

Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement Volume IV



March 2021

Estimated Lead Agency Costs Associated with Developing and Producing this Final EIS: \$3,539,425

U.S. Department of the Interior Bureau of Ocean Energy Management www.boem.gov



Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement Volume IV

March 2021

Author:

Bureau of Ocean Energy Management Office of Renewable Energy Programs

Published by:

U.S. Department of the Interior Bureau of Ocean Energy Management Office of Renewable Energy Programs

ENVIRONMENTAL IMPACT STATEMENT FOR THE VINEYARD WIND 1 OFFSHORE WIND ENERGY PROJECT DRAFT () FINAL (X) DRAFT SUPPLEMENTAL ()

Lead Agency:	U.S. Department of the Interior, Bureau of Ocean Energy Management (BOEM), Office of Renewable Energy Programs	
Cooperating Federal		
Agencies:	U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service	
	U.S. Department of Homeland Security, Coast Guard	
	U.S. Department of the Interior, Bureau of Safety and Environmental Enforcement	
	U.S. Environmental Protection Agency	
Cooperating Tribal		
Nation:	Narragansett Indian Tribe	
Cooperating State		
Agencies:	Massachusetts Office of Coastal Zone Management	
-	Rhode Island Coastal Resource Management Council	
	Rhode Island Department of Environmental Management	
Contact Person:	Jennifer Bucatari	
	Environmental Protection Specialist	
	Office of Renewable Energy Programs, Environment Branch	
	Bureau of Ocean Energy Management	
	Office (703) 787-1742	
	Jennifer.Bucatari@boem.gov	
Area:	Lease Area OCS-A 0501	

Abstract:

This Final Environmental Impact Statement (FEIS) assesses the potential environmental, social, economic, historic, and cultural impacts that could result from the construction, operation, maintenance, and decommissioning of an approximately 800-megawatt offshore wind energy facility located more than 14 miles (23.6 kilometers) southeast of Martha's Vineyard. This Vineyard Wind 1 Offshore Wind Energy Project (Project) is proposed by Vineyard Wind LLC and designed to serve demand for renewable energy in New England. The FEIS was prepared following the requirements of the National Environmental Policy Act (42 United States Code [U.S.C.] §§ 4321-4370f) and implementing regulations. This FEIS incorporates analyses in the Supplement to the Draft Environmental Impact Statement (SEIS) addressing reasonably foreseeable offshore wind activities and their effects, previously unavailable fishing data, a new transit lane alternative, and changes to the proposed Project made by Vineyard Wind LLC. The FEIS also addresses comments received during the Draft Environmental Impact Statement (DEIS) and SEIS comment periods. The FEIS will inform BOEM in deciding whether to approve, approve with modifications, or disapprove the proposed Project. Cooperating agencies may also rely on the FEIS to support decision making if they determine the analysis is adequate for that purpose. BOEM's action furthers U.S. policy to make the Outer Continental Shelf energy resources available for development in an expeditious and orderly manner, subject to environmental safeguards (43 U.S.C. § 1332(3)), including consideration of natural resources and existing ocean uses.

VOLUME IV—TABLE OF CONTENTS

Appendix K Part 2 Public Comments and Responses

APPENDIX K PART 2

Public Comments and Responses

Index	Comment Text	Response
Number		
2-001	I am concerned about the effects on both commerical and recreational fishing. Some fisherman voices positive view. Saying it would improve fishing. After having read numerous articles from around the globe. This is not true. After they are built they restrict access stating safety and security.	Section 3.10.2 of the FEIS has been updated to state that while temporary restricted access areas (safety zones) may be set up around active construction areas where applicable, BOEM does not have the authority to restrict vessel access to the WDA during operations. In addition, the USCG has stated that they do not intend to restrict access to the WDA during operations. The USCG's authority to establish safety zones only extends to the boundary of the territorial waters of the United States, which is 12 nautical miles from shore and outside the WDA. Examples of this access in the U.S. can be seen in the Block Island Wind Farm and Coastal Virginia Offshore Wind Project. BOEM's lack of authority to restrict vessel traffic would apply equally to commercial and recreational vessels.
2-002	They are owned by multi-national corporations that have no ties to ICMD. But it will increase our taxes.	Section 3.6.1.1 of the FEIS references several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the anticipated growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions. Consideration of the nationality of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
2-003	We still do not know where they are planing to come onshore. One issue that needs to be considered is the possibility of the developers using eminent domain to lay the cables onshore.	The proposed Project would make landfall at the Covell's Beach landfall as Vineyard Wind has stated that New Hampshire Avenue is no longer being considered as they have received their state and local permits and approvals for Covell's Beach. Please see Figure 2.1-1 of the FEIS for the landfall location and upland route.
2-004	additionn the cables at Block Island did not even remain buried off shore	Section 2.1.1 of the FEIS has been updated to address cable burial risk for the proposed Project. The OECC would have a target burial depth of 5-8 feet (1.5-2.5 meters). Potential interactions with fishing gear are discussed in the revised Section 3.10.2 of the FEIS. A submarine cable system burial plan has been included in Appendix D as a mitigation measure for the proposed Project.
3-001	Please do not place wind turbines in our ocean. The pristine ocean view deserves to be left undisturbed.	The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the offshore wind development. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations provided by Vineyard Wind that provide views of the 14 MW wind turbines as well as simulations of

Table K-12: Substantive	Comments on the	SEIS and Responses
-------------------------	-----------------	---------------------------

Index Number	Comment Text	Response
		Vineyard Wind 1 combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment.
4-001	These [horseshoe] crabs are found only along the Atlantic Coast of the US and Mexico, and the largest biomass found in the Delaware Bay and coastal waters of Maryland and Delaware. Right where wind farms are planned on being built. Even to the point of being on top of and adjacent to a "horseshoe crab sanctuary" [Schuster Sanctuary] of the DE and MD coasts.	Section 3.2 of the FEIS has been revised to include a discussion on horseshoe crabs. Potential impacts on horseshoe crabs are considered alongside other slow-moving benthic species of importance. Impacts on spawning horseshoe crabs are addressed specifically. This is a Project-specific EIS, not a Programmatic EIS, and the proposed action does not overlap or effect the Carl N. Schuster Horseshoe Crab Reserve.
4-002	Structures built on top of their habitat will crush them.	Section 3.3.1 of the SEIS stated that new cable emplacement and pile driving would cause injury or mortality. Therefore, no change to the FEIS is warranted.
4-003	The electricity emanating out of underwater cables will destroy whatever non-crushed habitat remains.	Sections 3.3.1 and 3.4.1 of the SEIS discussed the impacts of EMF on fauna. Therefore, no change to the FEIS is warranted.
4-004	The horseshoe crab stock is in serious danger from offshore wind. The monopoles and cables will be placed right where the horseshoe crabs winter and fall habitat to bury, they find their food source I.e. razor clams, mussels, surf clams, etc.	Section 3.3 of the SEIS discussed the effects of structures in soft-bottom habitat. Therefore, no change to the FEIS is warranted.
4-005	I don't understand how foreign countries can come in and destroy what we, Americans, have put in a sanctuary [since 2001] and abided by conservative measures for years. The sanctuary was created to protect the large spawning population of horseshoe crabs in the Delaware Bay and maintain the superabundance of crab eggs available to migratory shorebirds. The rectangular shaped sanctuary is positioned in the Exclusive Economic Zone (EEZ) bounded by State regulated waters to the west and extending 30 miles east. The reserve's southern boundary lies just north of Ocean City, MD and the northern boundary is just south of Atlantic City, NJ. No commercial harvesting of horseshoe crabs is allowed within sanctuary waters.	Section 3.2 of the FEIS has been revised to discuss the current condition and potential impacts on horseshoe crabs. However, a quantitative assessment of the impact on any particular species or stock is beyond the scope of this EIS and is not essential to a reasoned choice among alternatives.
5-001	Offshore wind turbines offer nothing worth risking destruction of the sea life and the ocean habitat. Studies are showing possible drastic negative affects on sea life near wind farmsEven during these months of shut down CO2 continued to rise at the same rate as normal. Wind turbines do not reduce CO2 emissions due to their construction and installations. They are made of steel and concrete, both require coal to manufacture.	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
6-001	Infrasound is damaging to all life. Wind turbines are known to produce this. In other countries infrasound is used as a weapon. I cannot believe that our government lets these Wind Farms damage communities knowing the damage that they cause.	Section 3.3.7.3 of the DEIS and Section 3.5.1 of the SEIS discussed the expected distance that noise associated with operational WTGS would reach ambient levels. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at

Index	Comment Text	Response
Number		164 fast (50 materia Miller and Datty 2017). Therefore, no shance to the
		FEIS is warranted
7-001	Wind turbines kill birds and bats and insects	Thank you for your comment
7-002	Wind turbines the birds and bats and insects Wind turbines affect the navigation systems of whales and dolphins leading to their deaths	Sections 3.3.7.3 of the DEIS and Sections 3.5.1 and 3.5.2 of the SEIS discussed the potential impacts of EMF on marine mammals and the potential consequences to marine mammal migration. As discussed, modeled and measured magnetic fields from AC cables buried to a depth of 3 feet would emit detectable fields up to 82 feet above the cable and 79 feet along the sea floor. Vineyard Wind proposes to bury Project cables to a depth of 5-8 feet, providing greater shielding and reducing field detection distances. Additional discussion of the uncertainty regarding the individual and/or population level impacts of EMF on marine mammals was provided in Appendix H of the SEIS. Given the extremely localized nature of the potential EMF related impacts exposure is expected to be low. Therefore, no change to the FEIS is
		warranted.
7-003	Wind turbines cause infrasound affecting animals, sea life, birds, and humans	Sections 3.4, 3.5, and A.8.3 of the SEIS discussed the potential impacts of WTG operational noise. The SEIS discussed the expected distance that noise associated with operational WTGS would reach ambient levels. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at 164 feet (50 meters; Miller and Potty 2017). Therefore, no change to the FEIS is warranted.
7-004	Wind turbines make money for foreign companies not the state in which they put the turbine	The FEIS is for the Vineyard Wind 1 Project, and therefore provides analysis specific to the economic impacts of the Vineyard Wind 1 Project within the geographic analysis area that would reasonably be expected to experience direct economic impacts. Consideration of the nationality of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
7-005	Wind turbines do not create hundreds of local jobs	Section 3.6.1.1 of the FEIS has been updated to include more detailed information than the SEIS, from several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the anticipated growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions.
7-006	Wind turbines cost consumers millions of dollars in fees to pay for the subsidies given to foreign companies	The SEIS relied on projections of local employment, economic activity, local/state tax revenues, known investment in local ports and job programs, and grants to local communities and organizations, to reach a reasonable

Index	Comment Text	Response
Number		
		conclusions of beneficial impact within the geographic analysis area. Section 3.6.1.1 of the FEIS has been updated to include additional information on ongoing port facility improvements and projections of economic investment. The analysis of employment and economic impacts within the geographic analysis area is valid regardless of federal and state subsidies.
7-007	turbines increase the cost of your electricity threefold making the countries in which it prevails energy poor	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
7-008	Wind turbines cost rate payers money in subsidies when they are forced to stop running	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
7-009	Wind turbines are not green - they use more fossil fuel than they save	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
7-010	Wind turbines use rare earth minerals which are mined in less than humane conditions and cause much pollution where they are mined	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
7-011	Wind turbines cause health problems in humans	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
7-012	Wind turbines cause flicker on nearby properties	The FEIS does not address flicker because the Vineyard Wind turbines, being at least 14 miles offshore, would be too far from shore to cause flicker for observers on land. This effect could be experienced by mariners who are much closer to the turbines than the closest coastline.
7-013	Wind turbines drive fish away and affect the commercial and recreational fishing industry	Section 3.4 and 3.11 of the SEIS discuss the impacts from offshore wind development on finfish and commercial and for-hire recreational fisheries, including impacts from noise, anchoring, new cable emplacement and maintenance, vessel traffic, and the presence of structures. Therefore, no change to the FEIS is warranted.
7-014	Wind turbines cause havoc to shipping lanes	Sections 3.11.2 through 3.11.5 of the FEIS discuss impacts to vessel traffic. The major ports in the vicinity of the WDA include the ProvPort, Fall River, New Bedford, and Davisville. The primary vessel traffic and commercial shipping lanes serving these ports are outside of the WDA (COP Volume III, Section 5.5.1, Appendix III-I; Epsilon 2020a).
7-015	Wind turbines affect the ability of radar to predict severe weather	Section 3.12 of the FEIS has been updated to specify that weather radar systems were included in the analysis of the Proposed Action, and that the Proposed Action is not anticipated to impact weather radar systems. The FEIS was also updated to 1) Include references to FAA Order JO 7400.2M, (FAA 2019) which implements procedures for conducting aeronautical studies per 14 CFR Part 77, and requires an obstruction evaluation to consider "physical, electromagnetic, or line-of-sight interference on existing or proposed air navigation, communications, radar, and control systems facilities" and provides specific requirements for such an analysis, and to 2) Clarify that BOEM assumes offshore project proponents would conduct radar

Index	Comment Text	Response
Number		
		studies in coordination with BOEM's Information Guidelines for a
		Renewable Energy Construction and Operations Plan (COP) issued May 27,
		2020 and the requirements of 30 CFR 585.621, and these radar studies would
		identify potential impacts and mitigation to weather radar systems. To
		develop the information in the FEIS, BOEM relied on the FAA's DOD
		Preliminary Screening Tool which indicates that the Proposed Action and
		other offshore wind facilities in the RI and MA Lease Areas are unlikely to
		impact NEXRAD radar systems; prior FAA determinations for WTGs up to
		696 feet for the Proposed Action and up to 1,049 feet for other offshore wind
		projects in the RI and MA Lease Areas; and Vineyard Wind's project-specific
		radar evaluations included in the COP (COP Volume III, Section 7.9.2.1.2,
		Figure 7.9-1; Epsilon 2020a).
7-016	Wind turbines affect the ability of the military to adequately protect our	Section 3.12 of the FEIS addresses potential impacts to military and national
	shores	security uses and radar systems and includes updates to clarify information
		provided in the DEIS and SEIS. BOEM coordinates with the Department of
		Defense and the U.S. Coast Guard throughout the process of identifying
		leasing area and approving the COP in order to identify and minimize
7.017		conflicts with military and national security concerns.
/-01/	Wind turbines will limit the areas in which boats can travel for fear of	Section 3.11.2 of the FEIS discusses impacts due to the presence of
	collisions with the Wind turbine's bases	structures. With implementation of the self-imposed measures by Vineyard
		wind described in Section 3.11.2, non-Project vessels transiting between the
		Proposed Action ports and the wDA would be able to avoid Proposed Action
		within 12 nm of the coast) through routine adjustments to pavigation
7.018	Wind turbines will leak ail into the accorn	Section A 8.2.2 of the SEIS addressed the potential for accidental releases
/-018	which turbines will leak off into the ocean.	and discharges associated with the proposed Project Therefore, no change to
		the FEIS is warranted
8-001	Wind turbines are expensive innefficient unreliable and disrutative to the	BOEM's action is to assess the notential impacts of the proposed Project as
8-001	arid. They are the wrong technology for large scale annication or for use with	defined in Vinevard Wind's COP. The cost of the project and other
	a national grid	technological implications are outside of BOEM's purview
8-002	They cannot replace fossil fuels and are not reducing pollution, but they are	An analysis of economics is provided in Section 3.6 of the FEIS Resource
0 002	increasing costs, resource usage and habitat loss	usage and habitat loss are discussed within the other resource-specific
		sections in Chapter 3.
8-003	They also disturb wildlife and kill bird, bats and insects.	Thank you for your comment.
8-004	Wrongly applied 'green' technologies like wind power (see also solar, wave,	Thank you for your comment.
	biofuels, etc) that were only ever meant to be used as niche genearation in	5 5
	situations where affordable, reliable and useful grid generation (see Nuclear.	
	Coal, Gas) is not accessible. Wind power is doing more harm than it could	
	ever do good.	

Index	Comment Text	Response
Number		
9-001	I have no objection to an off shore windmill farm. However I do have an objection to any taxpayer/public funding going towards this wind farm. These energy sources need to be self sufficient without taxpayer funds and with the same tax deductions that any other company will get	tax revenues, known investment in local ports and job programs, and grants to local communities and organizations, to reach a reasonable conclusions of heneficial impact within the geographic analysis area. Section 3.6.1.1 of the
	with the same tax deductions that any other company will get.	FEIS has been updated to include additional information on ongoing port facility improvements and projections of economic investment. The analysis of employment and economic impacts within the geographic analysis area is valid regardless of federal and state subsidies.
10-001	Wind turbines kill birds and bats and insects	Thank you for your comment.
10-002	Wind turbines affect the navigation systems of whales and dolphins leading to their deaths	Sections 3.3.7.3 of the DEIS and Sections 3.5.1 and 3.5.2 of the SEIS discussed the potential impacts of EMF on marine mammals and the potential consequences to marine mammal migration. As discussed, modeled and measured magnetic fields from AC cables buried to a depth of 3 feet would emit detectable fields up to 82 feet above the cable and 79 feet along the sea floor. Vineyard Wind proposes to bury Project cables to a depth of 5-8 feet, providing greater shielding and reducing field detection distances. Additional discussion of the uncertainty regarding the individual and/or population level impacts of EMF on marine mammals was provided in Appendix H of the
		SEIS. Given the extremely localized nature of the potential EMF related impacts exposure is expected to be low. Therefore, no change to the FEIS is warranted.
10-003	Wind turbines cause infrasound affecting animals, sea life, birds, and humans	Section 3.3.7.3 of the DEIS and Sections 3.4, 3.5, and A.8.3 of the SEIS discussed the expected distance that noise associated with operational WTGS would reach ambient levels. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at 164 feet (50 meters; Miller and Potty 2017). Therefore, no change to the FEIS is warranted.
10-004	Wind turbines make money for foreign companies not the state in which they put the turbine	Section 3.6.1.1 of the FEIS has been updated to include more detailed information from several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions. Consideration of the nationality of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.

Index	Comment Text	Response
Number		
10-005	Wind turbines do not create hundreds of local jobs	The numbers of estimated jobs shown in the Sections 3.6.1.1 and 3.6.2.1 of the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions.
10-006	Wind turbines cost consumers millions of dollars in fees to pay for the subsidies given to foreign companies	The SEIS relied on projections of employment, economic activity, local/state tax revenues, known investment in local ports and job programs, and grants to local communities and organizations, to reach a reasonable conclusions of beneficial impact within the geographic analysis area. Section 3.6.1.1 of the FEIS has been updated to include additional information on ongoing port facility improvements and projections of economic investment. The projections support reasonable conclusions that offshore wind would support jobs and businesses within the geographic analysis area. The analysis of employment and economic impacts within the geographic analysis area is valid regardless of federal and state subsidies.
10-007	turbines increase the cost of your electricity threefold making the countries in which it prevails energy poor	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
10-008	Wind turbines cost rate payers money in subsidies when they are forced to stop running	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
10-009	Wind turbines are not green - they use more fossil fuel than they save	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
10-010	Wind turbines use rare earth minerals which are mined in less than humane conditions and cause much pollution where they are mined	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
10-011	Wind turbines cause health problems in humans	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
10-012	Wind turbines cause flicker on nearby properties	The FEIS does not address flicker because the Vineyard Wind turbines, being at least 14 miles offshore, would be too far from shore to cause flicker on coastal properties. This effect could be experienced by mariners who are much closer to the turbines than the closest land.
10-013	Wind turbines drive fish away and affect the commercial and recreational fishing industry	Section 3.4 and 3.11 of the SEIS discuss the impacts from offshore wind development on finfish and commercial and for-hire recreational fisheries, including impacts from noise, anchoring, new cable emplacement and maintenance, vessel traffic, and the presence of structures. Therefore, no change to the FEIS is warranted.
10-014	Wind turbines cause havoc to shipping lanes	Sections 3.11.2 through 3.11.5 of the FEIS discuss impacts to vessel traffic. The major ports in the vicinity of the WDA include the ProvPort, Fall River, New Bedford, and Davisville. The primary vessel traffic and commercial

Index	Comment Text	Response
Number		shinning longe conving these norte are outside of the WDA (COD Volume III
		Section 5.5.1, Appendix III-I; Epsilon 2020a).
10-015	Wind turbines affect the ability of radar to predict severe weather	Section 3.12 of the FEIS has been updated to specify that weather radar systems were included in the analysis of the Proposed Action, and that the Proposed Action is not anticipated to impact weather radar systems. The FEIS was also updated to 1) Include references to FAA Order JO 7400.2M, (FAA 2019) which implements procedures for conducting aeronautical studies per 14 CFR Part 77, and requires an obstruction evaluation to consider "physical, electromagnetic, or line-of-sight interference on existing or proposed air navigation, communications, radar, and control systems facilities" and provides specific requirements for such an analysis, and to 2) Clarify that BOEM assumes offshore project proponents would conduct radar studies in coordination with BOEM's Information Guidelines for a Renewable Energy Construction and Operations Plan (COP) issued May 27, 2020 and the requirements of 30 CFR 585.621, and these radar studies would identify potential impacts and mitigation to weather radar systems. To develop the information in the FEIS, BOEM relied on the FAA's DOD Preliminary Screening Tool which indicates that the Proposed Action and other offshore wind facilities in the RI and MA Lease Areas are unlikely to impact NEXRAD radar systems; prior FAA determinations for WTGs up to 696 feet for the Proposed Action and up to 1,049 feet for other offshore wind projects in the RI and MA Lease Areas; and Vineyard Wind's project-specific radar evaluations included in the COP (COP Volume III, Section 7.9.2.1.2.
10-016	Wind turbines affect the ability of the military to adequately protect our shores	Figure 7.9-1; Epsilon 2020a). Section 3.12 of the FEIS addresses potential impacts to military and national security uses and radar systems and includes updates to clarify information provided in the DEIS and SEIS. BOEM coordinates with the Department of
		Defense and the U.S. Coast Guard throughout the process of identifying leasing area and approving the COP in order to identify and minimize conflicts with military and national security concerns.
10-017	Wind turbines will limit the areas in which boats can travel for fear of collisions with the Wind turbine's bases	Section 3.11.2 of the FEIS discusses impacts due to the presence of structures. With implementation of the self-imposed measures by Vineyard Wind described in Section 3.11.2, non-Project vessels transiting between the Proposed Action ports and the WDA would be able to avoid Proposed Action vessels and restricted safety zones (if USCG establishes any such zones within 12 nm of the coast) through routine adjustments to navigation.
10-018	Wind turbines will leak oil into the ocean.	Section A.8.2.2 of the SEIS addressed the potential for accidental releases and discharges associated with the proposed Project. Therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
10-019	Wind turbines will destroy the pristine view from our shores for the foreseeable future affecting the economy of every seaside resort	Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations and night sky impacts. Vineyard Wind has committed to use ADLS at night to greatly reduce nighttime impacts of aviation lighting. Vineyard Wind would also use white or light grey paint color as described in Appendix D to reduce visibility against the horizon. New visual simulations provide views of the 14 MW WTGs as well as simulations for Vineyard Wind 1 wind turbines combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment. Research findings that address the impacts on coastal tourism were provided in the DEIS and Section 3.10.1 and 3.10.2 of the SEIS, and have been carried forward into the FEIS.
11-001	The Vineyard wind project should not be approved. Its location is within clear visibility of the important tourist destinations of Martha's Vineyard and Nantucket. Visible wind farms will harm the property values and rental incomes of those within the view shed. It is not just visibility during the day that is harmful but also visibility at night from both aviation and marine red flashing warning lights.	Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations and night sky impacts. Vineyard Wind has committed to use ADLS at night to greatly reduce nighttime impacts of aviation lighting. Vineyard Wind would also use white or light grey paint color as described in Appendix D to reduce visibility against the horizon. New visual simulations provide views of the 14 MW WTGs as well as simulations for Vineyard Wind 1 wind turbines combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment. Research findings that address the impacts on coastal tourism were provided in the DEIS and Section 3.10.1 and 3.10.2 of the SEIS, and have been carried forward into the FEIS.
11-002	The wind turbines will create few domestic jobs, most of the components will be manufactured overseas and installed by European workers, because the USA lacks infrastructure to manufacture offshore wind components.	Section 3.6.1.1 of the FEIS has been updated to include more detailed information from several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions.
11-003	The cost of energy will be 300% or more, more expensive than power from conventional sources, this will drive up the cost of electricity in the region which will harm the poor the most since the poor spend a larger percent of their income on energy.	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
11-004	There is little if any environmental benefit from the wind power produced due to the unreliability of the wind. Power production on some days will be zero and when the wind doesnt blow. This means no fossil fuel power plants can be closed due to the need for continuous back up power. Fossil fuel	BOEM's review is focused on the potential impacts to environmental, social, and cultural resources from the proposed Project. As it relates to air quality and the offshore wind industry's potential to displace fossil fuels, Section A.8.1 of the SEIS and FEIS provide additional information.

Index Number	Comment Text	Response
Number	plants must even continue to burn fuel on spinning reserve in the event that the wind stops blowing with sufficient energy which could happen in minutes. The cost of energy will necessarily rise due to the cost of maintaining two power sources, wind power, and conventional sources of power.	
11-005	The cost of the Vineyard wind project, in terms of lost tourist revenue, depression of home prices, the higher cost of energy, is higher than the potential benefits.	Research findings that address potential impacts on tourism and rental income were provided in the DEIS and Section 3.10.1.1 and 3.10.2 of the SEIS. Therefore, no change to the FEIS is warranted.
12-001	1st Major hurricane and those will be all over the place!	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years. Section 2.3 of the FEIS also discusses potential effects of the proposed Project being hit by a hurricane. More precise forecasts of hurricane frequency in future climate scenarios are not likely to be significantly different from currently available data. Therefore, further updates to the FEIS are not warranted.
13-001	These [WTGs] are proven to be far more costly then ever anticipated and destroy the surrounding eco systems.	Thank you for your comment.
14-001	Move forward with the wind farm. The benefits far outweigh the detriments.	Thank you for your comment.
14-002	We must move forward towards clean energy. Keep moving forward.	Thank you for your comment.
15-001	Please format the Vineyard Wind Supplement to the Draft Environmental Impact Statement using the Government Printing Office (GPO) Style Manual so that the document can be efficiently read, analyzed and commented on by the interested public.	BOEM has updated the FEIS to use single spacing for document layout to be more in line with the DEIS format.
15-002	Page Limitations under the Department of the Interior's Secretarial Order 3355 were to be met by focusing on techniques such as tiering or incorporation by reference, not by switching to a narrow text, reducing the spacing between characters of text, lines, headings and titles.	BOEM has been granted a 300 page limit for the FEIS which assists with the culmination of multiple analyses into the FEIS. Even so, in order to comply with the page limits in the Department of the Interior's Secretarial Order 3355 and focus on the impacts of most concern, BOEM had to include tables, figures, and analysis of resources in appendices. The information located in the appendices is readily accessible and conveniently labeled for the review of all interested stakeholders. A large print version of the SEIS was posted to the BOEM website. BOEM has updated the FEIS to use single spacing for document layout to be more in line with the DEIS format.
15-003	I request BOEM make public a correctly formatted Vineyard Wind Supplement to the Draft Environmental Impact Statement and a minimum of 45 days is allowed for public submission of comments after the corrected document is made public.	A large print version of the SEIS was posted to the BOEM website. In addition, the public comment period for the SEIS closed on July 27, 2020.

Index Number	Comment Text	Response
15-004	The Vineyard Wind Offshore Wind Energy Project DEIS was formatted in such a way that it could be easily read. The Vineyard Wind 1 Offshore Wind Energy Project SEIS, on the other hand, was formatted in such a way that it crammed more words into smaller spaces and can not be easily read.	A large print version of the SEIS was posted to the BOEM website. BOEM has updated the FEIS to use single spacing for document layout to be more in line with the DEIS format.
15-005	The addition of line numbers on each page would also assist those collaborating on this document's review.	Line numbering for a publication version of an EIS is not standard practice. Therefore, no change to the FEIS.
15-006	The Department of the Interior's Secretarial Order 3355 was not meant to burden the interested public as will be the result, if this is not corrected.	A large print version of the SEIS was posted to the BOEM website. BOEM has updated the FEIS to use single spacing for document layout to be more in line with the DEIS format.
16-001	wind turbines are not economical nor are the environmentally friendly.	Thank you for your comment.
16-002	they [wind turbines] only serve the purpose of making a few richer and the mass majority poorer.	Thank you for your comment.
16-003	they [wind turbines] create more havoc in the long run to the sea life and safety of the general public in america.	Thank you for your comment.
16-004	we should never allow a system that is outdated and inefficient to the conductance of energy created.	Thank you for your comment.
17-001	We need MORE wind turbines	Thank you for your comment.
18-001	As someone who has been vacationing on Martha's Vineyard since the '90s, and followed the travails of Cape Wind, it is gratifying to see the first major offshore wind project in the United States come one step closer to becoming a reality. After all of the delays, I hope this project can get underway quickly, and that many more soon follow.	Thank you for your comment.
19-001	I am a strong believer in Vineyard Wind. The rapid climate change we face requires immediate, strong action. The development of non carbon emitting, clean sources of energy is necessary for the safety of our planet, human life and other species.	Thank you for your comment.
19-002	we pay a price with current methods of producing carbon-base energy, from the devastation of strip mines, the health and safety of energy workers, risk of oil spills and dangers of fracking.	Thank you for your comment.
19-003	Vineyard Wind makes a significant contribution to affordable, clean energy in our area.	Thank you for your comment.
19-004	There is no meaningful impact on the views from the Vineyard.	The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the offshore wind development. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations provided by Vineyard Wind that provide views of the 14 MW wind turbines as well as simulations of Vineyard Wind 1 combined with other offshore wind development. The

Index	Comment Text	Response
Number		simulations can be viewed at https://www.boem.gov/vineyard-wind- cumulative-visual-assessment.
19-005	And the improvement to the environment will save more birds than may be killed by the turbines.	Thank you for your comment.
20-001	Wind turbines are a great way to reduce our carbon footprint and generate electricity responsibly.	Thank you for your comment.
20-002	I expect that in the long run they will help reduce electricity costs and create well paying jobs.	Ratepayer costs depend on numerous variables beyond the scope of the EIS. Job creation, job types and anticipated salaries were provided in the DEIS, and are restated in Section 3.6.2 of the FEIS.
20-003	Offshore wind is common in Europe, particularly in Germany, and while large scale wind farms need to be balanced with sufficient transmission capacity, wind power has been successful there.	Thank you for your comment.
21-001	The most important benefit of Vineyard Wind 1 is the large scale reduction of greenhouse gases that are pumped into the atmosphere by typical fossil fuel power plants. Offshore wind turbines use no water and produce zero emissions.	Thank you for your comment.
21-002	Another very important benefit of the Vineyard Wind 1 project is the economic impact. The project can launch an offshore wind industry here in the USA and create thousands of jobs in the supply chain and construction and operation areas. The Marine Commerce Terminal in New Bedford MA stands ready to be a staging area for this project as well as Brayton Point in Fall River MA. Boston has a blade testing facility and major offshore players like Semens Gamesa and MHI Vestas are watching the Mass., Rhode Island and Connecticut areas very closely.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States. Section 3.6.2 also notes the investments in the Ports of New Bedford and Brayton Point.
23-001	We need to expand wind and solar electricity generation, as well as energy storage solutions. Climate change is one of several crises that are defining this generation. Our future health and prosperity require we try every alternative to reduce or eliminate greenhouse gas emissions I wholehearted support more wind power.	Climate change was addressed in the DEIS and SEIS and is included in Section A.8.1 of the FEIS.
23-002	As the project is "located approximately 14 statute miles from the southeast corner of Martha's Vineyard and a similar distance from the southwest side of Nantucket" there should be no major impact to the majority of residents.	Thank you for your comment.
24-001	I believe the Vineyard Wind 1 project would be extremely beneficial to the community on Martha's Vineyard. Not only would it provide jobs, but it would also produce clean and sustainable energy and save ratepayers over 1 billion dollars in energy costs throughout its first 20 years.	As noted in Section 3.6.2 of the FEIS, the Vineyard Wind 1 Project would create both short-term construction jobs within the geographic analysis area and long-term jobs. Many of the estimated 80 operational jobs would be located on Martha's Vineyard due to the location of the operations and maintenance facility and use of Vineyard Haven harbor.

Index	Comment Text	Response
24-002	[The Vineyard Wind 1 project] would assist in Massachusetts' progress towards its goal to be completely carbon neutral and Martha's Vineyard's plans to use only renewable energy for heating, electricity and transportation.	Thank you for your comment.
25-001	I am commenting in support of Vineyard Wind because their offshore windfarm will not only help reduce greenhouse gas emissions that contribute to climate change, but will create economic development as well.	Section 3.6.2 and Tables 3.6-3, 3.6-4 and 3.6-5 in the FEIS summarize Vineyard Wind's estimates of construction-phase employment, tax revenues (state and local), and operations-phase economic activity that would potentially be generated in Massachusetts by the Vineyard Wind 1 Project. These data were also provided in the DEIS. Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
25-002	Climate change is directly caused by increasing carbon emissions, therefore an offshore wind farm will help reduce emissions by creating renewable energy. It is important to spend money investing in these sustainable solutions now rather than having to do expensive damage control later.	Appendix A, Section A.8.1 of the FEIS has been updated to address air quality benefits of the displacement of fossil fuel electricity generation by offshore wind.
25-003	Vineyard Wind's project will also create economic development and employment that will benefit locals and the island's economy. For instance, the nonprofit will create 3,600 jobs for local residents over the next few years alone. The offshore wind industry as a whole will create more than 80,000 jobs in the next ten years, and over \$25 billion are projected to be invested in the industry. This alone shows the importance of renewable energy and demonstrates that contrary to popular belief, renewables can and will provide jobs rather than destroy them.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Section 3.6 of the FEIS has been updated to provide projections of national job creation and investment from several studies resulting from east coast offshore wind development. Although projections specific to the geographic analysis area are not available, jobs and investment are anticipated to be focused in and near the states that host offshore wind.
25-004	Ultimately, with Vineyard Wind's offshore windfarm Martha's Vineyard has a chance to become a leader in the renewable energy sector, while at the same time reducing impacts of climate change and creating jobs for the local population. It is long overdue that Americans invest in the future to help reduce climate change in ways that are clean, efficient, and cost-effective.	Thank you for your comment.
26-001	It's appalling and alarming that this project has been held up for so many years, especially now that the climate is changing so dramatically. The seas are rising, the Arctic is melting, and the National Weather Service is predicting serious hurricanes this year.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information. Table 1.3-1 of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
26-002	the Massachusetts economy has been hit hard by the effects of the virus. This project could offer employment opportunities to the thousands of workers who need jobs.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS.

Index	Comment Text	Response
26-003	As we can see from the recent decision to hold the gas company financially responsible for the explosions in the Merrimac Valley, wind energy also makes sense in terms of safety as well as economics.	Thank you for your comment.
27-001	I support Vineyard Wind and believe the Vineyard Wind 1 project would be extremely beneficial to the entire community. Increased forms of Renewable Energy is the future that the USA needs and I commend the BOEM for its efforts to accelerate its development.	Thank you for your comment.
28-001	We need to transition to an economy that is not based on fossil fuels. Electricity can get us there but if it is coming from a coal power plant then we aren't getting there very fast. It is embarrassing the United States has a grand total of ONE active wind farm. I applaud Vineyard Wind for fighting through the regulations to get this in the ground.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
28-002	Wind energy can ignite the green industrial revolution and help save electricity customers money on their utility bills up and down the East Coast.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
29-001	I fully support the Vineyard Wind project. It is an important component in reducing fossil fuel emissions as well as a critical adaptation measure in the protection of our environmental resources for the Cape and the Islands.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
30-001	Example 1. Habitat for Marine Mammals and Fish/Shellfish. Conceptual Model: Marine Habitat Effects Vulnerability (Wind Farms) = function of (physical bottom type; biological structure on bottom; foraging behavior of biota; breeding areas of biota; special, sensitive or unique habitat status). Scores range from 0 (no impact) to 3 (high impact) for each characteristic. Total Scores would range from 0 to 15 and one would choose a threshold (say 10) above which one would not locate wind towers on structures in marine habitats that have these joint characteristics. Existing maps and databases could be incorporated into Geographic Information Systems (GIS) and overlaid to locate such areas on a map; one could employ best scientific judgment to estimate where these areas occur or utilize existing scientific reports and papers as proxies for this that address regional habitat quality/quantity components for fish/shellfish and marine mammals of interest.	In light of the known value of hard-bottom habitats and complex bottom, the proposed Project would avoid Special Sensitive and Unique habitats, especially hard-bottom habitats, and to a lesser degree complex bottom, to the greatest extent practicable. This is described in Sections 3.1.2, 3.2.2, and 3.3.2 of the FEIS. The alternative conceptual model proposed is not available at the scale of a Proposed Action. The information presented in the FEIS is at the highest resolution available to provide a reasoned choice amongst alternatives.
30-002	Example 2. Cumulative Effects on Marine Biota. Cumulative Effects Vulnerability (Wind Farms) = function (commercial fishing; climate change; nutrient enrichment; invasive species; synergistic interactions) where the qualitative scoring ($0 = no$ impact; $1 = low$ impact; $2 = moderate$ impact and 3	This is a Project-specific EIS, not a Programmatic EIS, and it complies with the requirements of NEPA. Section 3.3 of the FEIS has been updated to consider the potential impact of the proposed Project in light of reasonably foreseeable environmental trends and planned actions. However, species- specific assessments are beyond the scope of this EIS.

Index	Comment Text	Response
Number		
	where the qualitative scoring ($0 = no$ impact; $1 = low$ impact; $2 = moderate$	
	change, nutrient enrichment (and) invasive species	
30-003	Example 3. Effects of Wind Farms on Birds. Impact on Sea Birds, Shorebirds & Coastal Migrating Birds (Wind Farms) = function (foraging areas; breeding/staging regions; incidental mortality/altered flying behavior due to wind turbine interactions; mitigation measures; cumulative mortality from other sources).	Section A.8.3.2 provides an updated discussion of bird use of the Atlantic Flyway along the North American Atlantic Coast. Within the Atlantic Flyway, much of the bird activity is concentrated along the coastline concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). Additionally, as depicted in Figures A.8.3-1 and A.8.3-2
		In the SEIS, total avian abundance for species with high collision sensitivity and displacement sensitivity are low in the proposed Vineyard Wind 1 Project area, as well as within all of the offshore wind lease areas on the Atlantic OCS. As such, collision and displacement impacts are expected to be low. Additionally, as cited in the SEIS, many of the species that exhibited high avoidance rates in the Skov et al. (2018) study are same species that were modeled as part of the analysis in the SEIS.
30-004	Example 4. Adaptive, Ecosystem Based Management Effectiveness (A,EbM). A,EbM effectiveness vulnerability (wind farms) = function (marine spatial planning regime; environmental review program; mitigation measures; adaptation options; legal framework and permitting process).	Thank you for your comment.
30-005	The Northeast Continental Shelf Large Marine Ecosystem conceptual model underlies [Atlantic seaboard cumulative impact assessment for wind farms between Cape Hatteras, NC and Cape]. The LME approach assumes that the ocean & associated marine biota/habitats are in a steady state, equilibrium condition which is at odds with the recently published NOAA Fisheries 2020 State of the Ecosystem report which illustrates that we are dealing with a complex non-linear system that is not at equilibrium. The BOEM Supplemental DEIS mentions climate change; increased ocean noise; commercial fishing gear effects on the "productive capacity" of Essential Fish habitat; fish aggregation from structures acting like artificial reefs; and other human stressors that effects sea turtles; marine mammals; fish and invertebrates; sea birds and their habitats.	Sections 3.3.1 and 3.4.1 of the SEIS discussed the variability and general trends observed in patterns of organisms across space and time. This analysis does not assume an ecosystem at steady-state or in equilibrium. The FEIS assesses the impacts of the Proposed Action and other planned actions in light of reasonably foreseeable environmental trends. Therefore, no further revision to the FEIS is warranted.
30-006	The cumulative impact assessment might want to consider the adaptive, ecosystem-based management approaches being considered by the Mid- Atlantic and New England Fishery Management Councils & NOAA Fisheries GARFO (Greater Atlantic Regional Fisheries Office) Scenario Analysis approach (Diane Borggaard- NOAA Fisheries GARFO) to manage	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be

Index	Comment Text	Response
Number	changes in a dynamic ocean with multi sector management of a variety of sometimes conflicting human uses.	considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
30-007	Vulnerability and Scenario Analysis [presented during a symposium at the University of Rhode Island, "Offshore Renewable Energy-Changes in Habitats and Ecosystems",] combine[s] the use of leading edge science with outreach to a variety of interest groups to provide tools that can be used by policy makers and regulators. They can be explained more easily and in a shorter space than cumulative impact analysis used by BOEM to evaluate wind farms along the Atlantic seaboard The White House Council on Environmental Quality (CEQ) recently released NEPA guidelines to make the federal Environmental Assessment process simpler and more effective.	BOEM has carried forward the methodology established in the SEIS into the FEIS. No changes to the FEIS are warranted.
30-008	The [North Atlantic Right Whale] (NARW) "critical habitat" under the Endangered Species Act coincides with the BOEM Supplemental DEIS wind farm region from North Carolina to southern New England which has the potential to produce 13.5 GW of renewable electricity. The Atlantic seaboard wind farm planned leases could generate 21.8 GW of renewable electricity which would help Massachusetts reach its 2030 greenhouse gas (GHG) targets. The cumulative impact assessment has marine mammals with a moderate effect from the 20 (?) Atlantic seaboard wind farms.	A detailed analysis of impacts to ESA listed species, including the NARW, is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation- Documents/. Further discussion of the potential impacts to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed, no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
30-009	Even if the NOAA Fisheries GARFO Environmental Impact Assessments (EIA) process on NARW mortality/lobster gear entanglement follows the proposed White House Council on Environmental Quality NEPA guidelines, this process could take 2-3 years to complete. Since the BOEM Supplemental DEIS ranks marine mammal effects as medium (and those for regulated fisheries as maximum), it not clear to me if the BOEM decision to permit the [Vineyard] Wind project wind farm by December 2020 can be met.	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. The NMFS Biological Opinion and Incidental Take Statement (including all Terms and Conditions and Reasonable and Prudent Measures are discussed Section 3.4.2 and Appendix D of the FEIS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for

Index Number	Comment Text	Response
Trumber		NARW would be required. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS.
30-010	It appears that the [Vineyard] Wind farm will serve as a model for the other to be 20 developed along the Atlantic seaboard. NOAA Fisheries GARFO would have to provide incidental take permits for threats to NARWs/sea turtles from wind farms throughout their range. Even though this is normally a formality that could be worked out between BOEM and NOAA Fisheries, it is not clear to me under the proposed CEQ policy which agency would decide between potentially conflicting EIS processes. I feel that the [Vineyard] Wind project Supplemental DEIS should be completed before the NOAA Fisheries EIA endeavor begins and the scientific studies on wind farm effects on marine mammals and fisheries are completed.	A detailed analysis of impacts of the Vineyard Wind 1 Project to ESA listed species is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/, as well as the Biological Opinion issued by NMFS on September 11, 2020. The NMFS is a cooperating agency for the Vineyard Wind 1 Project and has been involved in its development, and will rely upon this EIS for the issuance of required permits. Project specific consultation with NMFS will occur for each project contemplated in the expanded planned action scenario, and will include project specific monitoring and mitigation measures that will be required to satisfy regulatory concerns relative to sea turtles.
30-011	As the former Recreational Fishery Coordinator in the Northeast it is not clear that Alternative F1 and F2 from RODA (Responsible Offshore Development Alliance) would be that helpful for saltwater anglers who would probably benefit from wind farm structures acting as artificial reefs for finfish and shellfish species not found in soft bottom habitats. Given the diverse requirements for commercial fishing when it comes to navigating through windfarms and fishing within their boundaries in historical fishing grounds for mobile and fixed gear, it is hard to envision a successful compromise beyond the mitigation and outreach carried out by MV Wind/financial agreement with lobster fishermen/women. The NOAA Fisheries EIS is likely to effect lobstermen/women much more severely than wind farms do.	Thank you for your comment.
31-001	How many bird strikes per year are expected per 400 MW block? What species of birds are expected to be struck?	Section A.8.3.1 of the FEIS includes and updated discussion regarding the species that have some potential to encounter operating WTGs. Section A.8.3.1 of the FEIS provides an updated discussion of collision model methods, but does not include all species that may encounter operating WTGs, as many species do not have the required datasets to allow for modeling. While not all species potentially present within the offshore wind lease areas were modeled, the modeling results of those species with sufficiently robust occurrence and behavioral characteristics datasets represent a variety of species with representative behaviors and flight characteristics and illustrate the overall low expected collisions rates. BOEM expects the same outcome from species that were not modeled. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of

Index	Comment Text	Response
Number		
		digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures that can refine our understanding of impacts arising from the presence of WTGs on the Atlantic OCS.
32-001	I'm writing to support going ahead with Vineyard Wind with the planned 1x1 nautical mile turbine layout, and to oppose adding 2+ mile transit lanes within wind farms, which the US Coast Guard has determined is unnecessary.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
32-002	Massachusetts needs clean energy, and offshore wind is New England's biggest untapped clean energy source. Our economy needs the hundreds of jobs Vineyard Wind will create and our ratepayers need the energy cost savings Vineyard Wind will bring.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS.
33-001	We have five months. That's the time limit given before it is no longer possible to affect a change to irreversible climate heating. Five months, twenty weeks: so either just give up now, or aggressively pursue the goals of Vineyard Wind to at least begin a process to begin to rectify climate catastrophe. I support Vineyard Wind's Facility Offshore.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
34-001	I fully support Vineyard Winds offshore wind project bringing renewable Offshore wind energy for the coastal New England states and the artificial reefs every offshore wind turbine will become. Marine life will thrive around these turbines.	Thank you for your comment.
35-001	In 1980, I was second license on an offshore crew boat in the Texas oil patch. After we had delivered our people and supplies, we would move to a cluster of unmanned rigs, and fish with hook and line. We caught monster fish. Why? Because mobile net gear could not be deployed in among the rig clusters, and they acted as reefs for the local fish. If Wind farms are built around the Cape, cod and haddock, among others, will come back over time. They might even grow to the size they were when my 8th great grandfather Andrew Newcomb moved from the Isles of Shoals to the Vineyardthen, mature cod went upwards of 50 lbs, and were prolific spawners.	Section 3.4 of the SEIS discussed the reef effect, and Sections 3.4 and 3.11 discussed that fishing pressure may be substantially influenced by the presence of structures offshore, resulting in reduced local fishing pressure. Therefore, no change to the FEIS is warranted.
36-001	The supplemental environmental impact statement (SEIS) for the Vineyard Wind 1 project provides a baseline for understanding the potential consequences of the proposed project, identifies positive and negative effects for the environment, and offers proposed mitigation solutions. The SEIS represents an even more fulsome evaluation of the project and the future Offshore Wind industry than was achieved during the earlier Vineyard Wind comprehensive public and regulatory review process, which involved	Thank you for your comment.

Index	Comment Text	Response
Number	assessments from more than 25 federal, state, and local regulatory bodies, including the US Bureau of Ocean Energy Management, the Army Corps of Engineers, Massachusetts Department of Environmental Protection, the Cape Cod Commission, the Martha's Vineyard Commission, and local conservation commissions.	
36-002	By way of Vineyard Wind's ample economic, environmental and energy reliability benefits, the project has earned permits or approvals from the Massachusetts Energy Facilities Siting Board (EFSB), an independent state board responsible for review of proposed large energy facilities, the Massachusetts Environmental Policy Act office, the Cape Cod Commission, the Town of Barnstable, MA, and the Martha's Vineyard Conservation Commission. The SEIS project sets forth all of the necessary elements required for the project to move forward.	Thank you for your comment.
36-003	Special consideration should be given to the U.S. Coast Guard study group regarding the proposed uniform turbine array that has been agreed to by all five offshore developers that hold leases off the coast of Massachusetts. The study group found that proposed one nautical mile spacing between wind turbine generators (WTG) is sufficient for navigation by commercial and recreational fishing interests and Coast Guard search and rescue operations. The developers' plan offers ample transit lanes options through the wind development areas. The study group found that using wider vessel transit lanes through these areas would make navigation and fishing more hazardous while reducing the number of WTGs available for creating carbon-free electricity.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
36-004	Any requirement that wind developers must set aside larger areas for vessel transit lanes is short-sighted and counter-productive to the most important benefit of Vineyard Wind 1 and other offshore developments: increased supplies of reliable, clean wind power.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
37-001	In light of the alarming pace at which our global climate is heating, confirmed by three reports on climate change issued by the Intergovernmental Panel on Climate Change, the UN Environmental Programme and the US Federal government, it is critical that we make a swift transition to renewable energy and abandon our reliance on fossil fuels. The Vineyard Wind offshore wind project will help us do just that. According to the facts, the wind project will help reduce our MA carbon emissions by over 1.6 metric tons per year (apparently the equivalent of taking 325,000 vehicles off the road). It will provide 400,000 homes with wind power energy and would meet the MA goal of 3200 MV of offshore wind, meeting 25% of the state's energy needs with the clean, renewable,	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.

Index	Comment Text	Response
Number		
	locally sourced energy. Moreover, by 2030, millions of households will be	
	powered by 22,000+ megawatts of renewable offshore wind energy in	
	densely populated centers along the East Coast.	
37-002	The fact that it is locally sourced with a community oriented development	Thank you for your comment.
	approach is an important aspect of this well thought out project. The project	
	has sought to be transparent with frequent public input at every step of the	
	way. Special attention has been focused on the needs and concerns of the	
	fishing industry, indigenous tribal interests, the protection of endangered and	
	local wildlife species, and the minimizing of environmental impacts.	
37-003		Sections 3.3 and 3.4 of the SEIS addressed the potential impacts of EMF on
	Additional scrutiny addressing more recent questions and concerns about	finfish and invertebrates and determined that the impacts would be negligible
	electromagnetic fields that might impact various fishes has shown that	to minor. Therefore, no change to the FEIS is warranted.
	precautions taken with the cables will result in negligible effects or risk to	
	bottom dwelling or pelagic species or to commercial or recreational fishes in	
	the southern New England area.AC undersea power cables associated with	
	offshore wind energy projects within the southern New England area will	
	generate weak EMF at frequencies outside the known range of detection by	
	electrosensitive and magnetosensitive fishes. And the range over which these	
	species can detect electric fields is limited to centimeters, not meters around	
	these species.	
37-004	Vineyard Wind will be the first large offshore wind farm. 4,000+ offshore	Thank you for your comment.
	wind turbines already successfully power Europe. Furthermore, these	
	turbines, which will be spaced over 1 mile apart, will ensure safe and	
	navigable transit and fishing.	
37-005	We cannot risk a poor prognosis for environmental, social and economic	Greenhouse gas emissions and climate change were evaluated in Section
	outcomes by failing to move quickly to renewable energy in an effort to	A.8.1 of the SEIS and the FEIS has been updated to include additional
	reduce greenhouse gasesand the window of opportunity to abate global	information.
	warming is closing rapidly. The Vineyard Wind project offers one path to a	
	sustainable future, a healthy planet and provides a plan to nurture the	
	continuation of life on earth as we know it. We have a moral imperative to	
	seize this moment and move forward with aggressive action to abandon fossil	
	fuel reliant energy. The wind farm proposed by Vineyard Wind will be an	
	important contribution to these efforts. Lastly, the Vineyard Wind project	
	will be an exemplary model for others to follow.	
38-001	I am in support of the Vineyard Wind project going forward without further	Section 2.5 of the FEIS has been added which includes the agency-preferred
	delay and with 1 x 1 mile spacing. There is strong evidence that this spacing	alternative.
	is ample to provide the outcome desired and wider spacing would harm the	
	positive outcomes.	

Index Number	Comment Text	Response
38-002	Its time to stop playing games with our climate and our planet. the great majority of Americans approve of alternative energy and I say, "Yes in my backyard!"	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
39-001	I fully support the Vineyard Wind project and believe it should go ahead without any more delay It is crucial that we develop sources of renewable energy that can be produced domestically so we can eliminate our dependence on polluting fossil fuels, many of which come from abroad.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
39-002	Vineyard Wind has done an exceptional job of working with all stakeholders in this process to ensure that the results are amenable to everyone, showing that they truly care about the environment and the lives of those who live in the area. No power source is without its drawbacks, but I believe the benefits of offshore wind far outweigh any drawbacks that some may use as an excuse not to do it. The wind energy potential off the coast is tremendous, so even compared to other renewable sources, offshore wind is one of the best choices to produce the amount of energy we need. Then when you look at the environmental cost of extracting and burning fossil fuels, offshore wind is a far superior option.	Thank you for your comment.
40-001	The Vineyard Wind project makes good sense, and especially in the northeast USA. The environmental impacts have been extensively examined and are fully acceptable to most people, and to me as a wildlife biologist who has done extensive work in Massachusetts over the past 35 years.	Thank you for your comment.
41-001	I fully support this green project. It is high time we took action to reduce fossil fuel consumption.	Thank you for your comment.
42-001	We need to move fast to address climate change and offshore wind is an opportunity to combat this issue by reducing greenhouse gas emissions caused by fossil fuel generation and use.	Thank you for your comment.
42-002	Vineyard Power is working ACE MV, our local regional high school and Bristol Community College to help train a local workforce to meet the job demands in this new industry.	Section 3.6.1.1 of the FEIS has been updated to list the Bristol Community College offshore wind job training program.
42-003	We support Vineyard Wind and the other developers of the New England Wind Energy Area agreement to develop all future projects with a uniform 1 x 1 nautical mile (NM) layout throughout the lease areas. This layout is also endorsed by the US Coast Guard and is a good compromise between the fishermen and developers which will ensure safe transit without compromising additional delay and cost to us, the residents of Martha's Vineyard.	The FEIS addresses this comment in Section 3.11.4.
43-001	The Bureau of Ocean and Energy Management is asking the public if they should give VW a permit for their project. Yes they should. It's time to put climate change in the driver's seat in this climate emergency.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.

Index	Comment Text	Response
Number		
44-001	We need to move forward with this important clean energy project.	Thank you for your comment.
45-001	Please give Vineyard Wind a permit with 1/2 mile spacing ASAP.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
46-001	To that end, what specific provisions has Vineyard Wind included in the project to facilitate enlarging WTGs, adding WTGs, increasing cable capacity, support facilities, and support vessels as necessary to provide the tens of gigawatts needed to fulfill the energy needs of the Massachusetts area, then Northern New England? What additional provisions would Vineyard Wind recommend adding to facilitate such expansion?	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action.
46-002	On page 19 of the (SEIS) document, the first "Reasonably Foreseeable Assumptions" lists the "For those projects with announced WTG sizes, BOEM assumed an 8 or 12 MW WTG. BOEM understands that turbine capacity may exceed 12 MW in the future. However, for future procurements and projects under this cumulative analysis, BOEM evaluates potential impacts assuming that 12-MW WTGs will be used—since it is the largest turbine now commercially available (Appendix A)." However on page 9, Table ES-1 below, (also called Table 2.2-1 page 23) it discussed the changes to the VW Project Design Envelope, a 14 MW WTG is listed. Because there seems to be a disparity between future projects and the cumulative analysis being evaluated based on a 12 MW turbine, and the PDE which reflects a 14 MW WTG, please explain this disparity and explain why for future procurements and the cumulative analysis, why you chose a smaller turbine? Especially in light of 20 MW turbines being developed and possibly being utilized for the Empire Wind project and other future projects?	As noted in the SEIS, and within the FEIS, BOEM has included a list of assumptions for the analysis for those planned actions that were considered reasonably foreseeable. As noted, for those projects with announced WTG sizes, BOEM assumed an 8 or 12 MW WTG. BOEM understands that turbine capacity may exceed 12 MW in the future. However, for future procurements and projects under this analysis, BOEM evaluated potential impacts assuming that 12 MW WTGs will be used—since it is the largest turbine now commercially available. In addition, each of these future projects will have a NEPA analysis, which will evaluate the appropriate turbine capacity assumption at that time. Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts. As noted in Section 1.7.1.1 of SEIS, it is difficult to predict turbine capacity and spacing or other future engineering for planned but currently unscheduled offshore wind awards. Therefore, BOEM used reasonably foreseeable assumptions for the analysis and no changes to the FEIS are warranted
47-001	I want to express my support for the Vinyard Wind project WITHOUT a reduction in the proposed density. I understand that there will be one mile spacing between turbines, which is the largest spacing of any turbines in the world. The 2-4 mile transit lanes would appear to be unnecessary based on a recent US Coast Guard study.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
47-002	our region and country desperately needs power generation from sources such as wind power in order to reduce our dependence on fossil fuels and to combat global warming.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
48-001	I support the 1x1 nautical mile turbine layout - a compromise proposed in response to commercial fisheries' concerns. I oppose adding 2+ mile wide transit lanes within wind farms because it A) reduces offshore wind buildout B) massively impairs carbon reduction potential and C) is unnecessary per the US Coast Guard.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
48-002	I Support offshore wind jobs, ratepayer savings, and reduction of carbon emissions on a large scale	Thank you for your comment.
49-001	Offshore wind is an opportunity to combat climate change by reducing greenhouse gas emissions caused by fossil fuel generation and use It's already been more than ten years of exhaustive study and analysis to determine where offshore wind could be developed with the least possible impact on existing industries and the environment.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
50-001	Cape Wind was doomed by NIMBYism, but that is not the case here where the turbines are about 15 miles offshore. That project was held up for so long that it became unaffordable. Let's not let that happen with Vineyard Wind. The rates it will delivery electricity for will be a boom to consumers. With the current crises we have had to endure, please give us clean and cheap electricity as soon as possible.	Thank you for your comment.
50-002	Massachusetts needs a lot more Class I RECs to meet the demand of Green Municipal Aggregation programs being adopted by towns around the state.	Thank you for your comment.
51-001	[The North Atlantic Right Whale] are already nearly extinct because of human behaviors, formerly whaling and currently line entanglements and ship strikes. I am concerned that the location of these devices may hinder their movements. Also, whales are very auditory, and any noise can further block their group communication, already compromised because of shipping, etc., and the fact that sound travels much further in water than in air. I would like clear reassurance that research has been done to be absolutely sure that we do not kill off the last NA right whales while we are trying to have sustainable energy - a GOOD causing a BAD.	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. The NMFS Biological Opinion issued by NOAA (NMFS 2020) and Incidental Take Statement (including all Terms and Conditions and Reasonable and Prudent Measures are discussed Section 3.4.2 and Appendix D of the FEIS. As discussed in the Section 3.4.2 of the FEIS and in the Biological Opinion, no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, as discussed in the Biological Opinion, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. All project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS.
53-001	My biggest concern is that I don't want to see it contracted out to foreign labor and foreign flagged vesselsAny vessels NEED to be JONES ACT compliant. Made in USA shipyards, owned by US companies, Flagged in the USA and staffed with US Merchant Mariners period!!! This will ensure that the income earned stays in the USA, apprenticeship opportunities go to local residents, the labor and safety standards of the USA are followed, etcI'd also like to see a PLA and or MoU from the interested parties to promise to	The SEIS addressed projected job creation, and Section 3.6.1.1 of the FEIS has been updated to include more detailed information from several studies that provide generalized projections of economic investment from offshore wind. Only domestic jobs are included; the Vineyard Wind 1 Project job projections (Section 3.6.2.1) are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the growth of the domestic

Index	Comment Text	Response
Number		
	use LOCAL union labor and Jones Act compliant vessels. Not complying with the Jones Act would be a complete OPTICS failure.	offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions.
54-001	I strongly urge that Alternative Action Proposal A in the Supplement to the Draft Environmental Impact Statement for Vineyard Wind LLC's Proposed Wind Energy Facility Offshore be accepted so that the proposed off-shore wind farm can move ahead. In light of current and future negative impacts of climate change, it is imperative that we transition to renewable energy as quickly as possible.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
56-001	Are the WTGs and their foundations Earthquake Proof and to what level? Earthquakes are mentioned only once (A.8.2.1.1) in the review document and does not address earthquake resilience.	The DEIS and the FEIS include information on non-routine activities and low probability events. Information on severe weather and natural events is included in Section 2.3 of the FEIS and specifies the wind speeds the turbines would be constructed to endure.
57-001	I fully support the Vineyard Wind project. It is an important component in reducing fossil fuel emissions as well as a critical adaptation measure in the protection of our environmental resources for the Cape and the Islands.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
58-001	I support the development of wind energy in MassachusettsI believe this project will have a positive impact on our area providing skilled jobs and better and sustainable enegery development methods.	Section 3.7.2 of the SEIS and Section 3.6.2 of the FEIS conclude that Vineyard Wind would have a minor beneficial impact due to provision of employment and economic value. The job projections for Vineyard Wind include only jobs located in Massachusetts.
59-001	I fully support the Vineyard Wind 1 ProjectLaunching the offshore wind industry in the United States is a significant and necessary step towards combating its adverse effects and preserving natural resources for future generations. Failure to act will almost ensure that we experience the worst effects of climate change, a factor that will do far more to disrupt the fishing industry than the development of wind lease areas that were selected primarily because they have the least amount of exposure to fishing.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
59-002	The project will generate clean, renewable, cost-competitive energy for over 400,000 homes and business across the state while reducing carbon emissions by more than 1.6 million tons per year, the equivalent of taking 325,000 cars off the road.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
60-001	I am writing to urge your agency to move forward as soon as possible to approve the construction of the Vineyard Wind project without the reduction in density that is being proposed. This reduction would significantly decrease the electricity production at a time when the United States should be seeking ways to reduce our carbon emissions and expand our sources of renewable energy.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
60-002	The one-mile-plus spacing between turbines that Vineyard Wind is planning allows for the largest amount of space between wind turbines of any wind	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
	development in the world, and it provides sufficient space for the safe	
61.001	I support final approval by POEM and the Secretary of Interior for the	Greenhouse are emissions and elimete abange were evaluated in Section
61-001	Vineward Wind I I C's proposed wind facility of the shore of Massachusetts	Λ 8 1 of the SEIS and the FEIS has been undated to include additional
	With many years of detailed work and much support from the Coast	information
	Guard approval will provide much-needed non-fossil-based energy and will	
	foster iob creations in Massachusetts and across northern New England.	
61-002	I see no reason to expand from 1 mile to the 2-4 mile pathways now under	Section 2.5 of the FEIS has been added which includes the agency-preferred
	consideration by BOEM, particularly given the USCG's support of the 1-mile	alternative.
	plans.	
62-001	It is time for America to harness the abundant clean energy potential off our	Economics and employment were addressed in Section 3.7 of the SEIS and in
	shores, and seize the environmental, economic, and public health benefits it	Section 3.6 of the FEIS. Greenhouse gas emissions and climate change were
	can unleash. The nation's only five offshore wind turbines - the Block Island	evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to
	Wind Farm - demonstrate the feasibility of this job-creating, wildlife-friendly	include additional information.
	energy opportunity along the Atlantic Coast. It is essential that we build on	
	that momentum by advancing the nation's first utility-scale offshore wind	
(2.002	project.	
62-002	The projects contracted along the Atlantic-coast could generate \$25 billion in	Section 3.6.2 of the FEIS has been updated to note the importance of the
	annual economic oulput and 85,000 well-paying jobs by 2050 alone. Whether	vineyard wind I Project as the east coast's first large-scale offshore wind
	starting with the approval of Vineward Wind's 800 measurett offshore wind	in other offshore wind projects and the creation of a domestic supply shoin
	nroject	for the offshore wind industry in the eastern United States Section 3.2.1.1 of
		the SEIS addressed projected job creation, and Section 3.6.1.1 of the FEIS
		has been updated to include more detailed information from several studies
		that provide projections of jobs and economic investment from Atlantic coast
		offshore wind.
62-003	It's time to chart another energy course, and embrace the environmental and	Economics and employment were addressed in Section 3.7 of the SEIS and in
	economic benefits of responsibly developed offshore wind power.	Section 3.6 of the FEIS. Greenhouse gas emissions and climate change were
		evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to
		include additional information.
63-001	With the uncertainty that comes with living through this [the pandemic], the	Economics and employment were addressed in Section 3.7 of the SEIS and in
	approval of Vineyard Wind 1 can provide us with a reliable source of clean,	Section 3.6 of the FEIS. Greenhouse gas emissions and climate change were
	renewable energy that, because of the record low bid for this project, will	evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to
(2,002	save MA ratepayers more than \$1 billion over the project's lifetime.	Include additional information.
63-002	The approval of this project will directly lead to the creation of thousands of	The Vineyard Wind I Project job projections (in Massachusetts only) are in
	jobs in trades that come with good pay and benefits.	Section 5.0.1 of the FEIS, and were also provided in the DEIS. The SEIS
		Section 3.6.1.1 of the FEIS has been undeted to include more detailed
		information from several studies. Anticipated salaries for certain offshore-

Index	Comment Text	Response
Number		wind-related jobs were provided in the DEIS and are in Section 3.6.2 of the FEIS.
63-003	Vineyard Wind has devoted great resources and time to engage stakeholders throughout this process. Since the release of the DEIS in 2018, they have incorporated stakeholder concerns by agreeing to the 1 X 1 NM grid placement of turbines (as shown in Alternative D2) and taken steps to use Covell's Beach for the cable landfall. Mitigation should be undertaken when it can benefit affected parties, but not to undermine the economic feasibility of this project or future projects. For this reason, I urge BOEM not to select Alternative F using either the 2NM or 4NM transit lanes.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
64-001	This comment is to encourage BOEM's approval of the Vineyard Wind project. The environmental regulatory issues appear to have been addressed responsibly and collaborativelyWe have learned a lot from European wind power construction experience with marine mammal, fish and other wildlife ecosystems, and Vineyard Wind appears to have integrated this learning into its systems, such as consideration for migratory patterns during construction. Even with unanticipated impacts, we are assured by the extant research that they are local, small, and likely to be temporary.	Thank you for your comment.
65-001	Construction of this wind turbine facility will be very good for the environment. Specifically, it will produce clean electricity which will be substituted for energy generation which uses fossil fuels. The burning of fossil fuels contributes to global warming, harming the natural world, including the oceans, and hurting the health of human beings. Burning fossil fuels also contributes to particulate pollution which humans breath into their lungs worsening their health.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
65-002	While the offshore facility might make it marginally harder to collect fish in some areas, it would only impact a very small fraction of fisheries. Furthermore, commercial fishing harms the ocean environment and ecosystem a great deal, especially bottom-trawling. Commercial fishing pollutes the oceans with fishing net waste, which degrades and small plastic particles make their way into food. Fishing boats also kills many whales each year, including the endangered Right whale. A reduction in the volume of commercial fishing would be good for the environment and contribute to the long-term health of the oceans.	Thank you for your comment.
66-001	I support [Vineyard Wind] and all alternative energy projects. We need to stop burning fossil fuels. It's that simple. Climate change is the defining crisis of our time, and no corner of the globe is immune from the devastating consequences of climate change. The costs of ignoring climate change are reaching irreversible points. Wind is the way of a sustainable, livable future.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
Index Number	Comment Text	Response
-----------------	---	---
67-001	I oppose ALL of the comments that urge BOEM to rush forward as fast as possible. This is the start of a multi decade development and it must be laid out carefully from the startThe lease can be taken up by a more responsible developer if this is needed.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
67-002	I strongly recommend that the US does not rush into rapid development without a solid country and regional plan. This is exactly what Vineyard Wind is doing, they are not acting in the green spirit for the maximum economical benefit of their shareholders and their intent is not in the best interest of the general population of the US or even the region.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
67-003	A serious gap in the COP, DEIS and SEIS and even the state of the science is on the wake effects both on the water side and atmospheric side. On the atmospheric side, impacts have been seen in Europe up to 34 km from the wind farms. In the water, there are many images of the sediment re- suspended by the mono-pile foundations that span and exit the wind farm. In the analysis, it has minimal analysis of the physics of the environmentThere is significant evidence from wind farms which creates fluctuating pressure deficits. Wind turbines have been taken down on land for these effects and considered a colossal failure. With the prevailing winds relative to the islands, this issue needs to be addressed. The impacts seen in Europe are a wake impact on the surface of the ocean.	Section A.8.2.2 addresses sedimentation and sediment plumes, as well as changes in mixing/stratification due to the presence of structures associated with the Project. Atmospheric effects such as a wake in air are discussed in FEIS Appendix E, Section E.2.6, and oceanographic effects are discussed in Section E.4.4. Consideration of increased water mixing and potential effects on biology is discussed in Section 3.3.1 and 3.3.2 of the FEIS.
67-004	The Baird lectures have shown that within 3 years of the establishment of a wind farm, blue mussels colonize the structure to the degree that the sediments within a 100 m radius are completely anoxic and the sediments are no longer providing the environmental benefits that they naturally do. Impacts are seem up to ranges greater than 600 meters from the foundations. These impacts need to be carefully studied and predicted.	Sections 3.3 and 3.4 of the SEIS discussed the reef effect and the potential colonization by mussels based on what is known from other wind farms. Section 3.2 of the FEIS has been updated to include new data sources and to discuss potential impacts of the presence of structures on sediment near foundations. The current benthic monitoring plan (COP Volume III, Appendix D) is posted on BOEM's website.
67-005	Energy is injected to the coastal water column at full depth through a stratified water column. There are no scientific references available in the literature for a low aspect ratio cylinder in a stratified flow. We do not even have the ability to make a back of the envelope estimate if there will be an impact or not and what that impact will be? Will it be a sustainable upwelling and sustained bloom or will it be a vigorous boom that generates water column anoxia and an ecosystem crash? You can't even begin to assess these impacts without the basic science existing. It is hard to understand how the COP can simply brush off these fundamental impacts and state there will be zero impact without justification or defense of this statement.	Sections 3.4.1, 3.5.1, and 3.6.1 of the SEIS and Sections 3.3.1, 3.4.1, and 3.5.1 of the FEIS discuss the potential impacts of the physical presence of structures in the water column. As discussed in these sections, tank and modeling conclude that flows are reduced immediately downstream of a monopile foundation, but return to background flow from 3.5 to 50 monopile diameters, depending upon local conditions (Miles et al. 2017, Cazenave et al. 2016). While there is some level of uncertainty around the consequences of these flow interruptions on the Atlantic OCS, shelf-scale modeling in the Irish Sea indicates that waterflow typically returns to within 5 percent of background levels within a relatively short distance from monopile foundations, and mean flows disruptions are not expected to reach from one monopile to an adjacent monopile. Therefore, no change to the FEIS is warranted.

Index Number	Comment Text	Response
67-006	There is a lot of discussion and concern on cables. They produce various EMF fields that have a relative strength compared to the ambient EMF fields. There is so much biology that can be impacted. The media presented by Vineyard Wind says that the cables will be shielded and EMF will be negligible but scientific research suggests otherwise can the developer describe why the cables cannot be buried to a depth that makes the EMF negligible for their transmission choice?	Sections 3.3 and 3.4 of the SEIS addressed the potential impacts of EMF on finfish and invertebrates and determined that the impacts would be negligible to minor. Therefore, no change to the FEIS is warranted.
67-007	I am also not confident that the impact of the cabling has been considered. The insurance for the industry states that over 70% of the risk to offshore wind farms is due to cable failure. I would like to see an honest estimate of the lifetime disruption to the benthos from cable maintenance.	Appendix E, Section E.3 of the FEIS has been revised to include consideration of cable failure rates, among other types of failures.
67-008	The SEIS is a great step. A regional view is essentialHowever, I strongly urge you to not build out 100 foundations prior to additional analysis. I would urge BOEM to really take control of the development and give strong guidane on how we do this responsibly and not let lobbyists for wind companies drive this for special interest groups. Planning should take a much, much wider view and plan for how all this power will be input to the grid. As I see it, there is more power to be produced than can be landed. Planning should include the option to include an ocean grid which would open up PPAs to companies not just states and will reduce the cost to developers in their lease areas.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information. In addition, Section C.5 in Appendix C addresses an offshore regional transmission network that was an alternative considered in the DEIS, SEIS, and FEIS, but not carried forward for analysis as described in that section.
68-001	This project is the first step to wind energy in this country and to stop the first project will subsequently put an end to any future projects, effectively killing the industry we so desperately need. The amount of new jobs that this would generate cannot be overstated	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States. Section 3.7 of the SEIS addressed projected job creation, and Section 3.6.1.1 of the FEIS has been updated to include more detailed information from several studies that provide generalized projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts.
68-002	As a lifelong fisherman I am excited with the benefits that the towers will bring in the form of artificial reefs for sea life, I believe this will enhance the	Section 3.4 of the SEIS discussed the reef effect on finfish, and Sections 3.10 and 3.11 discussed that recreational fishing may improve near structures
68-003	I have confidence that the travel lanes are more than adequate and to ask for more is unnecessary and greedy and will kill this project, and wind energy in the U.S.	The FEIS addresses this comment in Sections 3.11.4 and 3.11.5.

Index Number	Comment Text	Response
70-001	The draft SEIS includes an alternative ("Alternative F") with 4 nm wide transit corridors through the wind energy area (WEA). The transit corridors, while providing space through the WEA for very large vessels, has several negative impacts both to the wind farms but also to navigation. It is very much "the worst of both worlds" and should not be pursuedIntroducing transit corridors would reduce the turbine spacing over the remainder of the WEA and concentrate vessels in those corridors, increasing the risk of collisions. The USCG reviewed the transit corridor option now proposed as Alternative F and rejected it, concluding that fewer large corridors "actually provide far less area than the numerous corridors that result from the recommended array and spacing."	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
70-002	The transit lanes proposed in Alternative F also disproportionately affect some lease areas over others. While comparatively little area of lease OCS- A-0486 is impacted, and the impacted area is furthest from shore, a significant portion of lease area OCS-A-0521 would be lost and the restricted areas are closest to shore, requiring much longer cable runs. The transit lanes in Alternative F should be rejected.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
71-001	I see what we have done to our planet through years of reliance on fossil fuels, and yes no solution is perfect. But here we have the opportunity to lead the way. To build turbines in a way that takes into account, wildlife, fisherman and local residents. There is no perfect solution to supply the energy demands of a growing world, but these turbines along with other clean energy solutions are the future.	Thank you for your comment.
71-002	You can resist the change and demand that as an industry fishing should be given precedence over turbines for ocean space, but you can not deny that your industry has also had dire negative impacts on the waters you claim to be here to protect. Overfishing, habitat destruction and an industry that has become one dominated by large conglomerates can not possibly sit here and say they are doing right by our planet. Yes, the project could affect people's livelihoods, but it could also put us one step closer to having cleaner energy.	Thank you for your comment.
71-003	We are now at the point where we can make a very positive change on our planet when it comes to creating clean energy, creating jobs in a growing field, and we need to take a stand against increasingly large fishing entities that claim to be working for the best interest of their employees and not just to take all they can from our oceans.	Thank you for your comment.
72-001	For our future, I support developing all types of power, particular wind in areas well suited to it, such as off Cape Cod and the Islands. Wind reduces the need to use fossil fuels and is sustainable. The project is the culmination of more than ten years of exhaustive study and analysis to determine where	Thank you for your comment.

Index	Comment Text	Response
Number		
	offshore wind industry could be developed with the least possible impact on	
	existing industries and the environment.	
73-001	Why is the US still using coal & gas for electricity production? Can we get	Thank you for your comment.
	the US out of the 'dark ages' and move into the present with wind power? I	
	fully support the Vineyard Wind project. It is time we take our future	
	seriously and make the change to renewable energy now.	
74-001	I see the threats to [the Connecticutt River's] viability daily. Fossil fuels and	Thank you for your comment.
	their by-products have so disturbed the natural environment our waters are	
	getting clogged with hard to control invasives, our air is polluted, fish	
	reproduction is shriveling. We have an opportunity in New England to take a	
	giant step in the righ direction if we enable wind farms to be built. I	
	wholeheartedly endorse The Vineyard Wind LLC's proposed wind energy	
	facility offshore MA.	
75-001	Both in spirit and in practice we fully support Vineyard Wind's efforts to	Thank you for your comment.
	move us into the future of green, natural energy. There will always be two	
	sides of the coin, concerns to consider, mitigate, and thoughtfully address but	
	much like a vaccine, the benefits here drastically outweigh any issues or	
	impacts that Vineyard Wind is always quick to consider. We look forward to	
	the day when wind - one of nature's most bountiful gifts - is harvested for	
F (001	energy and survival.	
/6-001	I would like to see Vineyard Wind go forward now as soon as possible	Section 2.5 of the FEIS has been added which includes the agency-preferred
55 001	without any further decrease in density.	alternative.
77-001	I support the Vinward wind project for Connecticut wholeheartedly. It is a	Thank you for your comment.
	natural way to supplement our necessity for power without adding to our	
70.001	environmental problems.	
79-001	I fully support the Vineyard Win Project. In 2018, the state of Connecticut set	Thank you for your comment.
	a goal of producing 40% of its electric power through renewables by 2030,	
	rising to 100% by 2040 and of reducing greenhouse gas emissions to 80%	
70.002	below 2001 levels by 2050. This project will help us achieve these goals.	
/9-002	The untapped offshore wind resource along the U.S. Eastern Seaboard is one	Section 3.6.2 of the FEIS has been updated to note the importance of the
	of the most powerful in the world, and is within reach of many low income	Vineyard Wind I Project as the east coast's first large-scale offshore wind
	densely populated areas where energy demands are high and new resource	energy project. Approval could encourage and support continued investment
	options are few and access to employment is low. The offshore wind industry	in other offshore wind projects and the creation of a domestic supply chain
	could create 83,000 jobs by 2030 and deliver \$25 billion in annual economic	for the offshore wind industry in the eastern United States. Section 3./1 of
	input by that same year.	the SEIS addressed projected job creation and investment from Atlantic coast
		ourse data indication 3.0.1.1 of the FEIS has been updated to include
01.001		more detailed information.
81-001	I and my nusband completely support Wind Energy. We support the 1x1	Section 2.5 of the FEIS has been added which includes the agency-preferred $\frac{1}{2}$
	[nautical mile turbine layout - a compromise proposed in response to	alternative.

Index	Comment Text	Response
Number	commercial figheries' concerns. Support offehore wind jobs, retenaver	
	savings and reduction of carbon emissions on a large scale	
81-002	We oppose adding 2+ mile wide transit lanes within wind farms because it A)	Section 2.5 of the FFIS has been added which includes the agency-preferred
01 002	reduces offshore wind buildout B) massively impairs carbon reduction	alternative.
	potential and C) is unnecessary per the US Coast Guard.	
82-001	I have viewed their presentation of the [Vineyard Wind] project, and as an	Thank you for your comment.
	engineer, can appreciate its technical merits. Their reaching out to the many	
	stakeholders, listening closely to their concerns, and addressing these	
	concerns in their planning has been extraordinary.	
82-002	As a resident of Cape Cod where we pay some of the highest electricity rates	Section 3.6.2 of the FEIS provides anticipated job creation resulting from the
	in the country, I welcome the project. The jobs creation alone will benefit us	Vineyard Wind 1 Project in Massachusetts, and primarily in southeastern
	greatly. I will be proud to have it off our shores in its ideal location.	Massachusetts. Section 3.6.2 also notes the project's contribution to a resilient
		and reliable electric supply. This information was also in the DEIS and SEIS.
83-001	The obvious reason to support these projects including our local project	Economics and employment were addressed in Section 3.7 of the SEIS and in
	vineyard wind is the longterm Enviornmental benefits, to help slow the	Section 3.6 of the FEIS. Greenhouse gas emissions and climate change were
	devastating impacts of climate change, to move away from our dependence	evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to
	on fossil fuels. We have an opportunity to be on the forefront of a new	include additional information.
	industry harvesting clean renewable sources of energy, this is not only a win	
	on the Enviornmental front but a huge win on the economic front.	
83-002	This global pandemic has had a unique ability to find weak spots in almost	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
	every aspect of life. Here on MV and I think in most coastal communities we	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
	are heavily dependent on service sector jobs. Restaurants, bars, catering, inn	3,600 FTE job years, including 1,100 to 1,550 job years during construction
	and hotels, taxi and uber drivers, seasonal retail stores, wedding industry,.	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
	I ne list goes on and on with over 15% unemployment in our country over	during operation. These data were also provided in the DEIS. Many of the
	20% on Marinas vineyard this is an unbelievable opportunity to create good	Marthe's Vineward
	MV but up and down the cost cost of the united states in every costal	Marula's villeyard.
	community. I believe the vineward wind estimate is 3 600 jobs over the life of	
	the project that is an enormous economic benefit to local communities. Well	
	naid year round stable jobs. I think the industry as a whole is estimating	
	80.000 jobs which again is an enormous benefit to these local communities.	
84-001	We agree that it is important that the first commercial offshore wind projects	Thank you for your comment.
	are done right and that it's imperative to evaluate the cumulative impacts to	5 5
	existing maritime uses as well as the environment and establish best practices	
	that minimize those. We are especially sensitive to the concerns of the	
	commercial fishing industry as an important piece of our past, present, and	
	future economy and one that is impacted the greatest by this industry.	
84-002	Vineyard Wind has gone through many iterations in an effort to craft a	Thank you for your comment.
	facility that is economically feasible while at the same time taking its impacts	

Index Number	Comment Text	Response
	into account. Vineyard Wind has been a collaborative, communicative and an engaged partner with many stakeholder groups, and has shown a genuine interest in the region's environmental and economic health.	
84-003	While it is clear that there will be impacts to existing uses and that the emergence of this new industry will require changes in both practice and habit, we feel that the adjustments made through this permitting process, and the mitigations put in place will minimize those impacts.	Thank you for your comment.
84-004	Developers have made a commitment to coordinate a predictable layout that answers marine concerns and comes at the cost of substantial reductions in clean energy potential among the lease areas.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
84-005	We support the proposal, and further dilution beyond this proposal could jeopardize project viability, increase the cost to ratepayers as well as increase environmental impact, and render existing lease areas insufficient to meet the region's clean energy mandates. All this would occur if additional transit lanes are added to the plan, which the US Coast Guard has asserted will not provide meaningful increases in ease of transit and could create increased conflict.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
84-006	In terms of economic development, Vineyard Wind represents a major opportunity bringing \$1.87 billion in direct economic benefits to Massachusetts including 3,600 new jobs. The project has created a \$15 million fund to help build a sustainable offshore wind industry in Massachusetts that would bolster development of the supply chain, businesses, and infrastructure. This type of economic development will play out up and down the east coast of the United States as the nation ushers in this new renewable energy industry.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Section 3.6.2.1 and Tables 3.6-3, 3.6-4 and 3.6-5 also list the grants that would be provided by Vineyard Wind and show economic value and first year tax revenues that would result from Vineyard Wind.
84-007	We urge BOEM to arrive at a final decision on the federal permit this year. This is critical not only for the viability of Vineyard Wind, but for the entire future U.S. offshore wind industry including shipbuilders, suppliers, and other maritime interests. Considering the nation's abrupt economic downturn this year due to COVID-19 impacts, this will help spur immediate economic growth in the nation's economy.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
85-001	Vineyard Wind 1 has been reviewed extensively by federal, state, and local regulators and experts. View factsheets, download the BOEM report, and watch short videos about BOEM's environmental impact report. Thousands of jobs will be supported by offshore wind including a diverse local supply chain. Read about how US manufacturers are preparing, Texas is readying for a new energy boom, and international offshore wind companies are coming to the US.	Section 3.7 of the SEIS addressed projected job creation and investment from reasonably foreseeable offshore wind development. Section 3.6.1.1 of the FEIS has been updated to include more detailed information from several studies that provide projections of economic investment from Atlantic coast offshore wind.

Index	Comment Text	Response
85-002	Vinevard Wind 1 will feature large 1+ mile spacing between turbines, the	Section 2.5 of the FFIS has been added which includes the agency-preferred
05 002	largest space between turbines of any wind development currently operating	alternative
	on the globe, to allow for safe navigation and fishing within the wind	
	farmAdditional 2 to 4-mile wide transit lanes within wind farms are	
	unnecessary and reduce renewable energy potential. Read what the US Coast	
	guard said about it.	
	Offshore wind and fishing can coexist.	
86-001	I am not worried about the [Vineyard Wind] windmills being a hazard to	Thank you for your comment.
	navigation. I already have the ability to avoid tiny lobster traps in the fog at	
	night using my radar. I feel the windmills are spaced out adequately.	
86-002	I also think these windmills will create entire ecosystems and increase the	Sections 3.3 and 3.4 of the SEIS discussed the reef effect on finfish, and
	marine life in the area, similar to how any artificial reef created in other areas	Sections 3.10 and 3.11 discussed that recreational fishing may improve near
	of the East Coast have been great for fishing. Each of these windmill bases	structures offshore. Therefore, no change to the FEIS is warranted.
	will become their own 'artificial reef', supporting dozens of varieties of sea	
	life and also drawing in the bigger predators. I look forward to fishing in the	
	region after they are installed because I think they will vastly improve our	
	fishing opportunities.	
87-001	As a piledriver in Local Union 56 out of Boston, MA, the proposed offshore	Economics and employment were addressed in Section 3.7 of the SEIS and in
	wind farm means more to me than a paycheck. It is an investment in our	Section 3.6 of the FEIS.
	states future in renewable energy	
87-002	While [commercial fishermen] have every right to utilize the oceans	Section 3.6.2 of the FEIS has been updated to conclude that a moderate
	recourses, they do not have the right to shut down a sector that will employ	beneficial impact on employment and economic activity would result from
	more people and provide clean energy for many years to come. I have already	offshore wind development in the RI and MA Lease Areas. It also notes a
	taken part in the training for the offshore wind farms, and my fellow	potential moderate adverse impact on the commercial fishing industry.
	piledrivers and I have every bit as much right to develop the renewable	Section 3.10 provides more information on impacts on commercial fishing
	energy resource presented by the wind farms.	and mitigations to be provided by Vineyard Wind.
88-001	If we want to meet national and global climate goals, we need to take action	Greenhouse gas emissions and climate change were evaluated in Section
	by reducing the state's carbon emissions by 1.6 million tons (as these off-	A.8.1 of the SEIS and the FEIS has been updated to include additional
	shore turbines will do).	information.
89-001	Massachusetts has a seafaring work force that will benefit from gigs	Section 3.6.2 of the FEIS has been updated to explain that the New Bedford
	requiring seafaring skills. OSW Turbine construction and servicing will	Port Authority, Massachusetts Clean Energy Commission, and Vineyard
	employ those seafaring skills and supplement diminished fishing	Wind are cooperating to develop supply chain and support opportunities,
	opportunities.	with a focus on fishing businesses. The supply of marine workers provides an
		experienced workforce with relevant skills. Section 3.6.2 notes the benefits of
		diversifying the current marine industries.
90-001	I write this letter of support today for the Vineyard Wind and all offshore	Greenhouse gas emissions and climate change were evaluated in Section
	wind projects being considered along the continental United States As we	A.8.1 of the SEIS and the FEIS has been updated to include additional
	address the challenges associated with the development of offshore wind, we	information.
	also should look back into the history of power generation and determine if	

Index	Comment Text	Response
Number	there are lessons learned from the past. As we enter a new continue the	
	nower generation industry now must take into consideration of impact items	
	such climate change, carbon dioxide emissions, canacity of fossil fuels while	
	experiencing an increase in global demand for electricity. Offshore wind is	
	no longer a new industry as offshore wind has been around for 20 years	
	predominately in Northern Europe. Many of the concerns addressed in the	
	BOEM report can be answered by communicating with those who have met	
	the challenges associated with offshore wind.	
90-002	As I reviewed the BOEM report, I took notice of the study on avian fatality	Section A.8.3.1 of the FEIS provides an updated discussion of collision
	and the model that was created indicated one fatality every 6.25 years. It is	model methods, but does not include all species that may encounter operating
	nice to know that a wind turbine is not a bird Cuisinart.	WTGs, as many species do not have the required datasets to allow for
		modeling. While not all species potentially present within the offshore wind
		lease areas were modeled, the modeling results of those species with
		sufficiently robust occurrence and behavioral characteristics datasets
		represent a variety of species with representative behaviors and flight
		characteristics and illustrate the overall low expected collisions rates. BOEM
		expects the same outcome from species that were not modeled. Additionally,
		Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and
		monitoring measures that would be implemented to avoid, minimize, and
		mitigate adverse impacts on birds. These measures include, but are not
		limited to, installation of bird deterrent devices, use of ADLS, installation of
		digital VHF receivers and acoustic monitoring devices to estimate the
		exposure of ESA-listed species and other migratory birds, preparation of a
00.002		The second secon
90-003	In reading the BOEM white paper, there was one statement which was	i nank you for your comment.
	continuarly used. To the degree whild energy development offsets the use of	
	afforts to reduce global warming" Calculated risks are a pacassity when	
	adopting a concept for the first time. Global warming is a subject that must	
	be addressed now, and corrective measures must be adopted so future	
	generations are not burdened by lack of decisiveness by regulatory	
	authorities.	
90-004	As a country who takes great pride in wanting to be a global leader, we have	Thank you for your comment.
	decided to an overly cautious approach to the development of offshore wind	
	power generation. Yes, when considering projects of this magnitude, there	
	are risks along with entities which could be impacted. There are also lessons	
	learned from existing offshore wind projects which should assist BOEM in	
	moving the necessary permitting for the Vineyard Wind project forward.	

Index	Comment Text	Response
91-001	Published Article in Environmental Management (2004) on Waquoit Bay Watershed Ecological Risk Assessment Project	Thank you for your comment.
92-001	At the public meeting on Cape Cod, I recommended a cumulative impact assessment and adaptive, ecosystems-based management approach for this situation Since it appears that BOEM will use the [Vineyard] Wind FEIS process and approval decision for the permit as a case study for the other proposed 20 (?) wind farms along the Atlantic Seaboard, it is important to dot the I's and cross the T's in the near term to integrate policy/regulations/ construction and operations rules.	BOEM will prepare a NEPA analysis for each future proposed offshore wind project within federal waters.
92-002	I registered for last night's "ZOOM virtual meeting" but was unsuccessful in joining it BOEM seems to have made it difficult to join their ZOOM meetings My two challenges in joining Friday evening's ZOOM public hearing were my log in name and the the identification number for the ZOOM meeting.	BOEM provided five opportunities to attend the virtual public hearings during the comment period.
92-003	I have a question about the link between the BOEM analysis of cumulative effects of the 20 wind farms between North Carolina and Maine on marine mammals and the NOAA Fisheries GARFO (Greater Atlantic Regional Fisheries Office) Environmental Assessment process on North Atlantic right whale mortalities due to entanglements in American lobster pot gear. When I attended a GARFO meeting on Cape Cod in 2019 Marine Mammal ENGO representative and some scientists raised concerns about the effects of wind farm noise on NARWs.	Section 3.3.7.3, 3.3.8.3, of the DEIS and Section 3.5.1 of the SEIS discussed the expected distance that noise associated with operational WTGS would reach ambient levels. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at 164 feet (50 meters; Miller and Potty 2017). Therefore, no change to the FEIS is warranted.
92-004	In addition, NOAA Fisheries recently released its 2020 State of the Ecosystems report which discusses the effects of climate change and ocean noise.	Thank you for your comment.
93-001	Recent news of record warming of both Arctic and Antarctic regions indicates that Climate Change is happening right now, and that it is URGENT to move as expeditiously as possible to large-scale renewable energy sources.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
94-001	It appears to me that not moving forward will hurt us in the future to develop sustainable energy sources and also currently if there's ever an interruption in our current sources of energy. We must continue to move forward on all fronts including wind. The byproduct of more jobs in our communities also has great value. I see no downside to Vineyard Winds and their proposals and hope they continue to expand operations.	Economics and employment were addressed in Section 3.7 of the SEIS and in Section 3.6 of the FEIS. Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
95-001	We badly need this renewable energy [Vineyard Wind project]. Environmentally I would say it is one of the most friendly that there is. We don't have hydro power here but we have a lot of clean wind.	Thank you for your comment.

Index	Comment Text	Response
Number		
96-001	After seeing pollution destroy our planet, having worked on many hazardous waste sites through out my career, I believe the time is now to issue the permits for Vineyard Wind. I understand the fisherman's concerns but I have a right to work offshore too. I believe the navigation way that Vineyard wind is adequate. Good paying jobs are on the line for thousands of people if these	Section 3.6.2 of the FEIS is updated to conclude that a moderate beneficial impact on employment and economic activity would result from offshore wind development in the RI and MA Lease Area. It also notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations
	permits are not issued as is.	to be provided by Vineyard Wind.
97-001	I'm looking forward to working at Vineyard Wind once the project gets up and running.	Thank you for your comment.
98-001	I write to show my wholehearted support for the Vineyard Wind project I know that this project is a crucial step in building a future where air is clean to breathe and sea levels stalled from rising.	Thank you for your comment.
98-002	Governor Charlie Baker issued Executive Order No. 569, Establishing an Integrated Climate Change Strategy for the Commonwealth. Massachusetts has a deep obligation to deliver on green energy solutions that reduce greenhouse emissions, and the Vineyard Wind project is the opportunity we must seize in order to do so. Offshore wind is central to Massachusetts' and our region's goals of reducing greenhouse gas emissions to limit the effects of climate change.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
98-003	For me, this is far greater than a political issue, it is an issue of whether the Massachusetts of my adulthood will be one where I can walk along Martha's Vineyard beaches, sit at the Boston waterfront, or ski in the hills of Wachusett, as I grew up doing. It is an issue of whether the privileges I've received in the land surrounding me clean water, clean air, grass and trails free of toxic waste will be rights guaranteed to everyone, rather than privileges; we know that our electric power has major public health impacts, typically on disadvantaged communities, that wind does not bear.	Section A.8.1 of the FEIS has been updated to address air quality benefits of the displacement of fossil fuel electricity generation by offshore wind. In addition, Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
98-004	It is an issue of whether we will be able to create jobs in the clean energy sector, rather than perpetuating an unproductive reliance on the stagnant coal, oil, and gas industry.	Appendix A, Section A.8.1 of the FEIS has been updated to address air quality benefits of the displacement of fossil fuel electricity generation by offshore wind.
99-001	I strongly support the Vineyard Wind and other proposed offshore wind projects. Offshore wind is critical for eliminating our greenhouse gas emissions and other harmful power plant emissions in the northeast. It will thereby improve public health, and slow climate change. It will do so while reducing wholesale electricity costs, and providing large economic development benefits.	Economics and employment were addressed in Section 3.7 of the SEIS and in Section 3.6 of the FEIS. Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
99-002	The proposed fishing lanes should be more than adequate.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
99-003	Turbine foundations will create habitat for more fish by creating artificial reefs.	Section 3.4 of the SEIS discussed the reef effect on finfish. Therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
100-001	reliance of Fossil fuels in the commonwealth, but also creating a healthier, safer, less expensive way of life for those who live in it. The wind farms will supply clean energy to 400,000 homes to not just the Vineyard but also to to	quality benefits of the displacement of fossil fuel electricity generation by offshore wind. Section 3.6.2.1 of the FEIS notes that the estimated job creation by Vineyard Wind in Massachusetts alone would be approximately
	Massachusetts, lowering energy bills across the board and saving taxpayers	3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during
	and ratepayers \$1.4 Billion in energy savings over the next 20 years of their	construction and about 80 jobs lasting at least 25 years (resulting in 2,000
	over the projects lifetime. I astly it will help both the Vinewards goal of	r i E job years) during operations. These data were also provided in the DEIS. Greenhouse gas emissions and climate change were evaluated in Section
	being totally reliant on renewable energy by 2040 and the Massachusetts	A.8.1 of the SEIS and the FEIS has been updated to include additional
	Goal of being carbon neutral by 2050.	information.
101-001	I strongly support the [Vineyard Wind] project and I am very concerned it	Thank you for your comment.
	will be delayed because the Vineyard Wind EIS is defective under NEPA for	
	failing to include a reasonable alternative that would largely eliminate the	
	major environmental impacts of the project. I believe the EIS will be	
	challenged in court, the BOEM will lose, and it will have to start the EIS	
101-002	The EIS states that the turbines will be installed on monopole or jacket	Sections 3.3 and 3.4 of the SEIS discussed the impacts of nile installation on
101-002	foundations. These foundations require scouring the seabed at the installation	seafloor habitats and on animals other than mammals. Section 3.5 of the SEIS
	site, destroying habitat, and they are driven into the seabed, creating	discussed potential impacts on marine mammals. All resources in Chapter 3
	significant sound effects and potential impacts on endangered whales. They	of the SEIS considered potential impacts from vessels, among other factors.
	require the use of new offshore crane ships to lift and install the turbines on	Section 3.3.7.3 of the DEIS and Section 3.5.1 of SEIS discussed habitat,
	the foundations. These ships also create environmental impacts.	noise, and vessel impacts to on marine mammals, including NARW, as a result of the expanded planned action scenario. Consultation with the NMFS
		under the ESA and MMPA has been completed. The NMFS Biological
		Opinion and Incidental Take Statement (including all Terms and Conditions
		and Reasonable and Prudent Measures) are discussed Section 3.4.2 and
		Appendix D of the FEIS. As discussed in the Section 3.4.2 of the FEIS and in the Diplograph Optimical by NOAA (NIMES 2020), no nonvestion level
		effects or reduced whale numbers are expected to occur as a result of the
		proposed Vinevard Wind 1 Project. Further, as discussed in the Biological
		Opinion, take of whale species is expected to involve harassment and some
		injury to a limited number of individuals during the course of pile driving
		activities. No other take of marine mammals, including NARW, is expected
		to occur as a result of the project. Additionally, Section 3.4.2 and Appendix
		D of the FEIS discuss updated mitigation and monitoring measures that
		would be implemented to avoid, minimize, and mitigate adverse impacts to
		af near NAPW presence use of sound attenuation technologies and f
		PSOs PAM soft start procedures shut down procedures vessel speed
		restrictions, injury and mortality reporting, and other measures. Further.

Index	Comment Text	Response
Number		
		should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS.
101-003	These impacts are eliminated if mobile jack-up platforms are used as foundations for offshore wind turbines. They do not require pile driving so create no significant sound effects. They are easily removed if they do create adverse environmental impacts. They do not require specialized construction ships and thus eliminate their environmental impacts. They have been used in the Gulf of Mexico for over 60 years and are proven to withstand Category 5 hurricanes. Jackup platforms can readily support turbines of up to 16MW, in depths to 300 feet, using proven offshore oil field construction with ABS-certified design. Thousands of jack-up platforms have been installed around the world The design is certified by ABS for wind turbines as well as met towers. The design is suitable for depth to 300 feet. In contrast, no monopole foundation for a wind turbine has ever been certified, much less built and proven, for water deeper than 100 feet.	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years. Section 2.3 of the FEIS also discusses potential effects of the proposed Project being hit by a hurricane. More precise forecasts of hurricane frequency in future climate scenarios are not likely to be significantly different from currently available data. Therefore, further updates to the FEIS are not warranted. Furthermore, Section 2.1.7 of the DEIS and Section C.5 in Appendix C of the FEIS includes information on alternatives considered but not analyzed in detail. One such alternative includes alternative foundation types, including jack-up platforms. Information is included in this section, as it was in the DEIS, specifying why alternate foundation types would not be feasible. Therefore, no change to the FEIS is warranted.
101-004	Jackup platforms are known, effective, and eliminate most of the impacts of constructing and decommissioning an offshore wind farm. Their use in the Vineyard Wind project will eliminate the most significant impact of concern on endangered whales protected by law. NEPA requires assessment of reasonable alternatives, especially concerning affected endangered species.	Section 2.1.7 of the DEIS and Section C.5 in Appendix C of the FEIS includes information on alternatives considered but not analyzed in detail. One such alternative includes alternative foundation types, including jack-up platforms. Information is included in this section, as it was in the DEIS, specifying why alternate foundation types would not be feasible. Therefore, no change to the FEIS is warranted.
101-005	The EIS and the supplement are defective because they do not include the reasonable and obvious alternative of mobile jackup foundations. It is very likely that the EIS will be challenged in court and will be found defective, and the EIS will have to redone. This will delay the project, costing the proponents and governments more money and raising the cost of the project which will be passed on to rate payers. BOEM must include a reasonable analysis of the foundation technology alternatives in the Final EIS to avoid this.	Chapter 2 of the DEIS, Chapter 2 and Appendix D of the SEIS and Chapter 2 of the FEIS includes a reasonable range of alternatives considered as well as alternatives considered but eliminated. Therefore no changes to the FEIS are warranted.
102-001	[The Vineyard Wind project] has tons of long-term beneficial impacts for the local community. For example this project will help to generate over 3,000 jobs for people nearby in the area. Provide clean, renewable and cost-effective electricity for 400,000 homes and businesses in Massachusetts. Additionally, within the first 20 years of the project ratepayers will be saving over \$1.4 billion in energy related costs.	Appendix A, Section A.8.1 of the FEIS has been updated to address air quality benefits of the displacement of fossil fuel electricity generation by offshore wind. Section 3.6.2.1 of the FEIS notes that the estimated job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS

Index	Comment Text	Response
103-001	I have been concerned about impending climate change since Earth Day	Thank you for your comment.
	inaction and the obstructionism and the ultimate failure of Cape Wind. No	
	solution is perfect, but Vineyard Wind and subsequent projects appear now	
	the only prospect for getting close to 100% renewable electricity for	
	Massachusetts by 2050. The negative impact on marine fisheries and	
	migratory birds have been well studied and in my opinion are dwarfed by the	
	earth as we know it (including the lives of fish and birds).	
104-001	It is imperative that we, as global citizens, wake up to the reality of climate	Greenhouse gas emissions and climate change were evaluated in Section
	change and aggressively pursue ways to limit the devastation. Any project	A.8.1 of the SEIS and the FEIS has been updated to include additional
	that focuses on clean, non-carbon energy should be brought on-line. Off-	information.
	shore wind is one of very few initiatives that can make a substantial impact.	
	shore wind can be.	
104-002	Slowing climate change would be a good enough reason to develop off-shore	New information quantifying averted emissions using AVERT relative to
	wind. When you add to that the benefits to public health from fewer	existing power generation has been added to Section A.8.2.1 of the FEIS.
	particulates (from burning fossil fuels), the value of this project should be	
105.001	Obvious.	These you for your comment
103-001	are critical to beloing us meet our energy demands, while reducing	i nank you for your comment.
	environmental harm caused by traditional fossil fuels energy sources.	
	After 10 years of planning, outreach, environmental reviews, and design	
	adjustments, it is time to move forward and join the rest of the world in	
	embracing off-shore wind technology.	
105-002	The projects will also provide jobs as they create a new industry for the state.	Job projections for the Vineyard Wind 1 Project are provided in Section 3.6.2
		of the FEIS, and were also provided in the DEIS. National projections of jobs
106.001		and investment for future offshore wind are provided in Section 3.6.1.
106-001	I agree with the BOEM decision to include cumulative impacts of the build out of additional offshare wind projects in neighboring lasse areas, and future	BOEM will comply with NEPA and all other procedural requirements
	projects in the Vineward 1 lease area. Approval and construction of the	waters BOEM will make a separate decision on each COP submitted
	Vinevard 1 project will open the door to additional offshore wind	waters. DOLWI with make a separate decision on each COT submitted.
	construction. How would future projects be limited once the first is in place?	
106-002	I agree with the draft EIS conclusions that the cumulative impact of the	Thank you for your comment.
	proposed action will be major for commercial fisheries, for hire fisheries,	
	navigation and vessel traffic, scientific research and studies, and military and	
	national security. The EIS conclusions are based on responses from the US	
	Marine Fisheries Service, the US Coast Guard and Navy, and marine	
1	research organizations.	

Index	Comment Text	Response
Number		DOEM determined that it is necessarily to service that if the necessary during the
106-003	I disagree with the draft assessment assumption that if the vineyard wind i	BOEM determined that it is reasonable to assume that if the proposed Project
	project is not built, it will be replaced with other offshole wild projects to meet state mandates. Other projects may be restricted for the same reasons	need to meet mandates/demand. This assumption also allowed BOEM to
	Vineward 1 may be rejected for BOEM permit approval. For example, if	assess the maximum impact scenario in terms of notential impacts
	Vineyard 1 was rejected because of visual impacts of being too close to	assess the maximum-impact scenario in terms of potential impacts.
	shore any future project a similar distance from shore could also be rejected	
106-004	I disagree with the draft FIS conclusion the cumulative impact of the	Although research findings in the SEIS have not been undated to address the
100 001	proposed action will have moderate negative impacts, and minor benefits on	14 MW turbines. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to
	tourism. In deciding the impact on viewshed the draft EIS quotes from a	include and evaluate the updated Vinevard Wind visual simulations. The
	BOEM commissioned study from Parsons and Firestone (page 3-86) The	simulations provide views of the 14 MW WTGs as well as simulations for
	summary of the study findings, and the study itself have several flaws. The	Vineyard Wind 1 wind turbines combined with other offshore wind
	Parsons/Firestone study used visualizations of a 579' tall turbine compared to	development. The simulations can be viewed at https://www.boem.gov/
	the Vineyard current plan of using 837' tall turbines, and the turbines will be	vineyard-wind-cumulative-visual-assessment. These simulations, combined
	as close as 14 miles from shore. The taller turbines have the equivalent	with the Parsons and Firestone study and other sources cited in the SEIS
	visual impact of moving the turbines 5 miles closer to shore in the	reflect the best available data, and are sufficient to support a reasoned choice
	Parsons/Firestone study, or equivalent to 10 miles. At 10 miles, survey	among alternatives; therefore, no further change to the FEIS is warranted.
	respondents stated their recreational beach experience would be worse with	
	turbines visible by a three to one margin (29 percent to 10 percent at 10 miles	
	shown in Figure 3 below). Trip loss is expected to be 14 percent compared	
106.005	to trip gain from curiosity trips of 2.6 percent (see study Figure 5).	
106-005	In deciding the impact on viewshed the draft EIS quotes from a BOEM	Section 3.10.1.1 of the SEIS notes the following findings from the
	commissioned study from Parsons and Firestone (page 3-86) The summary	Parsons/Firestone survey: (1) Reported trip loss (respondents who stated that
	of the study findings, and the study itself have several flaws curiosity trips	they would visit a different beach without offshore wind) averaged 8 percent
	are a one-time event, while trip loss tends to be permanent. Also, negative	when wind projects were 12.5 miles (20 kilometers) offshore, 6 percent when 15 miles (24.1 kilometers) offshore, and 5 percent when 20 miles (22.
	responses about visible turbines were followed up, and adjusted for a	15 miles (24.1 kilometers) offshore, and 5 percent when 20 miles (52
	correction. The Persons/Firestone study sample included neople involved in	knometers) onshore; and (2) About 2.0 percent of respondents were more likely to visit a beach with visible offenere wind facilities at any distance
	beach activities (65 percent) and people who simply visited the beach area	The SEIS did not have findings on one time heach visits from those who
	but not the beach itself (35 percent) who would not be expected to oppose	wanted to see wind turbines (the "curiosity trins"). The SEIS reflects study
	visible wind turbines. The Parsons/Firestone report stated property values	findings that the overall impact of visible WTGs on recreation would be
	would fall, but did not quantify by how much.	long-term, continuous, and adverse: that certain seaside locations on the
		southern coast of Nantucket and Martha's Vinevard could experience a small
		reduction in recreational and tourism activity; and that the visible presence of
		WTGs from limited shore locations would be unlikely to affect shore-based
		recreation and tourism in the geographic analysis area as a whole (as opposed
		to just the beach area). The Parsons and Firestone study and other sources
		cited in the SEIS reflect the best available data, and are sufficient to support a
		reasoned choice among alternatives; therefore, no change to the FEIS is
		warranted.

Index	Comment Text	Response
106-006	Contrast the Parsons/Firestone study with the study by Lutzeyer et.al. (2017),	Section 3.10.2.1 of the SEIS provided a finding from the cited study
	"The Amenity Costs of Offshore Wind Farms: Evidence from a Choice	(Lutzeyer et al. 2017), stating that nighttime views of aviation hazard lighting
	Experiment"3. The Lutzeyer study worked with beach home rental	for WTGs close to shore (5 to 8 miles [8 to 13 kilometers]) would adversely
	companies, and surveyed only people who had recently rented a house on, or	impact the rental price of properties with ocean views. This study did not
	near the beach. The study found 38 percent of beach renters would likely not	address the relationship between lighting, nighttime views, and tourism for
	come back to a beach with daytime visible turbines regardless of the distance	w IGS 15 or more miles (24.1 or more kilometers) from shore. Therefore, no
	with a rental discount depending on the distance	change to the FERS is warranted.
106-007	The Lutzever study also showed nighttime visualizations of red flashing	Section 3.10.2.1 of the SEIS stated that Vineyard Wind had committed to use
100 007	aircraft warning lights, and respondents stated even higher rates of objection	ADLS to reduce the time when nighttime aviation lighting is activated, and
	with 55 percent not likely to return to a beach with nighttime visible turbines.	that within the viewshed of the geographic analysis area, the use of ADLS for
	In a query to Parsons/Firestone I learned they also showed nighttime	offshore wind projects would reduce the impact of nighttime aviation safety
	visualizations but did not report the results. Since BOEM paid for the study	lighting to negligible. Vineyard Wind would also use white or light grey
	the nighttime survey results should be demanded by BOEM.	color as described in Appendix D to reduce visibility against the horizon.
		Therefore, no change to the FEIS is warranted.
106-008	Orsted has volunteered to install aircraft detection lighting systems (ADLS)	Section 3.10.2.1 of the SEIS stated that Vineyard Wind had committed to use
	that use radar to detect the presence of nearby aircraft to turn the warning	ADLS to reduce the time when nighttime aviation lighting is activated.
	lights on. Otherwise the lights are off reducing highttime lighting by up to 99	I herefore, no change to the FEIS is warranted.
	Administration that controls such systems up to 12 nautical miles from the	
	coast and by BOEM for greater distances	
106-009	While the ADLS mitigates this issue for the Vineyard Winds 1 project, no	Section 3.10.2.1 of the SEIS stated that Vineyard Wind had committed to use
	such commitment has been made for other lease areas. While no exact cost	ADLS to reduce the time when nighttime aviation lighting is activated. The
	could be determined for an ADLS could be determined there are several	SEIS also concluded that nighttime lighting of offshore wind turbines would
	references the systems are very expensive, and thus not be offered voluntarily	have an adverse impact on the visual quality of the landscape, but within the
	in every circumstance. For example, Orsted has discussed ADLS for the	viewshed of the geographic analysis area, the use of ADLS for offshore wind
	Skipjack project off the Delaware coast, but has not volunteered to install it.	projects would reduce the impact of nighttime aviation safety lighting to
	Without such systems the nighttime aircraft warning lights would constitute a	negligible. Therefore, no change to the FEIS is warranted.
106.010	major negative impact.	The DEIC and Cardiana 2 10 1 and 2 10 2 after CEIC addressed the science
106-010	Martha's vineyard and Nantucket will face a cumulative 56 miles of	The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the
	miles from seven separate proposed lease areas. The Martha's Vinevard	offshore wind development. The FFIS in Sections 3.9.1 and 3.9.2 has been
	Commission reports the combined direct economic impact of tourism on the	undated to address new visual simulations provided by Vinevard Wind that
	two islands was about \$333 million in 2016, with about 2.000 jobs, along	provide views of the Vineward Wind 1 14 MW wind turbines as well as
	with about \$26 million in state and local tax revenue. The U.S. Bureau of	simulations of Vineyard Wind 1 combined with other offshore wind
	Economic Analysis estimates an indirect multiplier of 1.43 bringing the total	development. The simulations can be viewed at
	economic benefit to about \$475 million a year.	https://www.boem.gov/vineyard-wind-cumulative-visual-assessment.
106-011	A 10 percent loss in net tourism using the Parsons/Firestone study would	Section 3.10.1.1 of the SEIS notes the following findings from the
	yield a Gross State Product loss of \$47.5 million a year. The Net Present	Parsons/Firestone survey: (1) Reported trip loss (respondents who stated that

Index	Comment Text	Response
Number		
	Value of the loss over the expected twenty year life of the Vineyard [Wind] 1 project is \$576 million at a 7 percent discount rate, and \$827 million at a 3 percent discount rate. Even a 1 percent tourism loss, given the lower population in the southern part of the islands, comes to about \$58 to \$83 million loss using the same discount rates. In either case, the cumulative impact is a potentially major impact, not a moderate impact as stated in the Draft Environmental Impact Study, and there are no offsetting minor benefits. The 1 percent loss becomes quite significant for projects closer to high impact tourist zones. I estimate the Net Present Value of a 1 percent loss of tourism in the Delaware and Maryland beach area would be about \$1 billion.	they would visit a different beach without offshore wind) averaged 8 percent when wind projects were 12.5 miles (20 kilometers) offshore, 6 percent when 15 miles (24.1 kilometers) offshore, and 5 percent when 20 miles (32 kilometers) offshore; and (2) About 2.6 percent of respondents were more likely to visit a beach with visible offshore wind facilities at any distance. The SEIS did not base findings on one-time beach visits from those who wanted to see wind turbines (the "curiosity trips"). The SEIS reflects study findings that the impact of visible WTGs on recreation would be long-term, continuous, and adverse, and while certain seaside locations on the southern coast of Nantucket and Martha's Vineyard could experience a small reduction in recreational and tourism activity; and that the visible presence of WTGs from limited shore locations would be unlikely to affect shore-based recreation and tourism in the geographic analysis area as a whole. Therefore, no change to the FEIS is warranted.
106-012	BOEM in Docket 2020-0005 is appropriately: Using cumulative impact of neighboring offshore wind projects to consider the environmental impact of the Vineyard Wind 1 project.	Thank you for your comment.
106-013	BOEM in Docket 2020-0005 is appropriately: Concluding that the cumulative impact of the proposed action will be major for commercial fisheries, for hire fisheries, navigation and vessel traffic, scientific research and studies, and military and national security.	Thank you for your comment.
106-014	BOEM needs to correct: The draft EIS conclusion the cumulative impact of the proposed action will have moderate negative impacts, and minor benefits on tourism is wrong. A 10 percent loss in net tourism using the Parsons/Firestone study would yield a Gross State Product loss of \$47.5 million a year. The Net Present Value of the loss over the expected twenty year life of the vineyard 1 project is \$576 million at a 7 percent discount rate, and \$827 million at a 3 percent discount rate. Even a 1 percent tourism loss, given the lower population in the southern part of the islands, comes to about \$58 to \$83 million loss using the same discount rates. In either case, the cumulative impact is a potentially major impact, not a moderate impact as stated in the Draft Environmental Impact Study, and there are no offsetting minor benefits	Sections 3.10.1.1 and 3.10.2.1 of the SEIS use the findings of the Parsons/Firestone survey to conclude that visible WTGs would have a long- term, continuous impact on the use and enjoyment of recreation and tourist facilities. Specifically, a small proportion of visitors to south-facing coastal or elevated locations may alter their behavior; however, this changed behavior is unlikely to meaningfully affect the recreation and tourism industry as a whole (Section 3.7.2 of the SEIS). Therefore, no change to the FEIS is warranted.
106-015	BOEM should require the Parsons/Firestone team release the results of their nighttime visualization survey as BOEM paid for the study, and adjust the authors conclusions taking into account the impact of taller turbines effectively making the turbines appear 5 miles closer.	Coastal nighttime views of WTGs would result entirely from the aviation safety lighting. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address night sky impacts, and Vineyard Wind has committed to use ADLS at night to greatly reduce nighttime impacts of aviation safety lighting on the wind turbines.

Index	Comment Text	Response
107-001	Vineyard Wind's project sets a precedent for responsible development that is critical to reduce fossil fuel emissions to stem the tide of the climate crisis.	Thank you for your comment.
107-002	The SEIS demonstrates that wildlife and habitat can be protected with offshore wind energy development.	Thank you for your comment.
108-001	The Supplemental Environmental Impact Statement affirms that offshore wind energy CAN be developed in a way that protects wildlife and habitat.	Thank you for your comment.
108-002	Among [Vineyard Wind's] benefits is the probable reduction of emissions from fossil fuel power-generating facilities and improved air quality.Climate change is omnipresent and offshore wind energy sources represents a sane and risk-aversive methodology.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
109-001	I support the proposed Wind Energy Facility because wind is an essential future resource for moving toward clean energy. Wind is free and wind turbines look better than fossil plants anyway!	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
111-001	Above all other considerations, we should get on with this wind project because it will seriously contribute to reducing air pollution and global warming while having amazingly little negative impact on our planets ecosystem.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
111-002	The proposed project is well situated to exploit abundant wind resources while being located near coastal cities that will use the energy produced efficiently.	Thank you for your comment.
111-003	In addition, it is my hope that jobs and related industrial support will arise in connection with this development benefitting the industries and workers of the Eastern United States.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
111-004	With respect to the additional transit lanes under consideration since 2019, it appears the additional lanes may hamper unnecessarily the viability and efficiency of the proposal causing delay, delay beginning more or less from 2010 that after all these years should come to an end. The 1 X 1 nautical mile turbine layout is an adequate response to commercial fisheries concerns. The Coast Guard study that found the additional lines unnecessary is appropriate and persuasive.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
112-001	we should get on with this wind project because it will seriously contribute to reducing air pollution and global warming while having amazingly little negative impact on our planet's ecosystem.	Greenhouse gas emissions, climate change, and air quality were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.

Index	Comment Text	Response
112-002	In addition, it is my hope that jobs and related industrial support will arise in connection with this development benefitting the industries and workers of the Easter United States.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
112-003	it appears the additional lanes may hamper unnecessarily the viability and efficiency of the proposal causing delay, delay beginning more or less from 2010 that after all these years should come to an end. The 1 X 1 nautical mile turbine layout is an adequate response to commercial fisheries' concerns. The Coast Guard study that found the additional lines unnecessary is appropriate and persuasive.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
113-001	The proposed project is well situated to exploit abundant wind resources while being located near coastal cities that will use the energy produced efficiently.	Thank you for your comment.
113-002	In addition, it is my hope that jobs and related industrial support will arise in connection with this development benefitting the industries and workers of the Eastern United States.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
113-003	Above all other considerations, we should get on with this wind project because it will seriously contribute to reducing air pollution and global warming while having amazingly little negative impact on our planet's ecosystem.	Greenhouse gas emissions, climate change, and air quality were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
113-004	With respect to the additional transit lanes under consideration since 2019, it appears the additional lanes may hamper unnecessarily the viability and efficiency of the proposal causing delay, delay beginning more or less from 2010 that after all these years should come to an end. The 1 X 1 nautical mile turbine layout is an adequate response to commercial fisheries' concerns. The Coast Guard study that found the additional lines unnecessary is appropriate and persuasive.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
114-001	I fully support developing clean energy potential off our shores. The Block Island Wind Farm demonstrates the feasibility of this job-creating, wildlife- friendly energy opportunity along the Atlantic Coast. It is so important for combatting climate change that we advance the nation's first utility-scale offshore wind project.	Thank you for your comment.

Index	Comment Text	Response
114-002	Projects contracted along the Atlantic-coast could generate \$25 billion in annual economic output and 83,000 well-paying jobs by 2030 alone. Whether we reach these goals will depend on swift action, starting with the approval of Vineyard Wind's 800 megawatt offshore wind project.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
114-003	The untapped offshore wind resource along the Eastern Seaboard is one of the most powerful in the world. Offshore wind is within reach of some of the most densely populated areas in the country where energy demands are high and new energy options are few.	Thank you for your comment.
114-004	We can already see the effects of climate change threatening our wildlife and coastal communities. It's time to chart another energy course, and embrace the environmental and economic benefits of responsibly developed offshore wind power. I urge you to act expediently to move the Vineyard Wind project forward and ensure responsibly developed offshore wind power plays a major role in our nation's energy future.	Economics and employment were addressed in Section 3.7 of the SEIS and in Section 3.6 of the FEIS. Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
115-001	I live in MA and often visit Martha's Vineyard and areas near the site and have NO reservations [about the Vineyard Wind project] -except for the ridiculously slow pace of this process in completing a project that should have been done a decade ago!!!	Thank you for your comment.
116-001	I am writing in support of the proposed Vineyard Wind wind farm. I am very concerned about the effects of climate change and believe we must do everything we can to invest in renewable energy sources and reduce our dependence on fossil fuels The Northeast region must diversify our alternative energy sources, and wind technology is a vital part of that portfolio.	Thank you for your comment.
116-002	I support the plan with the 1x1 nautical mile turbine layout without adding additional transit lanes, as this was deemed unnecessary in the recent US Coast Guard Study and would reduce the carbon reduction potential.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
117-001	As executive director of ACE MV, Adult and Continuing Education of Martha's Vineyard, I am excited to have welcomed our first cohort of students this January, entering into our new certificate program to earn a credential through Bristol Community College as Offshore Wind Technician- specifically to support the new offshore wind initiatives. We enrolled 18 Martha's Vineyard residents to study in a 2-3 year program that will directly prepare them as technicians working on offshore wind turbines. We expect to welcome our second cohort of students in January 2021, and will continue	Section 3.6.2 of the FEIS has been updated to include the Bristol Community College offshore wind training program as one aspect of local investment in the offshore wind industry. As noted in Section 3.6.2, the Vineyard Wind 1 Project would create both short-term construction jobs within the geographic analysis area and long-term jobs. Many of the estimated 80 long-term, year- round operational jobs would be located on Martha's Vineyard due to the location of the operations and maintenance facility and use of Vineyard Haven harbor.

Index	Comment Text	Response
Number		
	this educational program into the future to meet the needs of renewable	
115.000	energy in southeast Massachusetts.	TT1 1 0
117-002	There is no comparison between offshore wind and mountaintop removal; the	Thank you for your comment.
	erection of turbines in the ocean and the maintenance of them will have a	
	significantly lower environmental impact and is a much more welcome	
110.001	process than pursuing coal or other fuels.	
118-001	According to the Audubon Society, this habitat warming is having a more	Thank you for your comment.
	devastating effect on birds than wind farms on the eastern seaboard.	
118-002	Now I see [commercial fishermen's] expressed need for a 2-4 mile wide	Section 2.5 of the FEIS has been added which includes the agency-preferred
	transit lane through wind farms in order for them to get from one side to the	alternative.
	other. This cannot be true. No self-respecting sea captain needs even a mile	
	wide channel never mind a 2-4 mile one.	
118-003	To preserve planet Earth for humans and all animal life we must convert	Thank you for your comment.
	from energy based on burning fossil fuels to energy based upon renewable,	
	sustainable sources such as solar panels and wind farms [including Vineyard	
	Wind].	
119-001	Our region's economic vitality and quality of life are interdependent with our	Thank you for your comment.
	natural environment. Through our green initiative, we have undertaken	
	efforts to address climate change, leveraging all of our resources. As noted in	
	the SEIS, "the Proposed Project and other future offshore wind projects will	
	in fact probably lead to reduced emissions from fossil fuel power-generating	
	facilities and benefit air quality."	
119-002	We commend the Bureau of Ocean Energy Management (BOEM) and the	Thank you for your comment.
	federal and state agencies who have engineered and conducted such an	
	engaged, collaborative process. We also commend all involved for their	
	collaboration in arriving at approaches that respect the concerns of all major	
	stakeholders.	
119-003	Thank you for all you have done to move this project to the point where it	Thank you for your comment.
	can most optimally achieve its objective, while minimizing concerns relative	
	to related industries, natural wildlife, ocean life and surrounding	
	communities.	
120-001	Offshore wind resources in the Atlantic Ocean are an important resource for	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
	the densely populated Eastern seacoast. The offshore wind industry could	several sources of projected employment and investment resulting from
	create many thousands of jobs in both development and maintenance of this	growth of the wind energy industry along the Atlantic coast. While the
	non-polluting resource. And save rate payers money while avoiding the fast	estimates are national, jobs are anticipated to be concentrated in and near the
	spreading environmental crises.	east coast states that would host offshore wind. This information was also
		included in the SEIS (Section 3.7.2.1), and the FEIS provides additional
		detail and analysis.

Index	Comment Text	Response
Number 120-002	Offshore wind energy can be developed in a manner that protects wildlife and habitat, and will by reducing climate change protect these and other habitats from destruction. The proposed Project (and other future offshore wind projects) will probably lead to reduced emissions from fossil fuel power-generating facilities and benefit air quality.	Greenhouse gas emissions, climate change, and air quality were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
120-003	Vineyard Wind 1 will avoid emissions of almost 1.7 million tons of carbon dioxide per year, the equivalent of removing 325,000 cars off the road	Greenhouse gas emissions, climate change, and air quality were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
120-004	Vineyard Wind along with other developers of the New England Wind Energy Areas in late 2019 proposed to advance all future projects in their lease areas with a uniform 1 x 1 Nautical Mile (NM) layout. The United States Coast Guard (USCG) has since determined that this type of "standard and uniform grid pattern" layout would "maximize safe navigation"	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
120-005	The commercial fishing industry proposal of additional transit lanes (reflected in Alternative F of the SEIS), which would eliminate 30% of the areas of the area's potential energy production, 3,300 megawatts, or enough to power 1.65 million homes. This is unnecessary and unacceptable	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
121-001	Offshore wind energy generation is one of many pieces in the very large puzzle needed to ensure a safe and secure world for future generations. Therefore, the Vineyard Wind Project MUST happen. Massachusetts must lead the country in a clean energy revolution for offshore wind because revolutions are what we do best!	Thank you for your comment.
122-001	I support the Vineyard Wind project for a variety of reasons, chief among which is the positive impact it will have on our environment. Massachusetts should lead the way in converting our energy dependence from fossil fuels to renewables, and the proposed project is a major step in accomplishing that leadership.	Thank you for your comment.
122-002	The Vineyard Wind project will also result in a substantial number of high- quality jobs. Vineyard Wind is an outstanding project to put people to work helping to convert to renewable energy and I support it fully.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
123-001	the [Massachussetts Maritime] academy agrees with the New England Wind Energy Area (NE WEA) leaseholder's plans to provide 1+ mile spacing between turbines, the largest space between turbines of any wind development currently operating on the globe, to allow for safe navigation and fishing within the wind farm.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		_
123-002	Wind Power generation being considered along the Atlantic Coast will have a direct and positive impact on reduction of greenhouse gasses while providing an economic stimulus measured in billions of dollars.	Economics and employment were addressed in Section 3.7 of the SEIS and in Section 3.6 of the FEIS. Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
123-003	Wind Power generation has been accepted and proven effective for 20 years in Europe. The concept of offshore wind power generation off the Atlantic Coast must now go forward with necessary permitting, enthusiasm and support from all involved parties.	Thank you for your comment.
124-001	I support the Vinyard Wind project to go forward asap without the proposed reductions in density.We need the renewable energy and this has been studied and debated for decades.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
125-001	I support this project not only because of the thousands of jobs it will create,	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
125-002	but because it will give Massachusetts a chance to be a part of the solution when it comes to fighting climate change by reducing greenhouse gas emissions.	Thank you for your comment.
125-003	Not only does this [Vineyard Wind Project] have a positive effect on the climate it also has many public health benefits as many communities suffer numerous negative effects on their health due to carbon emissions.	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
126-001	Projects like these are critical to the future of our country.	Thank you for your comment.
127-001	I am appealing to you to support the future of clean energy. A large scale offshore wind farm such as Vineyard Wind would be the right step in that direction.	Thank you for your comment.
127-002	I urge you to support the 1x1 nautical mile uniform turbine layout. This compromise was proposed jointly by developers in response to commercial fisheries' concerns. This compromise will result in a 30% reduction of potential energy production across wind areas (~13,500 megawatts will be eliminated). This will Create hundreds of 1 nautical mile (larger than a mile) wide lanes for fishing and transit within MA & RI wind farms.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
127-003	A recent study showed that the US Coast Guard support the wind farm and opposed adding additional transit lanes within wind farms. This option reduces offshore wind buildout (additional ~4,000 megawatts eliminated) which will massively impair carbon reduction potential	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
127-004	It [additional transit lanes] will also Impair states' abilities to meet renewable	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative
127-005	Vinevard Wind has made agreements with the host community much like the	Thank you for your comment
127 005	ones Nantucket made with Harwich years ago to have electricity sent over to	Thank you for your common.
	the Island from Harwich MA. That agreement has worked great all these	
	vears I foresee the wind farm agreement made by Vinevard Wind with the	
	host community on Cane will work as well. The parties involved have all	
	signed on so therefore I don't see a stumbling block for this project to move	
	forward	
127-006	This offshore wind form will create jobs provide ratenaver savings and	Thank you for your comment
127-000	reduce carbon emissions on a large scale	Thank you for your comment.
128-001	I know the Vinevard Wind project in its' present form is the right project at	Thank you for your comment
120 001	the right time. The scaled back version is a good compromise that should	
	now move forward. As I look at the Nantucket project more than 25 years	
	later I know we made the right decisions and you would be hard pressed to	
	find any residual impact at all.	
129-001	State of the art wind turbines along the Atlantic Coast will be among the	Section 3.7.1 and 3.7.2 of the SEIS include, as a beneficial impact of offshore
	most, if not the most, efficient means of generating electricity. That means	wind, the long-term contribution of offshore wind to energy security and
	we can have the direct benefits of low-cost power, more jobs, more revenue	resiliency. In addition, Section 3.6.1.1 of the FEIS provides estimates from
	for governments and adequate profits for investors.	several sources of projected employment and investment in offshore wind
		resulting from growth of a wind energy industry along the Atlantic coast.
		While the estimates are national, jobs are anticipated to be concentrated in
		and near the east coast states that would host offshore wind. This information
		was also included in the SEIS (Section 3.7.2.1), and the FEIS provides
		additional detail and analysis.
129-002	But of much greater significance will be the indirect benefits, or externalities,	Thank you for your comment.
	of less harm to public health and less property damage from forest fires,	
	floods and strong winds. The current Covid crisis provides a painful example	
	of the kinds of threats that will be faced in the future if we fail to cut carbon	
	emissions.	
130-001	An emphasis on wind energy is crucial in protecting our planet as we wane	Thank you for your comment.
	off environmentally harmful energy sources. The additional benefits to the	
	surrounding economy further show how important and impactful this project	
	will be.	
131-001	am concerned about properly tracking climate changes because it is key to	Thank you for your comment.
	helping all stakeholders understand the urgency of moving forward on this	
	project and the wind facilities that are scheduled to be installed along the	
	coast.	

Index Number	Comment Text	Response
132-001	If we want to avoid catastrophic climate collapse, we must stop burning fossil fuels today. Offshore wind gives us an immediate and technologically possible solution The coast of New England is no different. Warmer waters are already affecting marine life, and if this process continues, our entire fishing ecosystem might collapse. It is not the question of "how will offshore wind affect the fishing industry?". The question we have to ask is "will we build the offshore wind fast enough to prevent the marine life collapse going on right now?"	Thank you for your comment.
133-001	The fishing issue is bigger than that represented by this area of the Atlantic, and needs to be viewed in the context of the impacts of Ocean Acidification, declining marine environments and fish stocks.	The effects of ocean acidification in the context of climate change were assessed in the SEIS and the FEIS. The conditions of marine environments and fish stocks were also assessed in order to establish baseline conditions against which proposed Project impacts could be analyzed.
133-002	We can do everything possible to accommodate the fisherman and still we will lose in the end because bigger forces are at work impacting our fish. And yet, the fishermen need help, but it goes beyond limitations that possibly will impact them on these projects.	Thank you for your comment.
133-003	I call on all the New England states to work with the fisherman and help them maintain their livelihoods. New England has a long tradition of working as a community to help fellow citizens. We should not back away from that now. In other words, I do not believe this project can be viewed solely in the context of the microenvironments in which these wind farms will be located.	Thank you for your comment.
133-004	As for the impacts on Military and Science – they have areas where they worked that could be impacted. It's a big ocean. If the priority is high enough why can't they move their boundaries to accommodate their training exercises, and their monitoring activities? This may be naive, however, all of these issues were created by people and can be changed by people. This project should not be delayed because of human created obstacles.	Section 3.12 of the FEIS addresses potential impacts to military and national security uses and scientific research and surveys. BOEM coordinates with the Department of Defense and the U.S. Coast Guard throughout the process of identifying lease areas and approving COPs in order to identify and minimize conflicts with military and national security concerns. As described in the FEIS, the level of impact to military and national security uses is anticipated to be minor for the Proposed Action, and moderate for USCG SAR operations. In the context of reasonably foreseeable environmental trends and planned actions, the overall level of impact to military and national security uses is anticipated to be minor, and major for USCG SAR operations.
133-005	We know by now that when a new technology—like Wind, or—looking in another arena like Facebook comes into a space there will be unforeseen consequences that we can't even imagine—even though BOEM has done as thorough of a job as possible with what we know today. Vineyard Wind is a company that has deep experience with a demonstrated track record who is able to anticipate some of the issues we may not even see.	Thank you for your comment.

Index Number	Comment Text	Response
133-006	The East Coast has a need for short and long term energy supplies, and given the strategic priorities of our states – clean energy. Vineyard Wind is here to provide it. I urge you to take the greater context into account in moving this project forward.	Thank you for your comment.
134-001	Vineyard Wind 1 will supposedly create roughly 3,600 jobs for local residents in Martha's Vineyard as well as the state of Massachusetts over time	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Most of these jobs would be in southeastern Massachusetts, and many of the estimated 80 long-term, year-round operational jobs would be on Martha's Vineyard.
134-002	and at the same time it will be removing 1.7 million tons of carbon dioxide from the atmosphere which is an environmentally beneficial task that helps push the world towards using renewable and reusable sources of energy.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information.
134-003	Over 400,000 homes and businesses in Massachusetts will have access to this new, clean, and renewable source of energy.	Thank you for your comment.
134-004	A prominent issue in regards to transitioning fully to wind energy, is the view. Many people believe these WTG's are hideous to the eye, and do not want them visible around the radius of their homes.	Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations and night sky impacts. Vineyard Wind has committed to use ADLS at night to greatly reduce nighttime impacts of aviation lighting. Vineyard Wind would also use white or light grey paint color as described in Appendix D to reduce visibility against the horizon. New visual simulations provide views of the 14 MW WTGs as well as simulations for Vineyard Wind 1 wind turbines combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment
134-005	Taking this into consideration, BOEM has created a way to limit the visibility of these turbines through ALDS, or Aircraft Detection Lighting System, which will greatly limit the visual impact of lights on the turbines. The paint is also non - reflective and off-white, further decreasing visibility.	Section 3.10.2.1 of the SEIS stated that Vineyard Wind had committed to use ADLS to reduce the time when nighttime aviation lighting is activated, and that within the viewshed of the geographic analysis area, the use of ADLS for offshore wind projects would reduce the impact of nighttime aviation safety lighting to negligible. Vineyard Wind would also use white or light grey color as described in Appendix D to reduce visibility against the horizon. Therefore, no change to the FEIS is warranted.
134-006	For economic reasons, studies have shown that European offshore wind facilities have not had an impact in the number of tourists they typically see. On top of this, it has been stated that Block Islands WTG's provide an excellent place for fishing and shell fishing. 68% of respondents indicated that the visibility of turbines would neither improve or worsen their experience. This is over 50% of respondents.	The comment refers to one of the findings from the study "Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism" (Parsons et al. 2018); other results of the study are summarized in Section 3.10.1 of the SEIS. In addition, a 2018 study and literature review used in the SEIS and referred to in this comment (Smythe et al. 2018) provided material summarized in Section 3.10.1 of the SEIS. Therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
134-007	Overall, after years of planning and researching, BOEM has created a plan to	Thank you for your comment.
	vastly benefit not only the environment, but the economy and living	
	conditions of hundreds of thousands Massachusetts residents.	
135-001	we believe that the Supplemental Environmental Impact Statement (SEIS)	Thank you for your comment.
	submitted in December 2019 fully addresses the concerns which were raised	
	by other stake holders when reviewing the first EIS. We strongly urge BOEM	
	to approve this SEIS and allow this project, which is critical to the entire US	
	offshore wind industry, to move forward.	
135-002	Specifically, we want to point out that Vineyard Wind has revised the overall	Section 2.5 of the FEIS has been added which includes the agency-preferred
	grid layout for the placement of turbine towers to allow for 1 nautical mile (alternative.
	NM) between each tower, in response to commercial fishing industry	
	concerns for vessels transiting the lease site. We recognize their legitimate	
	worries for how the project will impact fishermen. It is clear that Vineyard	
	Wind has taken their issues seriously.	
135-003	The re- design of the layout, which has the support of the United States Coast	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Guard, will come at considerable expense to the developer. The longer	alternative.
	transmission cables will incur costs, as well as the operational cost of 84	
	borings at the new locations. And the company has committed a further \$17	
	million to a fund to mitigate any impacts to fishing that may occur.	
135-004	However, we believe the current demand by commercial fishing interests for	Section 2.5 of the FEIS has been added which includes the agency-preferred
	a 4 NM wide transit corridor is unnecessary and will make the project	alternative.
	financially unfeasible. More to the point, it will jeopardize the future of	
	offshore wind, with major negative impacts immediately for both jobs and	
	the regional economy.	
135-005	Vineyard wind will help Massachusetts produce its own clean renewable	Thank you for your comment.
	energy.	
	For generations, the citizens of the Commonwealth have been dependent on	
	imported fossil fuels to power our homes and economy, and always sending a	
	sizeable portion of our earnings to out-of-state power generators. Wind	
	energy will reverse that outward cash flow, and reduce carbon emissions as	
125.000	Well. The X'_{1} is the C_{1} if C_{1} is the C_{1} is	
135-006	I ne vineyard wind project offers lifelong careers with excellent wages and	Section 3.6.2 of the FEIS lists the grants and community programs that the
	trade union, we know that offeners wind is not about "a job" it's a concerning	vineyard wind I Project is committed to, including job training for offshore
	a growing industry. Today, appropriate him and technical contificate	wind. This information was also provided in the DEIS.
	a growing industry. Today, apprentices nips and technical certificate	
	demonstrated meaningful commitment to workforce development with its	
	Windward Force Fund. The company has contributed more than \$200,000 to	
	Windward Force Fund. The company has contributed more than \$200,000 to	
	IMass Clean Energy Center Workforce Grant program. Pile Drivers Local 56	

Index	Comment Text	Response
Number		
	Was awarded \$100,000 in May 01 2019 by the CEC to train members in the	
	Global wind Organisation (GwO) Basic Olishore Safety program. We have	
	so far graduated 24 men and women, journeymen and apprentices from the	
	training facility at Mass Martille Academy, with plans to train at least 50	
	more. Vineyard wind both tarks the tark and warks the wark in its	
125.007	commitment to growing the workforce in New England.	
135-007	Wind energy substantially reduces the amount of heat-trapping gases we put	Thank you for your comment.
	into the atmosphere. This project offers us the opportunity to make a	
	difference in our own lives, but more importantly, in the lives of our children	
10 (001	and grandchildren.	
136-001	AIM strongly supports Vineyard Wind's proposal and its commitment to	Section 2.5 of the FEIS has been added which includes the agency-preferred
	building the turbines in a grid with I nautical mile (NM) between turbines in	alternative.
	the east-to-west direction and 1 NM between turbines in the north-to-south	
	direction. The United States Coast Guard (USCG) has since determined that	
	this type of standard and uniform grid pattern layout would	
	maximize safe navigation.	
136-002	AIM strongly supports the development of offshore wind energy as a major	Thank you for your comment.
	new source of electric power for Massachusetts consumers. Directed by state	
	legislation, the state has undertaken several competitive procurements of	
	offshore wind energy in recent years. The long-term power contracts that	
	have emerged from these procurements will deliver large amounts of carbon-	
	free electricity for many years to come to Massachusetts consumers,	
	including many of our member companies.	
136-003	The construction and operation of Vineyard Wind I will yield economic	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
	benefits to Massachusetts. Nearly 4000 jobs will be created in the area,	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
	directly in construction and operation and indirectly through existing and	3,600 FTE job years, including 1,100 to 1,550 job years during construction
	new supply chains. These jobs and industries will not exist if Vineyard Wind	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
	is not approved and construction does not begin soon.	during operation. These data were also provided in the DEIS. Additional
		indirect and induced job estimates are provided in Tables 3.6-3 and 3.6-5.
136-004	Further, the benefits will be more than local. Certain materials cannot be	Because the FEIS focuses on the geographic analysis area, it uses the
	sourced locally and will need to be purchased throughout the Northeast	Vineyard Wind 1 Project job projections for Massachusetts, provided in
	region and maybe throughout the United States, creating additional demand	Section 3.6.2.1. Although not addressed in the FEIS, it is true that the project
	and jobs.	would also generate business from purchases outside the immediate area.
136-005	Also, the carbon reduction benefits - estimated to be the equivalent of	Thank you for your comment.
	removing 325,000 cars from the road - will benefit the entire United States	
	and contribute to a necessary worldwide reduction in greenhouse gas	
	emissions that will help mitigate climate change. The benefits in jobs and to	
	the environment will accrue even more once additional offshore wind	
	projects follow Vineyard Wind's example and begins construction soon after.	

Index	Comment Text	Response
Number		
136-006	We can no longer delay offshore wind development – too much economic	Thank you for your comment.
	and environmental benefits depend on it and the Vineyard Wind project has	
	been studied extensively. Without it there is no chance we will stop the	
	negative impacts of climate change. We urge the Bureau of Ocean Energy	
	Management to do everything within its power to make Massachusetts and	
	the United States the new leader in clean energy development.	
137-001	I'm here today to speak in support of the Vineyard Wind project because we	Thank you for your comment.
	believe that clean, renewable energy is essential to preserving public health,	
	and protecting both our facilities and the communities we serve from the	
	impacts of climate change. Offshore wind also has the potential to reduce	
	New England's notoriously high energy costs and help energy-intensive	
	businesses like health care recover from the financial impacts of the COVID	
	crisis.	
137-002	Over the last few months, we have seen all too clearly the disproportionate	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of
	impact that COVID has had on the lives and health of low-income	fossil fuel consumption and resulting degraded air quality on different racial
	communities and communities of color who are disproportionally burdened	groups, as well as different income groups, as well as benefits from reduction
	by air pollution from the burning of fossil fuels, making them more	of fossil fuel power generation displaced by offshore wind energy (including
	vulnerable to the impacts of this deadly respiratory disease.	the proposed Project and other projects).
137-003	In order to effectively combat climate change, and protect the health of the	Thank you for your comment.
	communities our hospitals serve, we must not only transition to renewable	
	energy but do so in a way that brings new renewable energy sources here to	
	our region to replace the power plants that are burning fossil fuels and	
	harming our health.	
137-004	Power from offshore wind is not just cleaner, it could also reduce the cost of	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
	energy, which would help energy-intensive businesses like health care	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
	recover more quickly from the financial impacts of COVID. Vineyard 1	3,600 FTE job years, including 1,100 to 1,550 job years during construction
	alone is expected to save ratepayers more than \$1.4 billion in energy-related	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
	costs over the life of the project, money that is essential for our region's	during operation. These data were also provided in the DEIS. Appendix A,
	economic recovery, and our future economic prosperity. These benefits are,	Section A.8.1 of the FEIS has been updated to address air quality benefits of
	of course, in addition to the 3,600 jobs, many unionized, that this project will	the displacement of fossil fuel electricity generation by offshore wind.
	create which will also contribute to our region's economic recovery.	
137-005	I also want to briefly touch on the topic of the proposed transit lanes	Section 2.5 of the FEIS has been added which includes the agency-preferred
	envisioned in alternative F. The size of these lease areas has already been	alternative.
	substantially reduced, and the spacing between turbines has been	
	substantially increased, to safely accommodate fishing and other ocean uses.	
	The addition of the proposed transit lanes on top of those accommodations	
	would mean 4,000 fewer megawatts of wind power coming online which,	
	according to Health Care Without Harm's "Energy Climate Calculator"	
	would translate to an estimated additional 52.5 premature deaths from air	

Index Number	Comment Text	Response
	pollution and an additional 25.3 ER visits for asthma attacks every year. or 1325 premature deaths from air pollution and 625 ER visits over the 25-year life of the project.	
137-006	As we know, the health impact of our existing fossil fuel powered electric generation falls disproportionately on low-income communities and communities of color. By failing to consider these impacts - impacts that could be mitigated by generating more clean renewable offshore wind power, I'm concerned that this analysis fails to account for the negative impacts on Environmental Justice communities that alternative F would have. This is, of course, on top of lost jobs and business for our region due to the smaller project that would result.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects). Sections 2.2.2, 3.6.4, and 3.7.4 of the FEIS have been revised to note that Alternative F may reduce the capacity of offshore wind power generation in the RI and MA Lease Areas, resulting in a reduction of the potential benefits to minority and low income populations that could result from reduced fossil fuel power generation.
137-007	New England is blessed with some of the best offshore wind resources on the planet, which projects such as this can turn into an abundant source of clean inexpensive energy that can power a healthy, resilient, and economically thriving future for our region. We urge you to allow this critical project to move forward without further diminishment or delay.	Thank you for your comment.
138-001	In my opinion and speaking for millions of people on this Earth who support renewable energy, this project must go through. We must devote our time to renewable energy and this large wind project would provide energy that would help Americans be less dependent on fossil fuel energy. The U.S is so far behind in renewable energy compared to many parts of Europe. We must be diligent and support this project now so that it can be started and completed in a short time span.	Thank you for your comment.
138-002	I have seen the renderings of what the turbines will look like from shore, they are barely visible and will not have a large impact on enjoyment of Martha's Vineyard's oceans.	The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the offshore wind development. The FEIS in Sections 3.9.1 and 3.9.2 has been updated to address new visual simulations provided by Vineyard Wind that provide views of the 14 MW wind turbines as well as simulations of Vineyard Wind 1 combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment.
138-003	Additionally, greenhouse gas emissions from traditional energy sources are acidifying our ocean, decreasing the population of marine creatures like Scallops and will hurt the fishing industry.	The SEIS and FEIS discuss the baseline conditions of marine organisms, including the effects of climate change and ocean acidification.
139-001	BOEM has conducted a fair and balanced proceeding that recognizes the protection of critical environmental resources, navigation, commercial fisheries, development of clean sustainable technologies, and the cultivation of economic activities to create high-tech, clean energy jobs in the US. The	Thank you for your comment.

Index	Comment Text	Response
Number		
	approach includes a thoughtful siting process using collaborative	
	communication with all stakeholders.	
139-002	CCAT appreciates the solutions-oriented planning process to avoid,	Thank you for your comment.
	minimize, and mitigate impacts on navigation, wildlife, and commercial	
	fisheries.	
139-003	There is public need for the project to develop renewable energy resources	Thank you for your comment.
	that have zero emissions, are sustainable, and indigenous to the US.	
139-004	There is also public value for the project that will provide significant	Section 3.6.2.1 of the FEIS has been updated to identify completed and
	economic value to transform port cities, including Bridgeport, New London,	planned improvements to ports within the geographic analysis area. Although
	and New Bedford into offshore wind hubs with direct and indirect supply	the discussion does not include Bridgeport and New London, because the
	chain jobs.	Vineyard Wind 1 Project does not intend to use these ports, the discussion in
		3.6.1 provides projected investment resulting from east coast offshore wind
		development, which would include port improvements as well as supply
		chain (manufacturing and logistics) investments.
139-005	CCAT recognizes the potential for long term environmental effects and	Thank you for your comment.
	irreversible and irretrievable commitments of resources associated with the	
	project and believes that they have been avoided, minimized, mitigated, and	
	outweighed by the public need and benefits for the proposed project.	
139-006	CCAT recognizes the opportunites to find alternatives to the proposed project	Section 2.5 of the FEIS has been added which includes the agency-preferred
	and project development components and believes that all alternatives have	alternative.
	been adequately addressed and the proposed project presents the best	
	alternative to achieve the desired public benefits for rewnewable, sustainable	
	indigenous energy.	
139-007	In terms of alternatives associated with the grid layout, we are in general	Section 2.5 of the FEIS has been added which includes the agency-preferred
	agreement that a standard and uniform grid pattern should be designed and	alternative.
	adopted for offshore wind development without delay. It appears that the	
	proposed 1.0 nautical mile by 1.0 nautical mile grid layout (1 X 1 NM) is	
	reasonable for the development of the proposed wind project and will provide	
	an adequate margin of safety for commercial fishing and navigation, and that	
	no additional navigational lanes will be necessary. The TX TNM grid layout	
	has advantages to provide to navigation, turning, and predictable passage for	
120.000	both large commercial ships and fishing vessels.	
139-008	In addition to this uniform grid layout, the wind facilities will have marking,	The FEIS addresses this comment in Section 3.11.2.
	lighting,	
	electronic communications, navigational charting (paper and electronic), and	
120,000	pulletins with notice to mariners.	
139-009	we are also pleased to see a decommissioning plan for all facilities. The	Section 2.5 of the FEIS has been added which includes the agency-preferred
1	downside to the proposed layout spacing is that it reduces the area available	alternative.

Index Number	Comment Text	Response
	for facilities which reduces the opportunity to develop zero emission electric energy power.	
139-010	Nonetheless, the 1 X 1 NM grid layout is a reasonable trade off and balances the need for these facilities with protection of environmental resources, fisheries and commercial fishing, navigation, and recreational use of the site area.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
139-011	CCAT does not support the widening of this 1 X1 NM spacing or the creation of a four-mile transit corridor, which will further reduce the availability of the project area to produce renewable power.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
139-012	Unless BOEM finds hard credible evidence that requires a corridor wider than the 1 XI NM grid, we believe that the proposed grid is more than adequate for navigation and commercial fisheries and that this proposal for leasing and development should be approved without delay.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
139-013	we find that the project is needed; that potential impacts have been avoided, minimized, mitigated, and outweighed by the public need and benefits for the proposed project; and that alternatives have been fully addressed. We thank BOEM for this opportunity to comment and urge BOEM to approve the project, grid layout, and lease without delay.	Thank you for your comment.
140-001	Large-scale renewable energy projects like this are long overdue in the United States. Other countries, particularly in Scandinavia, have many established successful wind power projects that are contributing significantly to energy productionwhile reducing carbon dioxide emissions that would be generated by fossil fuel based generating plants. The Vineyard Wind Project will be a model project that may lead to similar projects in other places.	Thank you for your comment.
141-001	As climate change is the seminal challenge of our generation, any clean energy development is essential to mitigating its impactsOffshore wind energy is a vital resource that must be tapped in order to meet New England's climate change mitigation goals.	Thank you for your comment.
141-002	The Supplemental Environmental Impact Statement (SEIS) for Massachusetts' Vineyard Wind 1 project sets a precedent for all future offshore wind projects across the nation. The SEIS reinforces our belief that offshore wind energy can be developed in a manner that protects wildlife and habitat every step of the way, and that projects such as Vineyard Wind's should advance as quickly as responsible development will allow.	Thank you for your comment.
141-003	The SEIS states that, "the proposed project and other future offshore wind projects will in face probably lead to reduced emissions from fossil fuel powergenerating facilities and benefit air quality." It states that in the absence of offshore wind development, "additional, more polluting, fossil fuel energy	Thank you for your comment.

Index	Comment Text	Response
Number		
	facilities would come or be kept online to meet future power demand, fired	
	by natural gas, oil, or coal." Offshore wind energy is a vital resource that	
	must be tapped in order to meet New England's climate change mitigation	
	goals.	
141-004	Continued fossil fuel production poses detrimental impacts to our public	Thank you for your comment.
	health by increasing the chance of heart attack, respiratory disorders, stroke,	
	asthma, and more. Offshore wind energy holds over 50% of the potential	
	clean energy resources in the region and will help New England avoid almost	
	1.7 million tons of carbon dioxide per year, equivalent to removing 325,000	
	cars off the road in turn protecting our public health.	
141-005	Responsibly developed offshore wind must take wildlife protection into	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and
	account. CILCV is	monitoring measures that would be implemented to avoid, minimize, and
	pleased to see that the SEIS puts a focus on marine wildlife protection,	mitigate adverse impacts to marine mammals from noise and ship strikes.
	however, going forward,	These measures include, but are not limited to avoidance of peak NARW
	federal and state governments need to adopt measures that specifically avoid,	presence, use of sound attenuation technologies, use of PSOs, PAM, soft start
		procedures, shut down procedures, vessel speed restrictions, injury and
	mitigate underwater noise, ship strikes, and turbine collisions to protect the	mortality reporting, and other measures. Further, should a Right whale Slow
	endangered North	Zone or DMA overlap the proposed Project area between June 1 and October
	Atlantic right whale.	31 implementation of enhanced monitoring/mitigation measures for NARW
		would be required. Project activities will be conducted under the authority of
		a Project-specific IHA issued by the NMFS. These measures would apply to
		only the vineyard wind I Project, but not other future offshore wind
		future affehere wind development. Manifering and mitigation requirements
		for other future offshore wind development may be driven by lessons learned
		from the Vinevard Wind 1 Project, but will be part of a separate decision
		making process
141-006	Vinevard Wind 1 alone will create 3 600 jobs for local residents and will	Section 3.6.2.1 of the FFIS notes that the estimated direct job creation by
111 000	save ratenavers more than \$1.4 hillion in energy-related costs over the 20-	Vinevard Wind in Massachusetts alone would be approximately 3 100 to
	year contract with Massachusetts. That does not include the other offshore	3 600 FTE job years including 1 100 to 1 550 job years during construction
	wind projects currently in contract in New England	and about 80 jobs lasting at least 25 years (resulting in 2 000 FTE job years)
	which projects currently in contract in rear England.	during operation. These data were also provided in the DEIS
141-007	Vinevard Wind 1 has made commitments to job training programs on	Section 3.6.2 of the FEIS lists the grants and community programs that the
111 007	Martha's	Vinevard Wind 1 Project is committed to including job training for offshore
	Vinevard and Massachusetts workforce development programs.	wind. This information was also provided in the DEIS.
141-008	Vinevard Wind 1's turbine layout has been constructed with input from the	Section 2.5 of the FEIS has been added which includes the agency-preferred
	fishing industry as well as the U.S. Coastguard.	alternative.
141-009	As technology advances, the ability to avoid, minimize, and mitigate	Thank you for your comment.
	potential impacts to wildlife and the environment will only grow stronger.	

Index	Comment Text	Response
141-010	The climate crisis and ensuing health crisis demand that we stand up these projects as fast as their responsible development will allow, and we believe it's time to move forward.	Thank you for your comment.
142-001	The viewsheds from the south, west and southwest are pristine and of incalculable cultural value. These are the beaches where by Wampanoag communities and their ancestors traversed from the Vineyard to the Island and vice versa for thousands of yearsToday, these locales are heavily trafficked by tourists during the long summer days and make for glorious picture perfect sunsets[.]BOEM must move carefully before these cultural seascapes are put in jeopardy? Nantucket's night sky, with a bear minimum of light pollution, is highly treasured and potentially at risk too.	BOEM utilized all information provided in the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. The description of impacts is located in Sections 3.8.2-3.8.5, and when considered against the criteria determining the intensity of impacts (i.e., whether they are minor, moderate, etc.), located in Section 3.8.6, the impacts are of a moderate nature. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations and night sky impacts. Vineyard Wind has committed to use ADLS at night to greatly reduce nightime impacts of aviation lighting. Vineyard Wind would also use white or light grey paint color as described in Appendix D to reduce visibility against the horizon. New visual simulations provide views of the 14 MW WTGs as well as simulations for Vineyard Wind 1 wind turbines combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment
142-002	The highly endangered N. Atlantic Right whale migrates along this general marine highway (Jacksonville to Stellwagen Bank).	As discussed in the Section 3.4.2 of the FEIS and in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, as discussed in the Biological Opinion, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS.
142-003	Though the timeline to reach a conclusion on the process for this project is compressed, the impact of erecting these monumental windmills is generational.	Thank you for your comment.

Index	Comment Text	Response
143-001	Addressing climate change is the single most important action for our species to take. Offshore wind is an important part of addressing this issue. Please do what you can to increase New England's portfolio of renewable energy	Thank you for your comment.
144-001	It isn't if we didn't know that our energy model was potentially going to warm the planet. This was actively being addressed back in the late 1970's. Many scientists formed the U.S. Council on Environmental Quality under the Carter Administration to adopt more renewable energy alternatives to avoid what they accurately predicted would be a climate crisis. That climate crisis is upon us and many of us activists are beyond disappointed in our lack of action over the past forty-plus years. Offshore wind energy is one of a bevy of solutions that is a must in order for us to have any way of staving off a 3 degree C warming disaster in the next few generations. I've reviewed the Vineyard Wind information and fully support this ambitious endeavor. We simply have run out of time due to inaction by leadership and must act now.	Thank you for your comment.
145-001	There should be a large environmental insurance policy put on this (and all) wind farm projects before anything is approved!	As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and other BOEM requirements, Vineyard Wind would be required to remove or decommission all installations and clear the seabed of all obstructions created by the proposed Project. Vineyard Wind would need to obtain separate and subsequent approval from BOEM to retire any portion of the Proposed Action in place. If the COP is approved or approved with modifications, Vineyard Wind would have to submit a bond that would be held by the U.S. government to cover the cost of decommissioning the entire facility. This explanation has been added to Section 2.1.1.3 of the FEIS.
145-002	The oil coming out of those units will decimate the wildlife and fishing industry.	Chapter 3 and Appendix A of the SEIS addressed the potential for accidental releases and discharges associated with the proposed Project as well as potential impacts from those events. Therefore, no change to the FEIS is warranted.
145-003	[The oil coming out of those units will decimate the wildlife]And tourism and the federally protected seals!	Section 3.3.7.3 of the DEIS and Section 3.5.2 of the SEIS discussed the potential impacts of accidental releases, including oil, on marine mammals. Therefore, no change to the FEIS is warranted.
145-004	What if the storm that is coming up the coast this weekend, was a Category 5 Hurricane?? or if it is like the 1938 "Long Island Express!" The windfarms will not stand a chance!!	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years. Section 2.3 of the FEIS also discusses potential effects of the proposed Project being hit by a hurricane. More precise forecasts of hurricane frequency in future climate scenarios are not likely to be significantly different from currently available data. Therefore, further updates to the FEIS are not warranted

Index Number	Comment Text	Response
146-001	I have been extremely impressed with the level of diligence and efficiency	Thank you for your comment.
	displayed by BOEM in the EIS process, as well as the level of thoroughness	
	with which the report has been presented. I was on the recent virtual meeting	
	and it further solidified my view that there has been extensive work and study	
	put into ensuring the Vineyard Wind proposal and project are sound, and well	
	thought out.	
146-002	Additionally, I believe the commercial aspectsspecifically, the impacts to	Sections 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts of increased
	the fishing and marine commerceare being addressed in a meaningful and	vessel traffic on commercial fisheries; therefore, no change to the FEIS is
	diligent manner. I have personally spoken with several members of the	warranted.
	commercial fishing industry who have shared, often off-the-record, that their	
	biggest concern is not with the turbines, or their placement themselves, but	
	with the amount of additional traffic will be experienced with service vessels	
	at the New Bedford Harbor areas. That must be addressed through careful	
	logistical study(ies) and planning, yet I believe that is outside of the purview	
	of your report.	
146-003	Additionally, over the past year-plus, I have been involved with numerous	Thank you for your comment.
	"meet the buyer" events and "blue economy" gatherings that have been	
	sponsored by or at the very least, included Vineyard Wind. I continue to be	
	impressed by their level of commitment to a safe, controlled, and well-	
	executed solution for the much needed (first major) American wind farm.	
147-001	If we are going to meet the required energy needs in New England without	Thank you for your comment.
	increasing the use of fossil fuels we must rely on renewable energy such as	
	wind energy. It is for that reason that I support the proposed Vineyard Wind	
	Energy expansion project.	
148-001	The RICRMC [Rhode Island Coastal Resources Management Council]	Section 2.5 of the FEIS has been added which includes the agency-preferred
	strongly encourages BOEM to adopt Alternative D2 in the EIS as the	alternative.
	preferred alternative for the Vineyard Wind project and require the developer	
	to construct the wind farm in a uniform grid pattern with 1 x 1 nautical mile	
	spacing between all turbine foundations (including the OSS platforms) in an	
	East-West, North-South orientation as recommended by the U.S Coast Guard	
	in their June 14, 2020 final Massachusetts Rhode Island Port Access Route	
	Study (MARIPARS). We request BOEM to require the USCG MARIPARS	
	recommended wind farm configuration as a condition of COP approval not	
	only for the Vineyard Wind project, but for all southern New England	
	offshore wind projects.	
148-002	The Alternative D2 configuration in a uniform grid of 1 x 1 nautical mile	Section 2.5 of the FEIS has been added which includes the agency-preferred
	spacing between all turbine foundations (including the OSS platforms) in an	alternative.
	East-West, North-South orientation is entirely consistent with the	
	MARIPARS recommendation and the offshore wind industry's November 1,	

Index	Comment Text	Response
Number		
	England offehore renovable energy losse energy. The DICDMC holioves it is	
	England offshore renewable energy lease areas. The KICKWIC believes it is	
	imperative that BOEW condition an COF approvals accordingly so that there is negulatory containty for the offeners wind inductry and statishedders with	
	is regulatory certainty for the orishore which industry and stakeholders with	
	assurance that there will be a predictable and uniform which farm pattern that	
	fishing activities and USCG search and rescue operations	
148-003	In addition, we are mindful of federal law that governs development	The FIS and public process comply with the procedural requirements of
140 005	activities on the outer continental shelf (OCS) that requires "the right to	NEPA Section 3.11 of the FEIS provides a detailed analysis on the impacts
	navigation and fishing therein shall not be affected " See 43 U.S. Code8	the proposal would have on pavigation and analyzes alternatives and
	1332 We expect BOEM to conduct its NEPA review of the Vineward Wind	mitigations that would avoid minimize or mitigate such impacts
	project and all other southern New England wind farm projects on the OCS	initigations that would avoid, initianize, or initigate such impacts.
	in accordance with this federal law	
148-004	Lastly, although not a consideration within the Vinevard Wind FIS, the	As discussed in Section 3.11.2 of the FFIS and as recommended by the
140 004	RICRMC strongly recommends that BOEM require as a condition of COP	USCG Vinevard Wind would install AIS transponders on select WTGs and
	approval the installation of automatic identification system (AIS) transmitters	ESPs to promote safe navigation during limed visibility (e.g. fog or night)
	on all turbine and electric service substation foundations for each and every	and adverse weather conditions. Currently, BOEM does not require AIS
	wind farm project within the southern New England lease areas to increase	transmitters on all WTGs and ESPs and it is outside the scope of the FEIS to
	navigational safety, especially under less than ideal navigation conditions.	determine if these measures would be implemented for other offshore wind
		projects.
148-005	Stakeholders have expressed concern that under some circumstances there is	Section 3.11.2 of the FEIS includes a discussion of potential radar
	the potential for vessel radar interference resulting from wind turbine	interference. The Final MARIPARS (USCG 2020) concluded that general
	generator (WTG) foundations. The USCG addressed this issue in the recent	mitigation measures, such as properly trained radar operators, properly
	Final MARIPARS and concluded that "the USCG is not aware of an	installed and adjusted vessel equipment, marked wind turbines, and the use of
	authoritative scientific study that confirms or refutes the concern that WTGs	AIS all enable safe navigation with minimal loss of radar detection.
	will degrade marine radar." See Final MARIPARS (June 14, 2020) at 25.	
148-006	Despite the uncertainty of vessel radar degradation within a wind farm, AIS	As discussed in Section 3.11.2 of the FEIS and as recommended by the
	transmitters on WTG foundations would provide safety equipment	USCG, Vineyard Wind would install AIS transponders on select WTGs and
	redundancy and allow a vessel operator to "see" foundation locations on a	ESPs, to promote safe navigation during limed visibility (e.g., fog or night)
	vessel chart plotter without the aid of radar. Thus, if radar degradation	and adverse weather conditions. It is outside the scope of the FEIS to
	becomes an issue or radar malfunction occurs, the AIS on WTG foundations	determine if these measures would be implemented for other offshore wind
	would provide additional navigation safety. Accordingly, BOEM should	projects. The Final MARIPARS (USCG 2020) concluded that general
	condition all wind farm COP approvals with a requirement for the installation	mitigation measures, such as properly trained radar operators, properly
	of AIS transmitters on all offshore wind farm structures.	installed and adjusted vessel equipment, marked wind turbines, and the use of
		AIS all enable safe navigation with minimal loss of radar detection.
148-007	The last sentence in Footnote 3 should be modified to reference the	The executive summary has been updated to note that "if approved, BOEM
	applicable BOEM regulations and to indicate that BOEM will condition that	plans on requiring as a condition of COP approval that any movements in
	any movement in turbine foundations will not result in diagonal lanes less	turbine location, as may be permissible pursuant to 30 CFR 585.634, do not
	than 0.6 NM as follows: "BOEM will require as a condition of COP approval	shrink the diagonal lanes to less than 0.6 nautical mile."
Index Number	Comment Text	Response
-----------------	---	--
Number	that any movements in turbine location, as may be permissible pursuant to 30 CFR 585.634, should not shrink the diagonal lanes to less than 0.6 nautical	
	mile."	
148-008	The BOEM regulations permit micro-siting of turbine foundations within 500 feet of the COP designated location. However, if two opposing turbine foundations located along a diagonal lane were moved towards one another in the direction of the center line of the diagonal lane the maximum allowed distance of 500 feet, then the diagonal lane between them would result in a distance of less than 0.6 NM (0.7 NM= 4254 feet - $(500 + 500) = 3254$ feet., which is less than 0.6 NM (3646 feet)) . Thus, in such a circumstance the 3254 foot (0.54 NM) distance would not meet the USCG recommended minimum diagonal lane width of 0.6 NM for the northwest to southeast direction.	BOEM's regulations do not specifically address micro siting. The FEIS clarifies that 0.6 nautical mile diagonal lanes would be maintained with any micro siting under Alternative D. The construction, operation, maintenance, and eventual decommissioning of the proposed Project occur within the range of design parameters outlined in the COP, subject to applicable mitigation measures (Appendix D of the FEIS). However, to reduce impacts to complex fisheries habitats and other resources that are the most vulnerable to permanent and long-term impacts, the locations of proposed Project elements would be altered or excluded, should micro-siting not be possible to avoid or minimize impacts. In addition, fewer WTG locations than proposed by the lessee may be approved by BOEM
148-009	This section should highlight within the text on page ES-3 that Alternative D2 is the only project alternative that BOEM indicates within Table ES-2 that would have moderate cumulative impacts only on navigation and vessel traffic as compared to all other alternatives, which may have major cumulative impacts.	BOEM had decided to keep the executive summary at a high level and not call out specific differences in impact levels in the text; the table speaks for itself in that regard, and the details can be found in the resource sections in Chapter 3 and Appendix A of the FEIS.
148-010	The Alternative D-2 description should include language that clearly indicates that this particular alternative is the only alternative being considered by BOEM that is consistent with the USCG recommendations for a uniform wind farm layout as specified in Section VI on page 3 8 of the USCG MARIPARS Final Report (May 14, 2020) and as is described in the SEIS in§ 2.2.2, p. 2-5. In addition, Footnote 1 should be modified as recommended above in ES-2.	The FEIS has been updated to reflect the Final MARIPARS and that Alternative D2 is consistent with the study.
148-011	Now that the USCG has issued its MARIPARS Final Report on May 14, 2020 the last paragraph on page 2-5 (and ending on page 2-6) should be modified to reflect the USCG recommendation on vessel transit lanes.	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS and that Alternative D2 is consistent with the study.
148-012	There are references to the USCG MARIPARS as a "Draft" report within this section on page 3-97. Now that the USCG report is final as of May 14, 2020 this section and similar text in other sections throughout the SEIS, including the appendices, should be revised to reflect the final USCG MARIPARS report status along with its recommendations. There are 26 occurrences within the SEIS referencing the MARIPARS report as "Draft."	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS and that Alternative D2 is consistent with the study.
148-013	The discussion within the fourth paragraph on this page should indicate that Alternative D2 is entirely consistent with the final USCG MARIPARS report recommendation for wind farm layout and orientation.	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS and that Alternative D2 is consistent with the study.

Index Number	Comment Text	Response
148-014	Now that the USCG Final MARIPARS is final, this section should include added text that indicates that Alternative D2 is consistent with the USCG MARIPARS recommendations for a uniform 1 x 1 NM grid oriented with East-West rows and North-South columns as described within§ 3.13.2.4 on page 3-116.	Section 3.11.4 of the FEIS includes a discussion of the Final MARIPARS study.
148-015	Similar text describing Alternative D2 as consistent with the MARIPARS recommendations as found in §§ 3.13.2.4 (page 3-116), 3.13.2.5 (page 3-117) and 3.14.2.3 (page 3-129) should be added to any discussion of Alternative D2 throughout the SEIS.	Sections 3.11.4 and 3.11.6 of the FEIS includes a discussion of the Final MARIPARS study.
148-016	The text of the last paragraph in this section should reflect the USCG final MARIPARS report status and recommendation regarding transit corridors.	The FEIS has been updated in the appropriate chapters or sections to incorporate the Final MARIPARS.
148-017	The discussion on this page should reference the final USCG Final MARIPARS and its recommendations concerning additional transit corridors.	Section 3.11.5 of the FEIS includes a discussion of the Final MARIPARS study.
148-018	The second paragraph should be modified to reflect the final MARIPARS report status and recommendations for a uniform 1x1 NM grid oriented East- West and North-South in the southern New England WEA. In addition, since this section indicates that there is sufficient information for BOEM to make a reasoned choice among the alternatives, it would reason that this section should also indicate that Alternative D2 is consistent with the MARIPARS recommendation as well as the collaborative proposal put forth by the five southern New England offshore wind leaseholders on November 1, 2019 for a uniform 1x1 NM wind farm layout for the entire southern New England WEA.	Section 2.1.3 and Section 3.11 of the FEIS incorporate, where appropriate, the Final MARIPARS.
149-001	Vineyard Wind is a responsible and highly community minded company. Since the inception of Vineyard Wind 1 the company has done an exemplary job at engaging the public, working with experts and scientists, and refining their proposal. The proposal for Vineyard Wind 1 is the result of more than 10 years of study and dialog.	Thank you for your comment.
149-002	Massachusetts and New England needs ocean wind energy and the Vineyard Wind 1 project. It will generate clean, sustainable energy for more than 400,000 homes and businesses and effectively reduce carbon emissions by nearly two tons annually.	Thank you for your comment.
149-003	The issue of adding transit lanes need not be revisited. The United States Coast Guard has already endorsed the 1x1 NM layout finding that the standardized spacing layout would be best for navigational safety. In fact, the Coast Guard specifically notes that additional transit lanes are potentially less safe than the 1x1 NM layout.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number	The economic impact of fishers not being able to fish in the Wind Energy	Section 3.11 and Table 3.11.3 of the SEIS discusses the average approx
149-004	Area where Vineyard Wind 1 is sited is less than .05 percent according to various studies. That negligible impact assessment assumes that fishers cease to fish in the entirety of the lease areas and or fail to shift fishing to other	percentage of total revenue exposed to offshore wind (7 percent or less), including Vineyard Wind 1, and Section 3.10 and Table 3.10-4a and Table 3.10-4b of the FEIS discusses the value of landings by FMP for the WDA
	areas nearby, a highly unlikely scenario.	and as a percentage of total coast-wide FMP (less than 2 percent). Therefore, no change to the FEIS is warranted.
149-005	adverse impact on the environment, on fish stocks, and on the economics of the fishing industry have not been shown.	Section 3.3 and 3.10 of the FEIS evaluate potential adverse and beneficial impacts from offshore wind development on finfish and commercial and for- hire recreational fisheries.
149-006	Enough is known, however, about the adverse impact on the environment and the economy, including the livelihood of fishers, if nothing is done to develop renewable energy such as the Vineyard Wind 1 project. Warming waters due, in part, to carbon emissions, are but one example of a far greater threat to fishers and others than Vineyard Wind 1Time is of the essence to begin construction of the Vineyard Wind 1 project so that Massachusetts and New England can begin to see the benefit of clean, renewable energy, and less carbon impact on our environment.	Thank you for your comment.
150-001	I have concerns about this SEIS with regard to impacts to fisheries. Page 3- 23 last paragraph mentions the cold pool and its importance to fish and invertebrates and it is also mentioned again on 3-35 for sea turtles and marine mammals. However, possible vertical destratification is later described as a "good" thing from an increase in primary productivitywhich will then be supposedly cleared and eaten by the anticipated increase of mussels on the structures from the "reef effect." These are all hypothetical outcomes. The cold pool is an extremely unique feature that is critical to major molluscan fisheries such as clams. Temperature destratification due to turbine movement could cause permanent damage to a unique ocean feature. The summary section for structures states that there will be minimal impact because salinity and temperature change are the biggest driver of seasonal migration - however, earlier in the document it was stated that structure and disturbance could cause temperature destratification so there are contradictions in reasoning.	Sections 3.4, 3.5, and 3.6 of the SEIS discussed the cold pool and potential effects of offshore wind development. Furthermore, Section 3.6.1 of the SEIS provided a discussion of the potential impacts of WTG structures on the cold pool formation and the subsequent potential impacts to marine mammals. Additional discussion of the uncertainty around marine mammal response to WTG structures and how the structures would influence development of the cold pool was provided in Appendix H of the SEIS. As disused in these Sections, changes to the local oceanographic and climatic conditions caused by the presence of structures would be localized and would be expected to vary seasonally and regionally, and as such would not be expected to influence migration patterns. Therefore, no change to the FEIS is warranted. How the rate of cold pool breakdown is influenced by external factors such as weather and future offshore wind facilities is not well known. Potential impacts on the cold pool are dominated by factors other than the Proposed Action; nevertheless, the FEIS considers impacts of reasonably foreseeable environmental trends and planned actions, including the Proposed Action.
150-002	In addition, the SEIS states that noise should not be a factor because these are "temporary impacts." However, it will take 6-10 years for foundation production102 days of pile driving at 6 hrs/day. Plus, there are many anticipated wind projects along the east coast, so the effects are compounded.	Sections 3.3.6.3, 3.3.7.3, 3.3.8.3, and 3.4.5.3 of the DEIS discussed the potential acoustic impacts to finfish, marine mammals, sea turtles, and commercial fish, respectively, during pile driving activities. Further details regarding acoustic effects to marine mammal species are provided in Appendix F of the DEIS and FEIS. Additional discussions of acoustic

Index	Comment Text	Response
Number		
Number		impacts on ESA listed marine mammals and sea turtles were provided in the BA submitted to NOAA which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Sections 3.5.1, 3.6.1, and 3.11.1 of the SEIS provide a discussion of potential acoustic impacts on finfish, marine mammals, sea turtles, and commercial fish, respectively, as a result of pile driving. Additionally, Sections 3.3.2, 3.4.2, 3.5.2 and Appendix D of the FEIS discuss updated monitoring and mitigation that would be implemented to avoid, minimize, and mitigate adverse impacts. These measures include, but are not limited to, avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start
		presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures that would benefit these species. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met. Additional discussion of the uncertainty around the potential for acoustic impacts on marine mammals and sea turtles resulting from pile driving activities was provided in Appendix H of the SEIS. As discussed in the Biological Opinion (NMFS 2020), the consequences of Level A harassment as a result of exposure to pile driving noise would be "minor degradation of hearing capabilities" and the PTS anticipated is considered a "minor auditory injury." Level B harassment is expected to result in "low-level, temporary behavior modifications" NMFS expects exposures to be brief and that behavior responses would be temporary, with behavior returning to as baseline state after the pile driving stops or the individual swims far enough away to avoid exposure to disturbing levels of noise (NMFS 2020). Further, NMFS (2020) concluded that these behavior responses are not expected to impact individual health, survival, or reproduction. An updated discussion of acoustic impacts on sea turtles as a result of pile driving noise is provide in Section 3.5.1 and 3.5.2 in the FEIS. As discussed, sea turtles would exhibit an avoidance response before receiving the 24 hour exposures in shown in Table 3.5-6 of the FEIS and BOEM anticipates unavoidable, moderate temporary impacts on individual sea turtles from pile driving. However, these
		moderate effects are expected to occur only in a very small number of turtles, and the population would likely recover after pile-driving activity has ceased. There have been no documented sea turtle mortalities associated with pile driving and sea turtle anatomy may make them resistant to percussive shock waves (Madin 2009). Further, as discussed in the NMFS Biological Opinion, take of sea turtles due to pile driving activities would be limited to harassment only, and no injury would be expected. Additionally, given the

Index Number	Comment Text	Response
		expected short duration of exposures, sea turtle hearing is expected to return to normal shortly after exposure ends (NFMS 2020).
151-001	As a life-long resident of the Atlantic Seacoast, I am aware of the energy resources of the ocean: wave, tidal and offshore wind energy; and at the same time of the urgent need for more energy to serve these highly populated shoresVineyard Wind will be the perfect project to begin our harvesting of this almost unlimited resourceAll the studies and agreements are in order and any hesitation puts our welfare at risk. Power blackouts, economic downturns and climate disaster wait for those countries that continue to rely on polluting resources.	Thank you for your comment.
152-001	Choosing to build it [Vineyared Wind Project] with the one-mile spacing of turbines under option D2, or to further delay, and possibly kill it through proposals such as option F or G, is also a moral decision with possible life and death consequences.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
152-002	I have seen first-hand how dirty and dangerous energy projects impact communities of color and low-income communities; how their lives and livelihoods bear the brunt of pollution. I've seen kids with rare cancers, high rates of coronary and respiratory diseases, greater illness and death from COVID-19 due to compromised respiratory systems.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
152-003	Further permitting delays to Vineyard Wind will increase the likelihood of killing it, and leaving New England to the mercies of fossil fuel companies. Their environmental justice impacts would far exceed the Environmental Justice impacts on low-income fishing workers from the one-mile layout of wind turbines.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
152-004	And the continuing of ocean warming and acidification from burning fossil fuels would accelerate the crashing of fish stocks, causing far worse impacts on the fishing industry. The impacts of wind energy have to be weighed in that context.	Thank you for your comment.
152-005	It is past time for the U.S. to join other developed nations with projects like Vineyard Wind, that can provide clean energy, local jobs, and that have far less impact on human and environmental health than fossil fuels.	Thank you for your comment.
152-006	The Coast Guard states that the one-mile spacing plan (D2) is safe for shipping and fishing, and deems additional transit lanes unnecessary. The additional transit lane would likely make Vineyard Wind financially unfeasible. Please give this project the green light with the D2 spacing plan.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
152-007	ask that special attention be paid to training and hiring people from local communities of color and low-income communities to build and maintain Vineyard Wind as partial recompense for the disproportionate damage they	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction

Index	Comment Text	Response
Number	have already suffered from polluting energy projects. Please place climate justice, environmental justice, and racial and economic justice at the center of your decision making and permit this project.	of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
153-001	I believe that this project is vital for our green future in Massachusetts, especially one that is inclusive, diverse, and feasible. It will create thousands of unionized jobs on the South Coast of the state, help us transition away from dangerous fossil fuels, and create a positive feedback loop of more green energy production in our state.	Thank you for your comment.
153-002	as an avid bird-watcher I am glad to see that this project has taken important steps to ensuring that the wind energy created will not harm birds or disrupt their migratory patterns. The Mass. Audubon's support of this project is a good sign of this.	Thank you for your comment.
154-001	I want to urge the BOEM to expedite approval of a robust option for the Vineyard Wind project. The scientific community agrees that we must greatly reduce our greenhouse gas emissions to mitigate the worst impacts of climate change, and we have about ten years to accomplish this. If we fail, the cumulative impacts of climate change will likely overwhelm societies' ability to adapt. The stresses induced by climate change will endanger our very civilization.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information. Table 1.3-1 of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
155-001	Global warming is driving food and water insecurity and causing competition for basic resources, fueling socioeconomic tensions, increasingly often leading to mass displacement[.] Offshore wind energy is critical for meeting clean energy goals in New England, and the emission reductions necessary to stop the most catastrophic impacts of climate change, holding over 50% of the potential clean energy resource in the region.	Thank you for your comment.
155-002	Vineyard Wind 1 will create 3,600 jobs for local residents[.] Vineyard Wind 1 will save ratepayers more than \$1.4 billion in energy-related costs over the 20-year contract with Massachusetts[.] A recent study by the American Wind Energy Association (AWEA) found that the offshore wind industry will create more than 80,000 jobs in the next ten years, with economic output reaching upwards of \$25 billion per year by 2030	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Section 3.6.1.1 of the FEIS provides estimates from several sources of projected employment and investment resulting from growth of a wind energy industry along the Atlantic coast. Jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
155-003	Vineyard Wind has pledged to sign the nation's first offshore wind Project Labor Agreement (PLA) for Vineyard 1 to ensure fair compensation and the highest construction standards for the project	Although the Project Labor Agreement is not addressed in the FEIS, Section 3.6.2 provides projections of estimated direct job creation by the Vineyard

Index	Comment Text	Response
Number		Wind 1 Project in Massachusetts, and primarily in southeastern
155-004	Vineyard Wind has contributed \$200,000 to support the Mass Clean Energy Center's 2019 workforce development grants that went to six educational and workforce institutions in the state to develop and implement training programs[.] This grant funding helped support the Offshore Wind Technician Certificate training program on Martha's Vineyard, which will train local residents for the operations and maintenance jobs for the 25 year life of the project. There are currently 14 students enrolled, including 3 women.	Section 3.6.2 of the FEIS lists the grants and community programs that the Vineyard Wind 1 Project would provide, including job training for offshore wind. This information was also provided in the DEIS. In addition, the FEIS has been updated to include the community benefits agreement between Vineyard Wind and Vineyard Power.
155-005	Vineyard Wind along with other developers of the New England Wind Energy Areas (WEAs) in late 2019 proposed to advance all future projects in their lease areas with a uniform 1 x 1 Nautical Mile (NM) layout. The United States Coast Guard (USCG) has since determined that this type of "standard and uniform grid pattern" layout would "maximize safe navigation" in the WEAs. (MARIPARS, 32)	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
155-006	The commercial fishing industry has proposed additional transit lanes of at least 4 NMs (reflected in Alternative F of the SEIS), which would eliminate 30% of the areas of the area's potential energy production, 3,300 megawatts, or enough to power 1.65 million homes	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
155-007	The 1x1 NM uniform layout creates over 200 transit lanes throughout the entire wind project area The USCG has assessed the uniform 1 x 1 NM layout, without any additional transit lanes, and compared it to proposals with transit lanes in the MARIPARS (Massachusetts Rhode Island Port Access Route Study) that was released in May 2020. The USCG has endorsed the 1 x 1 NM layout, finding that the standard and uniform grid pattern will "would allow for safe navigation and continuity of USCG missions through seven adjacent wind farm lease areas over more than 1400 square miles of ocean." (MARIPARS, 33)	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
155-008	Vineyard Wind's project is precedent-setting for responsible development. As technology advances, the ability to avoid, minimize, and mitigate potential impacts to wildlife and the environment will only grow stronger. The climate crisis and ensuing health crisis demand that we stand up these projects as fast as their responsible development will allow, and we believe it's time to move forward.	Thank you for your comment.
156-001	concerned about our state's need to decarbonize the electric power sector as soon as possible as a key step in addressing climate change. I am impressed that Vineyard Wind has taken seriously new conerns raised about its project and has responded with viable alternatives. I urge BOEM to respond as soon	Thank you for your comment.

Index	Comment Text	Response
Number		
	as possible by accepting the options it deems most appropriate. We cannot	
	afford to wait any more to get the Vineyard Wind project up and running.	
157-001	The fishing and shipping industries are not subsidized. The Off-Shore Wind	Thank you for your comment.
	should not be either, not in capital costs, in operational costs or in market	
	share. At an energy density 1000X smaller than conventional energy sources,	
	they [Vineyard Wind] would probably not survive.	
158-001	The American Wind Energy Association forecasts the US Atlantic offshore	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
	wind industry to see investment up to \$57B with installation of 30GW of	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
	wind by 2030 and could support as many as 83,000 jobs. Of those jobs,	3,600 FTE job years, including 1,100 to 1,550 job years during construction
	approximately 3,600 will be created by Vineyard Wind 1	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
		during operation. These data were also provided in the DEIS. Section 3.6.1.1
		of the FEIS provides estimates from several sources of projected employment
		and investment resulting from growth of a wind energy industry along the
		Atlantic coast. Jobs are anticipated to be concentrated in and near the east
		coast states that would host offshore wind. This information was also
		included in the SEIS (Section 3.7.2.1), and the FEIS provides additional
		detail and analysis.
158-002	Vineyard Wind has contributed \$200,000 to support the Mass Clean Energy	Section 3.6.2 of the FEIS lists the grants and community programs that the
	Center's 2019 workforce development grants that went to six educational and	Vineyard Wind 1 Project would provide, including job training for offshore
	workforce institutions in the state to develop and implement training	wind. This information was also provided in the DEIS.
	programs. This grant funding helped support the Offshore Wind Technician	
	Certificate training program on Martha's Vineyard, which will train local	
	residents for the operations and maintenance jobs for the 25-year life of the	
	project.	
158-003	Vineyard Wind has pledged to sign the nation's first offshore wind Project	Although the Project Labor Agreement is not addressed in the FEIS, Section
	Labor Agreement (PLA) for Vineyard 1 to ensure fair compensation and the	3.6.2 provides projections of estimated direct job creation by the Vineyard
	highest construction standards for the project.	Wind 1 Project in Massachusetts, and primarily in southeastern
		Massachusetts.
158-004	The expediated advancement of the 800-MW Vineyard Wind Project would	Thank you for your comment.
	do just that, invigorating economic growth and putting local residents back to	
	work. Furthermore, Vineyard Wind will serve as a blueprint for how wind	
	projects are treated in the future.	
159-001	I've watched with alarm the acceleration of climate change and the threat it	Thank you for your comment.
	represents. It is front and center here on Cape Cod, and it threatens every	
	aspect of life on the Cape and Islands and beyondProjects such as	
	Vineyard Wind are increasingly essential if we are going to slow the advance	
L	of climate change and the looming crisis it represents.	
159-002	Wind energy, along with solar energy can be a major part of the recovery we	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
	need after the last disastrous five months, and counting, due to Covid-19.	several sources of projected employment and investment resulting from

Index Number	Comment Text	Response
	These energy sources are largely clean energy and have tremendous employment opportunities, with hundreds of well paying jobs, along with providing a much needed boost to local economies.	growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis. Additionally, Appendix A, Section A.8.1 of the FEIS has been updated to address air quality benefits of the displacement of fossil fuel electricity generation by offshore wind.
160-001	I strongly support the uniform grid plan with 1 nautical mile spacing. This would allow both maximum energy production and safe navigation.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
161-001	A project the size of Vineyard Wind will inevitably have impacts on other users of the ocean, human and otherwise. As the initial DEIS and now the Supplement make clear, those impacts have been carefully studied, and effective steps are being taken to minimize or compensate for those impacts. And the most important effect of the project will be its beginning a commercial-scale transition to renewable wind energy along the Eastern seaboard. This will be a major step toward mitigating the existential threat posed by climate change.	Thank you for your comment.
162-001	We urgently need to take action on climate change, and this project is a big step towards a sustainable future. Offshore wind energy is critical for meeting clean energy goals in New England, and the emission reductions necessary to stop the most catastrophic impacts of climate change, holding over 50% of the potential clean energy resource in the region. Vineyard Wind 1 will avoid emissions of almost 1.7 million tons of carbon dioxide per year, the equivalent of removing 325,000 cars off the roadWe need action on climate change and during this time of economic uncertainty we need more jobs. Please approve the Vineyard Wind Project.	Thank you for your comment.
162-002	There has been concern about the impacts the Project would have on wildlife, but evidence indicates that the project could be completed with minimum disruption. Vineyard Wind signed a landmark agreement with the National Wildlife Federation, Natural Resources Defense Council, and Conservation Law Foundation to protect the highly endangered North Atlantic right whale during project construction and operation. While the Supplemental EIS does not assume that all developers will adopt these measures, it does note that doing so would protect marine wildlife.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW, and include measures outlined in the referenced agreement. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
162-003	The Project will fuel economic development. Vineyard Wind 1 will create 3,600 jobs for local residents and Vineyard Wind has pledged to sign the	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to

Index	Comment Text	Response
Number	nation's first offshore wind Project Labor Agreement (PLA) to ensure fair compensation and the highest construction standards for the project.	3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS.
163-001	Offshore wind is critical to reaching ambitious and necessary greenhouse gas reduction goals for Rhode Island and neighboring states.	Thank you for your comment.
163-002	The fishing industry is concerned about the overall development of offshore wind, but it is important for us all to recognize that the much bigger risk to the fishing industry is climate change itself. Warming ocean waters have already impacted the lobster fishery in Rhode Island and southern New England.	Section 3.11 of the SEIS and Section 3.10 of the FEIS discusses impacts from climate change on fisheries; therefore, no change to the FEIS is warranted.
163-003	Climate change is the existential crisis of our time. Responsible development of offshore wind is critical to our rapid transition to renewable energy.	Thank you for your comment.
164-001	[Vineyard Wind 1 offshore wind development] will create clean energy, much needed clean energy jobs, and an infrastructure to create more in the future	Thank you for your comment.
164-002	Numerous scholarly, government, intergovernmental, and private industry studies have shown that off-shore wind energy is a proven, very cost-efficient technology that provides clean-energy, local and regional jobs, enhanced energy independence, excellent public relations, preparation for future fossil-fuel and climate-change related regulations and public demands, and even enhanced insulation from potential climate change related lawsuits. Reducing fossil fuel use has also been shown to reduce public health costs associated with the impact of air pollution on asthma rates, lung-related ailments, and other issues. In addition, studies show that most of the arguments against off-shore wind have little or no basis in fact and that all potential, actual downsides of off-shore wind are both far less significant than their upsides and can be addressed relatively easily Off-shore wind is also a key energy technology of the present and the future - and one in which the USA is falling behind. The opportunity to utilize our excellent natural, clean-energy resources in the northeast USA should be a regional and national priority.	Thank you for your comment.
164-003	This project would represent a significant private sector investment in clean energy jobs in a region hard hit by the economic impact of the historic COVID-19 pandemic.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS.
164-004	After more than ten years of exhaustive study and analysis, including the Supplemental Environmental Impact Statement, and extensive public consultation to determine where offshore wind could be built with the least possible impact on existing industries and the environment, I can see no	Thank you for your comment.

Index	Comment Text	Response
Number		
	reasonable public policy or environmental reason that the project should not	
	be approved and implemented without further delay.	
164-005	Vineyard Wind 1 represents the first major offshore wind development in the	Thank you for your comment.
	United States – and again, the USA lags seriously behind our global	
	competitors in deploying this critical clean-energy, job producing	
	technology. A final permit approval will provide the needed certainty for	
	future developments and capital investment along the East Coast.	
165-001	I think that VW has submitted a safe and cost-effective initial design and has	Thank you for your comment.
	collaborated responsibly and responsively with all stakeholders over timeI	
	think that the United States should more aggressively transition to renewable	
	energy sources for the good of the environment. I believe the Vineyard Wind	
	project is a prime application of a time-tested technology that furthers that	
	objective.	
166-001	As per the document ,the wind turbines will have a MAJOR effect on the	Thank you for your comment.
	commercial fishing industry- This is totally unacceptable! Not only will the	
	turbines have an effect on Marine life, it will have a major effect on the	
	Fishing community as a whole!	
167-001	Yes to Vineyard Wind. We need clean energy now. Warming oceans, above-	Thank you for your comment.
	average temperatures every year, wild storms the signs that it's time to quit	
	fossil fuels are all HERE, close to home, now. What an exciting modern	
	initiative towards getting off fossil fuels. As a bonus, this will be a job	
	creator, always positive but, given the pandemic, crucial.	
168-001	I am writing in support of Vineyard Wind and the expansion of offshore wind	Thank you for your comment.
	energy. The untapped offshore wind resource along the U.S. Eastern	
	Seaboard is one of the most powerful in the world and is within reach of	
	densely populated areas where energy demands are high and new resource	
	options are few. Vineyard Wind's environmental impact statement adequately	
	addresses climate change, wildlife protection, job creation, and the fishing	
	industry. Vineyard Wind and similar offshore wind projects should move	
169.002	forward rapidly to quickly transition us to a clean-energy economy.	
168-002	According to the United Nations, climate change is the defining crisis of the	i nank you for your comment.
	Current area, with no corner of the globe immune from its consequences. In	
	report projected that limiting warming to the 1.5C target this contury will	
	require an unprecedented transformation of every sector of the global	
	aconomy over the next 12 years. Less than two years later in March 2020	
	climate scientists calculated that global warming has already avocaded by	
	over 2C pre-industrial average global temperatures accelerating self	
	reinforcing changes. Climate change is driving species extinction food	
166-001 167-001 168-001 168-002	objective. As per the document ,the wind turbines will have a MAJOR effect on the commercial fishing industry- This is totally unacceptable! Not only will the turbines have an effect on Marine life, it will have a major effect on the Fishing community as a whole! Yes to Vineyard Wind. We need clean energy now. Warming oceans, above-average temperatures every year, wild storms the signs that it's time to quit fossil fuels are all HERE, close to home, now. What an exciting modern initiative towards getting off fossil fuels. As a bonus, this will be a job creator, always positive but, given the pandemic, crucial. I am writing in support of Vineyard Wind and the expansion of offshore wind energy. The untapped offshore wind resource along the U.S. Eastern Seaboard is one of the most powerful in the world and is within reach of densely populated areas where energy demands are high and new resource options are few. Vineyard Wind's environmental impact statement adequately addresses climate change, wildlife protection, job creation, and the fishing industry. Vineyard Wind and similar offshore wind projects should move forward rapidly to quickly transition us to a clean-energy economy. According to the United Nations, climate change is the defining crisis of the current area, with no corner of the globe immune from its consequences. In October 2018 a UN Intergovernmental Panel on Climate Change special report projected that limiting warming to the 1.SC target this century will require an unprecedented transformation of every sector of the global economy over the next 12 years. Less than two years later, in March 2020, climate scientists calculated that global warming has already exceeded by over 2C pre-industrial average global temperatures, accelerating self-reinforcing changes. Climate change is driving species extinction, food	Thank you for your comment.

Index	Comment Text	Response
Number		
	insecurity, water shortages, increasingly numerous, intense, and destructive	
	wildfires, floods, storms, and droughts, as well as sea-level rise and the	
1 (0, 002	spread of novel diseases.	
168-003	Because of low wind resources on land in New England, offshore wind is	Thank you for your comment.
	critical to develop; accounting for over 50 percent of the potential clean	
	energy resource in our region. Vineyard wind I will avoid emissions of	
	removing 325 000 cars off the road	
168-004	The state environmental impact statement reinforces my belief that offshore	Section 3.4.2 and Appendix D of the FFIS discuss undated mitigation and
100 004	wind energy can be developed safely in such a way that protects wildlife and	monitoring measures that would be implemented to avoid, minimize, and
	habitat. Vineyard Wind has signed a landmark agreement with the National	mitigate adverse impacts, including noise and ship strikes, to marine
	Wildlife Federation, Natural Resources Defense Council, and Conservation	mammals and include measures outlined in the referenced agreement. These
	Law Foundation to protect the endangered North Atlantic right whale during	measures include, but are not limited to avoidance of peak NARW presence,
	project construction and operation; federal and state governments can adopt	use of sound attenuation technologies, use of PSOs, PAM, soft start
	measures to further avoid, minimize, and mitigate underwater noise, ship	procedures, shut down procedures, and other measures. These measures
	strikes, and turbine collisions.	would apply to only the Vineyard Wind 1 Project, but not other future
		offshore wind development. Project-specific ESA consultations will be
		required for all future offshore wind development. Monitoring and mitigation
		requirements for other future offshore wind development may be driven by
		lessons learned from the vineyard wind I Project, but will be part of a
168-005	The offshore wind industry could create 83,000 jobs by 2030 and deliver \$25.	Section 3.6.2.1 of the FFIS notes that the estimated direct job creation by
108-005	billion in annual economic input by that same year. Vineyard Wind 1	Vinevard Wind in Massachusetts alone would be approximately 3 100 to
	specifically is projected to create 3,600 local jobs at fair wages. Furthermore.	3.600 FTE job years, including 1.100 to 1.550 job years during construction
	Vinevard Wind has contributed \$200.000 to support the Mass Clean Energy	and about 80 jobs lasting at least 25 years (resulting in 2.000 FTE job years)
	Center's 2019 workforce development grants develop and implement training	during operation. These data were also provided in the DEIS. This section
	programs, including the Offshore Wind Technician Certificate training	also lists grants provided by Vineyard Wind, including a grant program for
	program on Martha's Vineyard, which will train local residents for the	offshore wind training. Section 3.6.1.1 of the FEIS provides estimates from
	operations and maintenance jobs for the 25 year life of the project. There are	several sources of projected employment and investment resulting from
	currently 14 students enrolled, including 3 women. The project is expected to	growth of a wind energy industry along the Atlantic coast. Jobs are
	save ratepayers more than \$1.4 billion in energyrelated costs over the 20-year	anticipated to be concentrated in and near the east coast states that would host
	contract with Massachusetts.	offshore wind. This information was also included in the SEIS (Section
1 (0, 00 (3.6.2.1), and the FEIS provides additional detail and analysis.
168-006	10 preserve fishing areas, the turbines are proposed in a grid layout to	Section 2.5 of the FEIS has been added which includes the agency-preferred
	maximize sale navigation, creating over 200 transit lanes throughout the	anemative.
	project. The Office States Coast Guard as assessed and endorsed this T X I nautical mile layout finding that the standard and uniform grid pattern will	
	"would allow for safe navigation and continuity of USCG missions through	

Index Number	Comment Text	Response
Number	seven adjacent wind farm lease areas over more than 1400 square miles of ocean."	
168-007	Vineyard Wind's project sets a precedent for responsible development. As technology advances, the ability to avoid, minimize, and mitigate potential impacts to wildlife and the environment will only grow stronger. The climate crisis and ensuing health crisis demand that we stand up these projects as fast as their responsible development will allow, and I believe it is time to move forward.	Thank you for your comment.
169-001	I fully support the Vineyard Wind LLC Proposed Wind Energy Facility. We need to move as aggressively as possible toward renewable energy to deal with the continuing effects of Climate Change including rising water levels threatening coastal communities.	Thank you for your comment.
170-001	I have been closely following the implementation of the Massachusetts Global Warming Solutions Act, which has recently been amended to require a 90% GHG emissions reduction from 1990 levels by 2050. At a high level, this plan is to replace nearly all fossil fuels used in the buildings and transportation sectors in Massachusetts by electricity, and provide huge quantities of low CO2e electricity. An Offshore Wind infrastructure that can provide the majority of the energy used in Mass. is absolutely indispensable to meeting the legally mandated Mass. GWSA GHG emissions reductions.	Thank you for your comment.
170-002	As the Executive Summary of the 2018 UN Emissions Gap Report 2018 states: https://unepdtu.org/wp-content/uploads/2019/11/un-egr19-es-4e- extra.pdf "However, since this did not happen, the required cuts in emissions are now 2.7 per cent per year from 2020 for the 2C goal, and 7.6 per cent per year on average for the 1.5C goal. Evidently, greater cuts will be required the longer action is delayed." and "Further delaying the reductions needed to meet the goals would imply future emissions reductions and removal of CO2 from the atmosphere at such a magnitude that it would result in a serious deviation from current available pathways. This, together with necessary adaptation actions, risks seriously damaging the global economy and undermining food security and biodiversity." So given Vineyard Wind - and other offshore wind projects to follow - are essential to address the existential threat of Climate Change, I support immediately permitting this project.	Thank you for your comment.
170-003	The US Coast Guard has approved the plan for 1x1 nautical mile installation grid in response to commercial fishing concerns. Substantial concessions have been made to support the 1x1 nautical mile installation grid, which reduces the size of the potential build-out and impairs the CO2 reduction potential. The US Coast Guard has deemed additional transit lanes within wind farms as unnecessary, so I believe this issue is now resolved.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index Number	Comment Text	Response
170-004	The US has fallen far behind Europe, which has successfully deployed	Thank you for your comment
170 001	dozens of large scale Offshore Wind projects in the waters off Germany.	Thank you for your comment.
	Belgium, Denmark and the UK, with these impacts: OSW in Europe has	
	become a well understood, readily executed technology that is essential to	
	mitigating climate change - and that expertise resides in Europe, which is	
	why Vinevard Wind is importing this technology. I see this as a substantial	
	strategic disadvantage to the energy security of the US, so we should	
	immediately begin deploying, and learning from, large scale OSW in the US.	
170-005	The US has fallen far behind Europe, which has successfully deployed	Thank you for your comment.
	dozens of large scale Offshore Wind projects in the waters off Germany,	
	Belgium, Denmark and the UK, with these impactsThere is a large	
	amount of real world performance data supporting the economy and efficacy	
	of OSW, a proven technology about which we in the US have very little first	
	hand experience, having only 5 operating OSW turbines in all of the US.	
170-006	The US has fallen far behind Europe, which has successfully deployed	Thank you for your comment.
	dozens of large scale Offshore Wind projects in the waters off Germany,	
	Belgium, Denmark and the UK, with these impacts: There are now well	
	established processes for permitting large scale OSW in Europe, facilitating	
	the rapid deployment of vast wind farms. We need to learn how to do this	
	much more quickly in the US.	
170-007	With the current COVID crisis and the potential impact to the construction of	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
	office space, and other employment, projects like Vineyard Wind can provide	several sources of projected employment and investment resulting from
	well paying jobs on our shores, and these projects could prove very helpful to	growth of the wind energy industry along the Atlantic coast. While the
	the US recovery from the COVID crisis. A US OSW industry has the	estimates are national, jobs are anticipated to be concentrated in and near the
	potential for many tens of thousands of well paying jobs, and tens of billions	east coast states that would host offshore wind. This information was also
	of dollars in beneficial economic impact over the next decade - so we need all	included in the SEIS (Section 3.7.2.1), and the FEIS provides additional
170.000	these OSW benefits to begin to ramp up in the US immediately.	detail and analysis.
1/0-008	I he displacement of fossil fuels from buildings (electrification) is part of the	I hank you for your comment.
	Mass. Gw SA plan, and would avoid catastrophes like the Merrimack valley	
	gas explosions.	
	long term and enduring health impacts to children:	
	https://www.nchi.nlm.nih.gov/nmc/articles/PMC5800116/	
170-009	Fossil Fuel combustion is an important source of PM 2.5 particulate matter	Thank you for your comment
170 009	which has substantial health impacts: https://www.epa.gov/pm-	Thank you for your comment.
	pollution/health-and-environmental-effects-particulate-matter-pm. The true	
	cost of using large quantities of fossil fuels are not always obvious - but exist	
	at an enormous scale: ttps://www.ucsusa.org/resources/hidden-costs-fossil-	
	fuels	

Index	Comment Text	Response
Number		m1 1 0
1/0-010	In May 2020, a new record high of atmospheric CO2 was reached, in spite of	Thank you for your comment.
	the suppression of economic activity due to COVID:	
	https://www.esrl.noaa.gov/gmd/ccgg/trends/. For these, and a variety of other	
	reasons, I urge you to promptly approve the Vineyard Wind project, and start	
	the US on a path to leadership in the OSW industry. Each day we burn more	
	fracked natural gas to generate electricity increases global warming impact	
	that will remain for many decades.	
171-001	As a property owner on Martha's Vineyard and citizen who is concerned	Thank you for your comment.
	about preserving our environment, I am dismayed at the interminable length	
	of time it has taken to start developing offshore wind energy on a commercial	
	scale in the US. We all know from multiple studies that the Northeast US is	
	one of the most desirable places on earth for the development of wind	
	energy. The studies have been more than thorough and exhaustive.	
171-002	The Vineyard Wind developers have been incredibly patient is working out	Section 2.5 of the FEIS has been added which includes the agency-preferred
	solutions which protect the interests of the fishing industry. The 1 X 1 NM	alternative.
	layout has significantly reduced the economic return of the developers, and	
	yet, they have agreed to compromise in order to meet al possible concerns	
	about fishing and navigational interests.	
171-003	Significant capital has been invested in preparing to launch the Vineyard	Thank you for your comment.
	Wind project. Residents on Martha's Vineyard, as a result of the developers	
	strenuous efforts to communicate and explain every aspect of their plan, are	
	enthusiastically behind the project.	
171-004	Of special concern to many of us is that if additional constraints are placed in	Thank you for your comment.
	the way of the Vineyard Wind project, the entire offshore wind industry is	
	likely to collapse, resulting in the loss of tens of thousands of good paying	
	jobs, and losing a major opportunity to reduce damage to our oceans through	
	increased acidification and increased temperature.	
171-005	I sincerely hope that BOEM will approve the project as proposed by	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Vineyard Wind with the 1 X 1 NM layout as rapidly as possible. It is time the	alternative.
	US joined the company of so many nations around the world in safely and	
	effectively harnessing the benefits of offshore wind energy.	
172-001	I feel a strong responsibility to advocate for all we can do to reduce our green	Thank you for your comment.
	house gas emissions to as low as possible, and reduce our carbon footprint.	
	As you know, Massachusetts is committed to eliminate at least 90% of GHG	
	emissions from energy use in the state by 2050. As responsible stewards of	
	the earth, and as parents of children, we must reach this goal. We will not	
	meet this important goal without significant new sources of energy; and we	
	won't be able to employ people in the coal and oil business, since that sector	
	is in decline and will continue to fight essential changes to save our planet.	

Index	Comment Text	Response
Number	We CAN, however, reduce our GHG emissions and employ about 1,000 people, by supporting offshore wind turbines - a great source of green, renewable energy. The Vineyard Wind project is a major step in the right direction.	
174-001	I am writing to express my support for the Vineyard Wind project to go forward without further delay. This project has been studied for several years, revealing that it is a responsible approach to counteract our current and future climate change crisis. There are several reasons I am supportive [of the Vineyard Wind project]. First, we need to reduce carbon emissions in order to address the harmful effects of climate change. Second, studies have shown the environmental impacts of this project are negligible.	Thank you for your comment.
174-002	current jobs in the fishing industry will be preserved and thousands of more jobs will be created [by the Vineyard Wind Project].	Section 3.6.2 of the FEIS has been updated to conclude that a moderate beneficial impact on employment and economic activity would result from offshore wind development in the RI and MA Lease Areas. It also notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind.
174-003	If we are to address climate change so that future generations aren't burdened with resulting catastrophes, action needs to be taken at the federal, state and local levels. Communities need to take positive steps to reduce CO2 emissions and limit the effects of climate change. This project is an opportunity for the residents of Cape Cod and the islands to make a positive contribution. I am impressed that the energy generated by the turbines is expected to reduce carbon emissions by 1.6 million tons per year, an amount that would be equal to taking 325,000 cars off the road. Most importantly, wind energy is clean and renewable and this particular project is estimated to provide cost competitive energy to over 400,000 homes and businesses in Massachusetts.	Thank you for your comment.
174-004	The fishing industry has been particularly concerned about the impact of this project, but Vineyard Wind has diligently addressed their concerns. The current plan to have slightly more than 1 mile between turbines will provide more than 200 transit lanes for vessels allowing for safe navigation and fishing within the grid of the wind farm.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
174-005	The fishing industry will continue to provide local jobs and thousands of more jobs will be created by this project.	Section 3.6.2 of the FEIS has been updated to note the cooperative effort between the Port of New Bedford, Vineyard Wind, and MassCEC on a supply chain for offshore wind that includes the fishing industry.
174-006	I am opposed to the 2 mile transit lanes within the wind farm. The US Coast Guard has stated that this requirement is unnecessary am opposed to the 2 mile transit lanes	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
	within the wind farm. The US Coast Guard has stated that this requirement is	
175-001	I am in full support of the Vineyard Wind project because renewable energy systems are going to be a crucial part of the future in the United States and the rest of the world. Getting a start on this now will be extremely beneficial	Thank you for your comment.
	and will create thousands of jobs, not only in Massachusetts, but across the	
176-001	A wind farm off the coast is a perfect step in the right direction to a wide use of renewable energy! I am in favor of this decision.	Thank you for your comment.
177-001	In resent years I have partnered with my brother and purchased a few commercial fishing licenses with the intent to fish them after rehabbing a fishing vessel We had a fire on board during the repairs and were forced to sell that vessel to recoup some losses. With the declining fish quota allocations we thought we had enough quota to proceed. With the wing farm moving forward and the potential of fishing grounds lost along with a lot of uncertainty with placement of turbines and cables that would create a fishing hazard especially during inclement weather, and constantly changing fishing regulations, we have given up on our dream to rehab another fishing vessel to fish our licenses.	Thank you for your comment.
177-002	The location of the turbines would be on some of the most productive fishing grounds in the world. There is no proof or guarantee that once the work begins there would be no harm to the fish population. The scientific studies out there on the impact of off shore wind on the fish stock seem to be very few and of one sided.	Section 3.4 and 3.11 of the SEIS discussed the impacts from offshore wind development on finfish, invertebrates, and EFH and commercial and for-hire recreational fisheries, including impacts from noise, anchoring, new cable emplacement and maintenance, vessel traffic, and the presence of structures. A stock-specific analysis is beyond the scope of this EIS and is not essential to a reasoned choice among alternatives. The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments (https://www.boem.gov/environment/environmental-studies/renewable-energy-research).
178-001	Offshore Wind holds many benefits for our region The climate and our economy can not afford for Offshore Wind to be delayed.	Thank you for your comment.
178-002	Increasing navigational lanes beyond the 11 NM endorsed by USCG threatens offshore wind's future (no to Alternative F).	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
179-001	I support approving allowing Vineyard Wind to proceed without any additional navigation lanes beyond those proposed by Vineyard Wind.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
179-002	Offshore wind is an opportunity to bring money to CT (where I'm from) and other northeast states and should not be delayed further by political appointees in Washington DC.	Thank you for your comment.

Index	Comment Text	Response
Number		
181-001	It is imperative the human race responsibly transition to renewable energy	Thank you for your comment.
	sources as quickly as possible. OSW is undoubtedly a responsible method in	
	achieving this goal. This should have been built 20 years ago.	
182-001	We are greatly in need of the renewable energy this project will generate.	Thank you for your comment.
	Please permit the project to go forward.	
183-001	I am writing today to encourage you to support the Vineyard Wind I project	Thank you for your comment.
	off the coast of Massachusetts. This project is expected to produce enough	
	wind to power 400,000 homes in a densely populated part of our country.	
	This project and others like it will lead to a reduced dependence on fossil fuel	
	power generating facilities. In todays Boston Globe (originally appeared in	
	the New York Times) there is an article on the rising number of fracking oil	
	firms that are filing for bankruptcy. The tanks at many of these wells are	
	abandoned and are leaking methane and other planet warming pollutants into	
	the air, unchecked. The companies failed to keep the reserves on hand to	
	properly shut down the wells and the leaks continue unabated. This is further	
	evidence of our need to move away from fossil fuels.	
183-002	Vineyard Wind I will create 3,600 jobs for local residents and more than	Thank you for your comment.
	80,000 jobs over the next ten years. It will save ratepayers more than \$1.4	
	billion in energy-related costs over the 20 year contract with Massachusetts	
	and will avoid emissions of almost 1.7 metric tons of carbon dioxide per	
	year, the equivalent of removing 325,000 cars from the road.	
184-001	The planet needs so much more clean energy! Our population continues to	Thank you for your comment.
	grow and we are dependent on electricity, let's use what we know about clean	
	energy now and move forward to help the planet.	
184-002	It's time for fisherman and the shipping industry to share the ocean with wind	Thank you for your comment.
	turbines. Wind happens over water.	
184-003	Bringing so many new jobs to the island is a huge benefit. I love that the plan	Section 3.6.2 of the FEIS notes that many of the Vineyard Wind 1 Project
	includes going into the high school to expose and train local kids to the	operations and maintenance jobs would be on Martha's Vineyard, and lists
	current pertinent jobs and valid careers of the future in sustainable energy.	the grants and community programs that Vineyard Wind 1 is committed to,
		including job training for offshore wind. This information was also provided
		in the DEIS.
185-001	this project is precedent setting. The decisions made now will have	Thank you for your comment.
	ramifications on projects up and down the eastern seaboard. The Vineyard	
	Wind project is vital to moving this industry forward in the fight against	
	climate change, improving public health, addressing longstanding	
	environmental justice issues, and restarting the economy in the wake of the	
	COVID-19 Pandemic.	
185-003	In order to capture the full potential of the US offshore wind workforce,	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
	developers and suppliers need certainty to invest in and train a local	several sources of projected employment and investment resulting from

Index	Comment Text	Response
Number		
	workforce. Moving toward a 100% US workforce that captures the full	growth of the wind energy industry along the Atlantic coast. These sources
	economic benefits of this industry will require consistent, predictable projects	rely upon varying projections of the growth of the domestic supply chain for
	entering construction for workers to gain experience and qualifications	offshore wind. Appendix A.4 of the FEIS provides parameters to determine
	necessary to advance within the workforce and replace the Europeans over	which Atlantic coast offshore wind projects are reasonably foreseeable at this
	time.	time, but beyond that does not predict future industry growth.
185-004	It's important to note that these projects need to be economically viable, and	Section 2.5 of the FEIS has been added which includes the agency-preferred
	the industry has gone through an exhaustive process to establish a 1 x 1	alternative.
	Nautical Mile layout based on stakeholder feedback. The 1 x 1 NM layout	
	eliminates at least 30% of the area's potential energy production but	
	addresses the main comments from the commercial fishing industry	
	regarding the need for transit lanes to ensure safe navigation. The 1 x 1 NM	
	uniform layout creates over 200 transit lanes throughout the entire wind	
	project area. The United States Coast Guard (USCG) has determined that this	
	type of "standard and uniform grid pattern" layout would "maximize safe	
	navigation" in the Wind Energy Areas (WEAs) (MARIPARS, 32). So, we	
	ask you to reject alternative F, which calls for a 4 x 4 Nautical Mile layout.	
	Alternative F threatens the viability of this industry and provides no benefit.	
	Additional transit lanes will result in substantial technical challenges, delays,	
	cost increases to consumers, and more environmental impacts from offshore	
	wind development, with marginal gains and, as USCG identifies, potentially	
	greater conflict among transiting and fishing vessels that are "funneled into	
	the corridors thereby increasing traffic density and risks for vessel	
	interaction." (MARIPARS, 7).	
186-001	The offshore wind industry will also substantially mitigate the effects of	Thank you for your comment.
	climate change.	
187-001	As a student attending college in Massachusetts, I feel strongly about my	Thank you for your comment.
	state pursuing initiatives like this to further the goal of 100% renewable	
	energy. This project will prevent 1.7 million tons of CO2 from entering the	
	atmosphere, and is a great step towards a just energy transition. As a member	
	of the generation who will be most impacted by climate change, I believe	
	taking steps to develop reliable renewable energy sources is crucial to	
	preserving our future. In addition to the environmental benefits of this	
	project, the development will be a huge boost to employment in the area,	
	with a potential to create 3,600 jobs and supply 400,000 homes with clean	
	energy. This offshore wind development will benefit the local community.	
188-001	In order to meet the requirements of the Global Warming Solutions Act	Thank you for your comment.
	(GWSA), the power sector in Massachusetts must move continuously	
	towards an overall decarbonizationThe proposed Project has been	
	thoroughly vetted. It has been contracted to deliver power to the New	

Index	Comment Text	Response
INUILDEL	England energy grid to contribute to Massachusetts' renewable energy	
	requirements particularly the Commonwealth's mandate that distribution	
	companies jointly and competitively solicit proposals for offshore wind	
	energy generationIn addition to providing much needed, clean energy to	
	our power portfolio, the development of offshore wind will stabilize electric	
	prices over the long term.	
189-001	I am before you today to discuss navigation safety, a topic in which I have	Sections 3.11.4, 3.11.5, and 3.11.6 of the FEIS include a discussion of the
	been deeply involved over the past several years in numerous meetings and	Final MARIPARS study. It is outside of the scope of the EIS to look at the
	conversations with Vineyard Wind, other leaseholders, BOEM, the U.S.	validity of another agency's study. Further, Orsted's opinions or statements on
	Coast Guard, state regulators, the commercial & recreational fishing industry,	the matter are not relevant to BOEM's NEPA analysis.
	and many other key stakeholders. The vast majority of those conversations	
	were focused on two key issues: (1) turbine spacing-and-layout, and (2)	
	vessel transit lanes. Orsted would suggest that the recent U.S. Coast Guard	
	Port Access Route Study of the MA/RI WEA, commonly referred to as the	
	Final MARIPARS, completely and satisfactorily addresses both issues.	
189-002	Indeed any balanced examination of the U.S. Coast Guard's MARIPARS	Section 2.5 of the FEIS has been added which includes the agency-preferred
	report, when compared to the Alternatives proffered in the Supplemental EIS,	alternative.
	would lead one to conclude that Alternative D2 provides the best balance of	
	interest between various waterways users, while maintaining and even	
	improving navigation safety, and also preserving the Coast Guard's ability to	
	conduct effective search and rescue.	
189-003	In its final MARIPARS report the Coast Guard made three specific	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS
	recommendations regarding spacing and layout: 1. Lanes oriented in a	and that Alternative D2 is consistent with the study. Section 2.5 of the FEIS
	northwest to southeast direction, 0.6 to 0.8NM wide. 2. Lanes oriented in an	has been added which includes the agency-preferred alternative.
	east to west direction, 1NM wide. 3. Lanes oriented in a north to south and	
	east to west direction, 1NM wide, to facilitate helicopter search and rescue.	
	Alternative D2 is the only Alternative in the SEIS that meets all three of the	
100.004	Coast Guard's criteria for navigation safety.	
189-004	Notably, the Coast Guard has clearly stated that not only would transit lanes	Section 3.11.5 of the FEIS includes a discussion of the Final MARIPARS
	as proposed in Alternative F fail to preserve navigation safety, such lanes	study.
100.005	would actually increase risk and make navigation more dangerous.	
189-005	Indeed, in its Federal Register notice announcing the availability of its final	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS
	MARIPARS report, the Coast Guard stated, and I quote:	and that Alternative D2 is consistent with the study.
	"Although these larger navigation corridors may appear to provide more area	
	for navigation, they actually provide far less area than the numerous corridors	
	inal result from the recommended array and spacing," that recommended	
190.007	array and spacing being Alternative D2 in the SEIS.	$\mathbf{C}_{\mathbf{r},\mathbf{t}} = \mathbf{C}_{\mathbf{r},\mathbf{t}} + \mathbf{C}_{\mathbf{r},\mathbf{t},\mathbf{t}} + \mathbf{C}_{\mathbf{r},\mathbf{t},\mathbf{t}} + \mathbf{C}_{\mathbf{r},\mathbf{t},\mathbf{t}} + \mathbf{C}_{\mathbf{r},\mathbf{t},\mathbf{t}} + \mathbf{C}_{\mathbf{r},\mathbf{t},\mathbf{t}} + \mathbf{C}_{\mathbf{r},\mathbf{t},\mathbf{t}} + \mathbf{C}_{\mathbf{r},\mathbf{t},\mathbf{t},\mathbf{t},\mathbf{t},\mathbf{t},\mathbf{t},\mathbf{t},t$
189-006	Additionally, the Coast Guard goes on to say that transit corridors as	Section 5.11.5 of the FEIS includes a discussion of the Final MARIPARS
	proposed in Alternative F would make "navigation more challenging, [as]	stuay.

Index	Comment Text	Response
Number		
	most traffic would then be funneled into the corridors thereby increasing	
	traffic density and risks for vessel interaction."	
189-007	The Coast Guard further concluded that the spacing and layout as	Section 2.5 of the FEIS has been added which includes the agency-preferred
	recommended in the MARIPARS report—and as proposed in Alternative	alternative.
	D2—would "provide sufficient space for certain vessels that fish in the WEA	
	to continue fishing after the wind farms are constructed." Moreover, the	
	Coast Guard found that wider transit lanes, as proposed in Alternative F,	
	would "largely preclude fishing in the WEA."	
189-008	Lastly, the Coast Guard concluded that an array layout as recommended in	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS
	the MARIPARS report and as proposed in Alternative D2 would "result in	and that Alternative D2 is consistent with the study. Section 2.5 of the FEIS
	the functional equivalent of 231 navigation corridors that can safely	has been added which includes the agency-preferred alternative.
	accommodate both transits through, and fishing within, the WEA."	
189-009	For these reasons, among many others, Orsted strongly endorses and supports	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative D2 over all others.	alternative.
189-010	I would respectfully remind BOEM that Orsted, Vineyard Wind, and all	As stated in the SEIS, and within Section 2.1.5 of the FEIS, the developers'
	other leaseholders in the MA/RI WEA have unanimously committed to a	agreement was reached in order to avoid irregular transit corridors. This
	uniform grid layout, in a north/south orientation, with a minimum INM	agreement alone has resulted in significant reductions in the area available
	spacing between towers, per our joint letter to the U.S. Coast Guard of	for offshore wind development.
	November 1st, 2019, provided there is no additional requirement to	
100.001	accommodate transit lanes as proposed in Alternative F.	
190-001	It is no small feat to forecast the myriad impacts that the development of a	Thank you for your comment.
	new ocean-based renewable resource will have on the human and natural	
	environment, both positive and negative, but BOEM has largely presented a	
	comprehensive, thoughtful and data-driven analysis of the reasonably	
100.000	foreseeable impacts of projected development along the Eastern Seaboard.	
190-002	With the completion of the cumulative impact analysis, and establishment of	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most
	a methodology that can be broadly replicated across all planned offshore	recent status of the required environmental permits and consultations for the
	wind projects, we urge Secretary Bernhardt to now lift the department's hold	proposed Project.
100.000	on the formal environmental review of projects in the queue.	
190-003	We strongly support the adoption of Alternative D2 as the Preferred	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative for project layout in the Rhode Island/Massachusetts contiguous	alternative.
	lease area. As one of the participating developers to the consensus proposal	
	for a uniform Inm X Inm east-west grid configuration for these specific	
	lease areas, we were heartened to see the solid evidence presented in the	
	SEIS demonstrating the superiority of this approach from a navigational	
	safety perspective, while still respecting the ability of commercial fishermen	
100.001	and other navigators to transit in and through our lease area.	
190-004	We encourage BOEM to defer to the judgment of the US Coast Guard which,	Section 2.5 of the FEIS has been added which includes the agency-preferred
	in the context of the recently released final Massachusetts/Rhode Island Port	alternative.

Index Number	Comment Text	Response
	Access Route Study (MARI PARS), determined that the grid layout pattern "will result in the functional equivalent of numerous navigation corridors that can safety accommodate both transits through and fishing within the WEA" and declined to recommend further formal or informal vessel routing measures.	
190-005	Conversely, we take issue with the SEIS' findings that Alternative F, contemplating a dedicated 4-mile wide transit corridor, could "technically and economically meet the purpose and need." As an example, the Responsible Offshore Development Alliance (RODA) proposal for a 4nm wide transit lane (the basis for Alternative F)—if adopted and extended to other projects—would result in the loss of over 50 wind turbine locations from our South Fork, Revolution, and Sunrise Wind projects that currently have existing PPA obligations. This equates to nearly a 25% loss in total wind turbine locations needed to support our state Power Purchase Agreements. In light of this significant constraint on our developable footprint and attendant production loss, we believe the SEIS conclusion of technical and economic feasibility with respect to Alternative F is misplaced.	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS and that Alternative D2 is consistent with the study.
190-006	It is hard to reconcile the SEIS's qualitative assessment that future offshore wind development will result only in minor net economic benefits to the region, with the study's recognition of significant new investment in ports and harbors, manufacturing and other supply chain activities, and workforce development. Our company alone is in on its way to investing \$15 billion over the next decade in the U.S. The FEIS should reflect a more favorable rating of offshore wind as a domestic economic development engine consistent with ongoing and planned investments.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
190-007	For many of the cumulative impact parameters considered in the SEIS, BOEM chose not to incorporate widely accepted or legally mandated mitigation strategies. Thus, the "bottom line" impact of the 22 GW build-out must be considered a worst-case scenario and not representative of as- constructed project impacts. The FEIS should place the impact assessment in proper context.	As noted in the SEIS, the summary of the Proposed Action and the alternative analyses in this SEIS did not assume that the proposed mitigation measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is

Index	Comment Text	Response
Number		
		a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
190-008	Since the SEIS acknowledges that ongoing climate change would contribute to cumulative impacts, it is important to re-emphasize the positive climate impact that renewable energy provides to terrestrial and marine fauna and local communities. For example, Orsted's Ocean Wind project is expected to avoid emissions of over 100 million tons of carbon dioxide, almost 200 thousand tons of sulfur dioxide, and over 80 thousand tons of NOx over the life of the project. Offshore wind thereby results in a net reduction of regional air pollution.	The FEIS, like the SEIS, addresses the positive climate impacts of the proposed Project and future offshore wind projects in Section A.8.1. Section A.8.1 of the FEIS has been updated to include additional benefits of offshore wind to health and climate change.
190-009	At the same time, we stand ready to help the Northeast recover long-term from this unprecedented economic crisis by creating thousands of good local jobs and investing hundreds of millions of dollars in local ports to develop homegrown clean energy that will combat climate change and power our communities for decades to come.	As was the case for the SEIS and DEIS, the effects of the proposed Project to demographics, employment, and economics are addressed in Section 3.6 of the FEIS.
191-001	I am grateful for the expanded analysis, this is a regional issue not a sub-lease scale issue. You have not considered all the foreseeable impacts however, this is a good start.	Thank you for your comment.
192-001	This SEIS is incomplete. An important fact is omitted. According to NOAA's West Coast researchers, avian mortality is greater due to domestic feline activity than to rotary wind energy devices.	Avian mortality as a result of domestic feline interactions is not relevant as we are discussing impacts to avian species on the Atlantic OCS. As such, the information relative to the annual avian mortality attributed to domestic felines was omitted.
193-001	I'm against the building of wind farms without sufficient data to determine whether or not they will harm the environment.	Thank you for your comment.
194-001	Vineyard Wind alone will generate at least 3,600 jobs and reduce costs for ratepayers by an estimated \$1.4 billion, according to the Massachusetts Department of Energy Resources. A recent report from the American Wind Energy Association found that by 2030, the offshore wind sector will employ more than 80,000 people from North Carolina to Maine and lead to \$25 billion in annual economic output. That kind of economic potential, if realized, would be a game changer for people in our region and across the country, the kind of investment that can rebuild communities and create new opportunities for families	As was the case for the SEIS and DEIS, the effects of the proposed Project to demographics, employment, and economics are addressed in Section 3.6 of the FEIS.

Index Number	Comment Text	Response
194-002	But just as important as the economics is the effect the development of this	The FEIS like the SEIS addresses the positive climate impacts of the
19.002	industry will have on our environment and our efforts to reduce the	proposed Project and future offshore wind projects in Section A.8.1.
	catastrophic effects of climate change. Coastal communities are at a far	r - r
	greater risk from climate change, not only due to the impacts of coastal	
	erosion and severe storms, but also because our economic health is closely	
	tied to a healthy, stable environment. Vineyard Wind 1 will generate clean,	
	renewable, cost-effective power for over 400,000 homes and businesses	
	across the state while reducing carbon emissions by almost 1.7 million tons	
	per year, the equivalent of taking 325,000 cars off the road.	
194-003	In contrast, if the project fails to move forward, the SDEIS outlines the	The FEIS, like the SEIS, addresses the positive climate impacts of the
	cataclysmic impact that climate change will have on our oceans, including	proposed Project and future offshore wind projects in Section A.8.1.
	ocean acidification, ocean warming, and sea level rise, and other effects that	
	are likely to contribute or lead to "permanent changes of unknown intensity"	
	(3-2) to terrestrial and coastal fauna, "the decline of benthic resources with	
	calcareous shells" (3-14), "noticeable temporary and permanent adverse	
	impacts" on finfish and invertebrate communities (3-30), "long- term,	
	possibly high consequence risks to marine mammals (3-38), and "long-term,	
	high- intensity risk to sea turtles" (3-49).	
194-004	[If the project fails to move forward,] we would also see a burgeoning	Thank you for your comment.
	industry once again stalled, that could shake the confidence of those seeking	
	the regulatory predictability that leads to a stable, prosperous industry. The	
	offshore wind industry cannot get off the ground without a clear pathway	
	forward.	
194-005	Late last year, after hearing from many stakeholders, the developers of the	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS
	New England Wind Energy Areas (NE WEA) came together and proposed	and that Alternative D2 is consistent with the study.
	uniform, 1 x 1 nautical miles spacing between turbines, a layout that was	
	recently endorse by the United States Coast Guard (USCG). In the recently	
	released MARIPARS report, the USCG found that the standard and uniform	
	grid pattern "would allow for safe navigation and continuity of USCG	
	missions through seven adjacent wind farm lease areas over more than 1400	
101005	square miles of ocean." (MARIPARS, 33)	
194-006	Alternative "F" slashes the generation capacity the Commonwealth and other	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	New England states have demanded and puts the entire region at risk of not	that could occur in Alternative F were implemented. Therefore, no changes to
	meeting energy demand even as many of New England's fossil fuel and	the FEIS are warranted.
	nuclear power plants are retiring. Section 2.2.2 of the SEIS states "the	
	addition of all six of the 4-nautical mile transit lanes proposed by RODA	
	would reduce the technical capacity of the Rhode Island and Massachusetts	
	(KI and MA) Lease Areas by approximately 3,300 MW, which is 500 MW	
	less than the current state demand for offshore wind in the area" and further	

Index	Comment Text	Response
Number	"BOEM recognizes that implementation of Alternative F could further erode project economics and viability." Implementation of those additional transit lanes will only further constrain the economic and environmental benefits of the industry.	
194-007	States in our region have set ambitious goals for carbon reduction, and offshore wind is a major component of reaching those goals; in fact, they cannot be reached without this industry.	The FEIS, like the SEIS, addresses the positive climate impacts of the proposed Project and future offshore wind projects in Section A.8.1.
195-001	[I] appreciate all the effort to minimize noise during build outThe vibrations generated during operation: Will these vibrations be buffered somehow to minimize noise that would affect transient and permanent wildlife in the area? What buffering system will be employed? Could noise level exceed levels harmful to surrounding wildlife under certain conditions, e.g., high winds, wave action, mechanical noise transmitted down towers from gearbox?	Sections 3.4, 3.5, 3.6, and A.8.3 of the SEIS and Sections 3.3, 3.4, 3.5, and A.8.3 of the FEIS discussed the potential impacts of WTG operational noise. Based on measurements from existing wind farms, BOEM expects no impact of WTG operational noise that would require mitigation. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at 164 feet (50 meters; Miller and Potty 2017). Therefore, no change to the FEIS is warranted.
196-001	I believe that alternative G is not a responsible action as there are many devastating consequences of using our existing energy strategy and reliance on fossil fuels. First, all fossil fuels are more impactful to the environment than alternative energy supplies, notably wind power. They are emitting greenhouse gases which are warming our oceans, raising their levels and turning them more acidic. Both of these pose a much greater threat to our fishing industry than a well organized set of offshore turbines. Second, unlike off-shore drilling for oil, once built, there is little to no risk to the environment. Both oil and gas drilling operations have been permitted in ecologically sensitive areas and we have seen the devastation when those have had leaks and spills. Wind power does not have any danger of ongoing ecological devastation.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
196-002	It is important to note that states who have clean energy goals, like Massachusetts, cannot achieve those if the spacing of the turbines are reduced beyond the proposed 1x1 nm gridThe Coast Guard has determined that having multiple, predictable lanes to shore is far more effective for safe passage than 6 specific lanes which are 4 nm apart. As such, Alternative F is not a viable solution and should be abandoned.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
196-003	Lastly, we are all aware that burning fossil fuels emits pollutants. These cause respiratory problems, notably asthma, which kills many people prematurely every year. The COVID-19 pandemic has shown us that anything that compromises our breathing and health should be avoided. This is especially true for disadvantaged communities where they have been affected at an even greater rate. Approving this project will go a long way towards reducing the health impacts upon these communities	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).

Index	Comment Text	Response
Number		
197-001	Please know [that the Vineyard Wind I Project would be] detrimental to our fishing livelihoods. No research has been done on how 14MW will affect the fish that call that fragile ecosystem home.	Section 3.4.2 of the SEIS discussed the likely effects on finfish, invertebrates, and EFH and Section 3.11.2 discussed likely effects on commercial fisheries and for-hire recreational fishing. A stock-specific analysis is beyond the
		The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the EEIS is warranted
		BOEM continues to fund studies to address concerns raised in public
		comments (nups://www.boem.gov/environment/environmental- studies/renewable-energy-research)
197-002	Vineyard Wind is creating artificial structures that will draw predatory fish.	Section 3.4 of the SEIS discussed the reef effect on finfish and the potential
107.002		attraction of predatory fish. Therefore, no change to the FEIS is warranted.
197-003	with all the electricity running through the ground, the highly alert forage	Sections 3.3 and 3.4 of the SEIS addressed the potential impacts of EMF on
	lish will move on.	to minor. Therefore, no change to the EEIS is warranted
197-004	If I was to have a collision with one of the eight hundred foot structures. I	Section 3.11.2 of the EEIS discusses impacts due to the presence of
197-004	think we would lose that battle	structures. With implementation of the self-imposed measures by Vineward
		Wind described in Section 3.11.2 non-Project vessels transiting between the
		Proposed Action ports and through the WDA would be able to avoid
		Proposed Action vessels and structures though routine adjustments to
		navigation. Sections 3.11.1, 3.11.2, 3.11.4, and 3.11.5 discuss navigational
		safety. The impacts of a vessels allision with a WTG or ESP foundation on
		that vessel and crew have been considered in assigning the impact ratings.
197-005	We have just put on a new fourteen thousand dollar Furuno Radar and I am	Section 3.11.2 of the FEIS includes a discussion of potential radar
	still not confident that it won't be messed up with a false echo from the	interference. The Final MARIPARS (USCG 2020) concluded that general
	windmill.	mitigation measures, such as properly trained radar operators, properly
		installed and adjusted vessel equipment, marked wind turbines, and the use of
		AIS all enable safe navigation with minimal loss of radar detection.
197-006	If you were to build these structures, I am not certain I would be able to fish	Section 3.11 of the SEIS discussed how development in a Wind Lease Area
	around them anymore. After thirty summers of fishing in this area, we will	could cause fishing vessel relocation, increased conflict, increased operating
	have to tie up because we no longer have a summer off shore fishery.	costs, and lower revenue. Section 3.10 and 3.11 of the FEIS discuss impacts
		from offshore wind development to vessel navigation and maneuverability.
		Therefore, no change to the FEIS is warranted.
197-007	Lastly, with our net, doors and sensors we have sixty thousand dollars in the	Section 3.11 of the SEIS discussed the impacts from offshore wind
	water behind the boat. If we were to lose our gear in one of your cables or	development on commercial fisheries, including impacts from the presence of
	structures, that could put us out of business.	structures on fishing gear, and Vineyard Wind's voluntary financial
		compensation measures for potential gear loss. Sections 3.10.2, 3.10.8, and
		Appendix D of the FEIS were updated to discuss potential mitigation
		measures. BOEM believes that measures proposed in the COP and enforced
1		through terms and conditions of approval are sufficient to avoid interactions

Index	Comment Text	Response
Number		•
100.001		between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth.
198-001	The 1x1 pattern that all developers in the north east have jointly committed to is more accommodating to marine traffic than any offshore wind farm in the world and has been signed off by the US Coast Guard. The additional 4x4 navigational channels are unnecessary and will only further delay and reduce the positive economic and environmental benefits. Potentially this could scuttle some or all of the proposed projects and set us back another decade.	alternative.
198-002	Europe figured this out in the 90's. The fact that the United States is still tripping over itself in 2020 is extremely frustrating. We're now in the third decade of talking about offshore wind as if it's akin to landing a man on Mars. The benefits are clear and vastly outweigh the negatives. The rest of the world is making this happen.	Thank you for your comment.
198-003	Please agree to the proposed 1x1 pattern and let these projects move forward. American jobs and American lives are on the line.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
199-001	I have always said it's a dumb idea to put anything out in the ocean. Salt water destroys everything. Wires especially, much less any other moving parts. Why not put the turbines at Interstate off-ramps? There is at least an acre or two at each one. You could put them all the way across the country. They would be close to the population of people that could use the electricity. They would be easy to access. They wouldn't be in SALT WATER. They would need less maintenance due to no SALT WATER. They would be less expensive to build and operate. BECAUSE THEY ARE NOT ON SALT WATER 20 MILES OFF SHORE. And they would be closer to the PEOPLE THAT NEED THE ELECTRICITY much more than just the people at THE COAST.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action.
200-001	We urge BOEM to approve the Vineyard Wind Project with the preferred "D2" option (1 nautical mile spacing) without delay.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
200-002	We know the technology and cost for wind power has improved dramatically over the past decade. We know first-hand, that project delays make that power more expensive to our ratepayers. We also recognize that the Massachusetts and surrounding offshore wind resource has the unique potential to supply much more electrical energy to the region and potentially more than our state currently uses. Wind power complements our states solar	Thank you for your comment.

Index	Comment Text	Response
Number		
	resources with strong winter and nighttime performance. The project	
	promises to help decarbonize our industry, our building HVAC, and our	
200.002	transportation infrastructure by electrification.	TT1 1 0
200-003	To meet the requirements of the Global Warming Solutions Act (GWSA), the	Thank you for your comment.
	power sector in Massachusetts must move continuously towards an overall	
	decarbonizationMunicipal Light Departments will need to improve their	
	non-carbon emitting portfolio in the coming years and need options like	
	Vineyard wind to displace natural gas generation and the potential retirement	
200.004	of Millistone Nuclear as early as 2025 .	
200-004	The offshore wind project of Vineyard Wind offers very important potential	Job projections for the Vineyard Wind I Project are provided in Section 3.6.2
	for Massachuseus municipal utilities as a primary source of future energy for	of the FEIS, and were also provided in the DEIS. This section also includes
	all New England that also will provide many jobs.	vineyard wind's contribution to the security and resiliency of the local
		energy supply as a beneficial impact of offshore wind, with the same
200.005		conclusions as the SEIS.
200-005	New England has used natural gas to displace coal, but our New England	I nank you for your comment.
	grid must start the transition off natural gas and offshore wind is one of the	
201.001	rew resources that can make that possible in the timeframe we need.	
201-001	what will the impact be upon the natural ocean life in the waters surrounding	Chapter 3 of the SEIS and FEIS address the potential impacts to resources,
202.001	We can no longer offered to delevathic anniact while we foolighty new higher	There is a very comment
202-001	retes for forms of energy that nolly the sir we breathe and that contribute	i nank you for your comment.
	daily to the reverses of elimete shange	
202 001	Wind turbings kill birds and bats and inspats in killing the inspats the blades	Section A 8.2.2 provides an undeted discussion of hird use of the Atlantic
203-001	while turbines kin birds to their death	Flyway along the North American Atlantic Coast Within the Atlantic
	invite insect eating birds to their death	Flyway along the North American Atlantic Coast. Within the Atlantic
		concentrated along the coastline (Wetts 2010). Waterbirds use a corridor
		between the coast and several kilometers out onto the OCS while land hirds
		tend to use a wider corridor extending from the coastline to tens of kilometers
		inland (Watts 2010). Additionally as denicted in Figures A 8.3.1 and A 8.3.2
		in the SEIS total avian abundance for species with high collision sensitivity
		and displacement sensitivity are low in the proposed Vinevard Wind 1
		Project area, as well as within all of the offshore wind lease areas on the
		Atlantic OCS As such collision and displacement impacts are expected to be
		low. Additionally, as cited in the SEIS, many of the species that exhibited
		high avoidance rates in the Skov et al. (2018) study are same species that
		were modeled as part of the analysis in the SEIS.
203-002	Wind turbines are placed in the migratory bird paths which lead to the bird's	Section A.8.3.2 provides an updated discussion of bird use of the Atlantic
	death	Flyway along the North American Atlantic Coast. Within the Atlantic
		Flyway, much of the bird activity is concentrated along the coastline

Index	Comment Text	Response
Number		
		concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). Additionally, as depicted in Figures A.8.3-1 and A.8.3-2 in the SEIS, total avian abundance for species with high collision sensitivity and displacement sensitivity are low in the proposed Vineyard Wind 1 Project area, as well as within all of the offshore wind lease areas on the Atlantic OCS. As such collision and displacement impacts are expected to be
		low. Additionally, as cited in the SEIS, many of the species that exhibited high avoidance rates in the Skov et al. (2018) study are same species that were modeled as part of the analysis in the SEIS.
203-003	Wind turbines affect the navigation systems of whales and dolphins leading to their deaths	Sections 3.5.1 and 3.5.2 of the SEIS discussed the potential impacts of EMF on marine mammals. As discussed, modeled and measured magnetic fields from AC cables buried to a depth of 3 feet would emit detectable fields up to 82 feet above the cable and 79 feet along the sea floor. Vineyard Wind proposes to bury Project cables to a depth of 5-8 feet, providing greater shielding and reducing field detection distances. Additional discussion of the uncertainty regarding the individual and/or population level impacts of EMF on marine mammals was provided in Appendix H of the SEIS. Given the extremely localized nature of the potential EMF related impacts exposure is expected to be low. Therefore, no change to the FEIS is warranted.
203-004	Wind turbines cause infrasound affecting animals, sea life, birds, and humans	Section 3.3.7.3, 3.3.8.3, of the DEIS and Section 3.5.1 of the SEIS discussed the expected distance that noise associated with operational WTGS would reach ambient levels. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at 164 feet (50 meters; Miller and Potty 2017). Therefore, no change to the FEIS is warranted.
203-005	Wind turbines make money for foreign companies not the state or country in which they put the turbine	The SEIS relied on projections of employment, economic activity, local/state tax revenues, known investment in local ports and job programs, and grants to local communities and organizations, to reach a reasonable conclusions of beneficial impact within the geographic analysis area. Section 3.6.1.1 of the FEIS has been updated to include additional information on ongoing port facility improvements and projections of economic investment. The projections support reasonable conclusions that offshore wind would support jobs and businesses within the geographic analysis area.
203-006	Wind turbines do not create hundreds of local jobs	The SEIS relied on projections of employment, economic activity, local/state tax revenues, known investment in local ports and job programs, and grants to local communities and organizations, to reach a reasonable conclusions of beneficial impact within the geographic analysis area. Section 3.6.1.1 of the

Index Number	Comment Text	Response
		FEIS has been updated to include additional information on ongoing port facility improvements and projections of economic investment. The projections support reasonable conclusions that offshore wind would support iobs and businesses within the geographic analysis area.
203-007	Wind turbines cost consumers millions of dollars in fees to pay for the subsidies given to foreign companies. Wind turbines increase the cost of electricity threefold making the countries in which it prevails energy poor. Wind turbines cost rate payers money in subsidies when they are forced to stop running	The SEIS relied on projections of employment, economic activity, local/state tax revenues, known investment in local ports and job programs, and grants to local communities and organizations, to reach a reasonable conclusions of beneficial impact within the geographic analysis area. Section 3.6.1.1 of the FEIS has been updated to include additional information on ongoing port facility improvements and projections of economic investment. The projections support reasonable conclusions that offshore wind would support jobs and businesses within the geographic analysis area. The analysis of employment and economic impacts within the geographic analysis area is valid regardless of federal and state subsidies. Ratepayer costs depend on numerous variables beyond the scope of the EIS.
203-008	Wind turbines are not green - they use more fossil fuel than they save	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
203-009	Wind turbines use rare earth minerals which are mined in inhumane conditions and cause much pollution where they are mined	Thank you for your comment.
203-010	Wind turbines cause health problems in humans	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
203-011	Wind turbines cause flicker on nearby properties	The FEIS does not address flicker because the Vineyard Wind turbines, being at least 14 miles offshore, would be too far from shore to cause flicker for observers on land. This effect could be experienced by mariners who are much closer to the turbines than the closest coastline.
203-012	Wind turbines drive fish away and affect the commercial and recreational fishing industry	Section 3.4 and 3.11 of the SEIS discuss the impacts from offshore wind development on finfish and commercial and for-hire recreational fisheries, including impacts from noise, anchoring, new cable emplacement and maintenance, vessel traffic, and the presence of structures. Therefore, no change to the FEIS is warranted.
203-013	Wind turbines cause havoc to shipping lanes	Sections 3.11.2 thru 3.11.5 of the FEIS discuss impacts to vessel traffic. The major ports in the vicinity of the WDA include the ProvPort, Fall River, New Bedford, and Davisville. The primary vessel traffic and commercial shipping lanes serving these ports are outside of the WDA (COP Volume III, Section 5.5.1, Appendix III-I; Epsilon 2020a).
203-014	Wind turbines affect the ability of radar to predict severe weather	Section 3.12 of the FEIS has been updated to specify that weather radar systems were included in the analysis of the Proposed Action, and that the Proposed Action is not anticipated to impact weather radar systems. The

Index	Comment Text	Response
Number		
Number		FEIS was also updated to 1) Include references to FAA Order JO 7400.2M, (FAA 2019) which implements procedures for conducting aeronautical studies per 14 CFR Part 77, and requires an obstruction evaluation to consider "physical, electromagnetic, or line-of-sight interference on existing or proposed air navigation, communications, radar, and control systems facilities" and provides specific requirements for such an analysis, and to 2) Clarify that BOEM assumes offshore project proponents would conduct radar studies in coordination with BOEM's Information Guidelines for a Renewable Energy Construction and Operations Plan (COP) issued May 27, 2020 and the requirements of 30 CFR 585.621, and these radar studies would identify potential impacts and mitigation to weather radar systems. To develop the information in the FEIS, BOEM relied on the FAA's DOD Preliminary Screening Tool which indicates that the Proposed Action and other offshore wind facilities in the RI and MA Lease Areas are unlikely to impact NEXRAD radar systems; prior FAA determinations for WTGs up to 696 feet for the Proposed Action and up to 1,049 feet for other offshore wind
		projects in the RI and MA Lease Areas; and Vineyard Wind's project-specific radar evaluations included in the COP (COP Volume III, Section 7.9.2.1.2, Figure 7.9-1; Epsilon 2020a).
203-015	Wind turbines affect the ability of the military to adequately protect our shores	Section 3.12 of the FEIS addresses potential impacts to military and national security uses and radar systems and includes updates to clarify information provided in the DEIS and SEIS. BOEM coordinates with the Department of Defense and the U.S. Coast Guard throughout the process of identifying leasing area and approving the COP in order to identify and minimize conflicts with military and national security concerns.
203-016	Wind turbines will limit the areas in which boats can travel for fear of collisions with the Wind turbine's bases	Section 3.11.2 of the FEIS discusses impacts due to the presence of structures. With implementation of the self-imposed measures by Vineyard Wind described in Section 3.11.2, non-Project vessels transiting between the Proposed Action ports and the WDA would be able to avoid Proposed Action vessels and restricted safety zones (if USCG establishes any such zones within 12 nm of the coast) through routine adjustments to navigation.
203-017	Wind turbines will leak oil into the ocean	Section A.8.2.2 of the SEIS addressed the potential for accidental releases and discharges associated with the proposed Project. Therefore, no change to the FEIS is warranted.
203-018	Wind turbine blades are not recyclable and cause much havoc at landfills	As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and other BOEM requirements, Vineyard Wind would be required to remove or decommission all installations and clear the seabed of all obstructions created by the proposed Project. Vineyard Wind would need to obtain separate and subsequent approval from BOEM to retire any portion of the Proposed

Index	Comment Text	Response
Number		
		Action in place. If the COP is approved or approved with modifications, Vineyard Wind would have to submit a bond that would be held by the U.S. government to cover the cost of decommissioning the entire facility. This explanation has been added to Section 2.1.1.3 of the FEIS.
203-019	Wind turbines will destroy the pristine view from our shores for the foreseeable future affecting the economy of every seaside resort	Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations and night sky impacts. Vineyard Wind has committed to use ADLS at night to greatly reduce nighttime impacts of aviation lighting. Vineyard Wind would also use white or light grey paint color as described in Appendix D to reduce visibility against the horizon. New visual simulations provide views of the 14 MW WTGs as well as simulations for Vineyard Wind 1 wind turbines combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment. Research findings that address the impacts on coastal tourism were provided in the DEIS and Section 3.10.1 and 3.10.2 of the SEIS, and have been carried forward into the FEIS.
203-020	Instead of wasting billions of dollars and adversely affecting millions of people and thousands of businesses, might I suggest you put the money into enhancing the solar energy capabilities with more research. When that research produces an effective solar energy producing system, install that system on every roof in every seaside town and every roof in the sunbelt region. The panels or solar shingles or solar paint will not do the harm that the wind turbines will do. The solar panels will not have to be paid not to turn on in high winds. The solar panels will not harm migrating birds, bats, or ocean wildlife. Solar panels will not harm humans.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action.
203-021	Or better yet, put those billions of dollars into Fusion Technology. https://www.sciencefocus.com/futuretechnology/meet-the-renegades- building-a-nuclear-fusion-reactor-in-your-neighbourhood/) That is the future. Clean. And immensely powerful. Don't waste my money nor yours on an unreliable, environmentally unfriendly, energy like wind energy.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action.
204-001	Individually and collectively, state policymakers are making significant and long-term commitments to the development of a U.S based offshore wind market. Taken together, the U.S. now represents a nearly 30 GW market through 2035 based strictly on the procurement commitments that are already enshrined in state law.	Section 1.7.1 of the SEIS included a detailed overview of the future of offshore wind in the United States on the Atlantic OCS.
204-002	As part of our U.S. build-out, Orsted has already pledged nearly \$500M towards port facilities at State Pier in New London, CT; Tradepoint Atlantic in Baltimore, MD; Port Jefferson, NY; and Atlantic City, NJ. These ports will serve the diverse needs of the industry for component manufacturing, staging and O&M.	The FEIS is for the Vineyard Wind 1 Project, and therefore identifies major planned improvements to ports within the geographic analysis area for the Vineyard Wind 1 Project. It does not include information on specific offshore wind investments outside the geographic analysis area for Vineyard Wind 1, such as ports in Connecticut, New Jersey, or Maryland, Section 3.6.1.1 of the

Index	Comment Text	Response
Number		
		FEIS has been updated to include additional information on national
		coast offshore wind installation. These general projections are used to draw
		reasonable conclusions about anticipated economic impact within the
		geographic analysis area.
204-003	Recent commitments by the State of New Jersey for the establishment of a	The geographic analysis area for demographics, employment, and economics
	dedicated offshore wind port adjacent to the Hope Creek nuclear facility; and	was shown in Figure A.7-7 of the SEIS and has not been changed for the
	New York's imminent \$200M RFP for harbor facilities demonstrate the scale	FEIS. New Jersey and New York port improvements are not within the
	and seriousness of this investment. Investments like this will create thousands	geographic analysis area for the Vineyard 1 Project. Specific projects outside
	of jobs, stimulate coastal economies and revitalize U.S. port infrastructure.	the geographic analysis area were not included in the analysis for the
		proposed Project; however, the Section 3.6.1.1 of the FEIS has been revised
		to include additional information on national projections of employment and
		These general projections are used to draw reasonable conclusions about
		anticipated economic impact within the geographic analysis area.
204-004	Offshore wind procurements including local content requirements are	The geographic analysis area for demographics, employment, and economics
	spurring significant investment in a domestic U.S. supply chain. A prominent	was shown in Figure A.7-7 of the SEIS and has not been changed for the
	example of this is Ørsted's recently announced partnership with EEW, one of	FEIS. New Jersey and New York port improvements are not within the
	the world's leading producers of steel monopiles, to establish the first U.S	geographic analysis area for the Vineyard 1 Project. Specific projects outside
	based offshore wind-related manufacturing facility. This plant, to be located	the geographic analysis area were not included in the analysis for the
	in South Jersey, will be dedicated to the fabrication of foundations for the	proposed Project; however, the Section 3.6.1.1 of the FEIS has been revised
	U.S. and global offshore market. As U.S-based and foreign suppliers become	to include additional information on national projections of employment and
	convinced of the durability and scalability of the U.S. OSW market, they will	economic activity resulting from Atlantic coast offshore wind installation.
	make the necessary investment in local factories, people, and inventory to	These general projections are used to draw reasonable conclusions about
	support a robust, nomegrown supply chain rather than incur the high shipping	anticipated economic impact within the geographic analysis area.
	overseas	
204-005	The efficient build-out of offshore wind farms will require fit-for-purpose	Economics and employment were addressed in Section 3.7 of the SEIS and in
	installation vessels that are U.S. constructed, flagged, and crewed. Dominion	Section 3.6 of the FEIS.
	Energy has recently confirmed that it is leading a consortium of investors	
	who will commission the U.S.'s first dedicated installation vessel at a cost of	
	approximately \$500 million. Other specialized vessels will be required, such	
	as the purpose-built Crew Transfer Vessels commissioned by Orsted in 2019	
	to ferry workers from shore to the wind energy area for construction, and	
	long-term operation and maintenance.	
204-006	Ottshore wind development is expected to spur the creation of high quality,	Economics and employment were addressed in Section 3.7 of the SEIS and in C_{1}
	Inigh wage jobs. I nese comprise skilled jobs in the construction trades as well	Section 3.6 of the FEIS.
	as more permanent jobs for the operation and maintenance of the wind farm	
	over its 35+ year expected life. A study by the Workforce Development	

Index Number	Comment Text	Response
	Institute found that 74 different occupations, including electricians, ironworkers, and welders are needed during the various stages of planning, development and operations of offshore wind farms. Ørsted is committed to supporting skills development and safety training to stand up a U.S. OSW workforce.	
204-007	The building of a homegrown U.S. offshore wind industry will require capital investment of tremendous breadth and depth. These investments are already underway. While the SEIS recognizes this trend, it nonetheless concludes that the overall economic impact will be minor. It is hard to reconcile this qualitative assessment with the body of the report and the public record. We respectfully request that BOEM reconsider this finding and assign an impact rating commensurate with the major domestic investments made and contemplated by the industry, including but not limited to those identified in the body of the SEIS.	Section 3.6 of the FEIS provides summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. This is a revision from the minor beneficial impact given in the SEIS.
205-001	My only concern is seabirds. In Oregon we have hundreds of windmills providing power along the Columbia River. These windmills are necessary, but there is no question they represent a hazard to birds, in particular eagles. I would hope that these windmills are going to be far from the flyways for migrating birds, to minimize such loss.	Section A.8.3.2 provides an updated discussion of bird use of the Atlantic Flyway along the North American Atlantic Coast. Within the Atlantic Flyway, much of the bird activity is concentrated along the coastline concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). Additionally, as depicted in Figures A.8.3-1 and A.8.3-2 in the SEIS, total avian abundance for species with high collision sensitivity and displacement sensitivity are low in the proposed Vineyard Wind 1 Project area, as well as within all of the offshore wind lease areas on the Atlantic OCS. As such, collision and displacement impacts are expected to be low. Additionally, as cited in the SEIS, many of the species that exhibited high avoidance rates in the Skov et al. (2018) study are same species that were modeled as part of the analysis in the SEIS.
206-001	I write in support of the expedient permitting of Vineyard Wind 1We are decades behind in pursuing responsibly sited offshore renewables, and a decade of work has gone into the siting, surveying and leasing of the waters off southern New England. Further delay or unnecessary, late-issued restrictions will clearly threaten this and future projects, as stated explicitly in the Supplemental EIS If we further hinder this industry from a regulatory perspective, we will continue to stand still on addressing climate change (which poses grave threats to our oceans as well as nearly every other environmental resource on the planet), but we will also fail to capture the energy, economic and employment benefits that would come with embracing this new important maritime industry.	Thank you for your comment.

Index	Comment Text	Response
Number		
206-002	[1] support the compromise layout endorsed by the US coast guard, that will facilitate charactures of the account	Section 2.5 of the FEIS has been added which includes the agency-preferred
207.001	In Marca almost a static distance and a second second distance and a second distance and the second di	
207-001	In Massachusetts, offshore wind is the largest renewable energy resource we	I nank you for your comment.
	nave. In 2018, Environment Massachusetts Research & Policy Center	
	released a report, Wind Power to Spare: The Enormous Energy Potential of	
	Atlantic Offshore Wind, documenting the potential for offshore wind energy	
	along the Atlantic coast. Our report found that Massachusetts has the highest	
	offshore wind potential of any state in the nation. Massachusetts' technical	
	potential for offshore wind is equivalent to more than 19 times the state's	
	annual electricity consumption. Even if our heating and transportation are	
	converted to electric power — a trend that is already underway, and a	
	necessary step toward decarbonizing our economy and preventing the worst	
	impacts of global warming — offshore wind will still be sufficient to power	
	Massachusetts eight times over. Massachusetts' offshore wind resources,	
	along with our potential for other forms of renewable energy like solar, give	
	us confidence that a future powered by 100 percent clean, renewable energy	
	is feasible. When we achieve 100 percent renewable energy, our air will be	
	cleaner, our communities will be healthier, and we'll be doing our part to	
	avoid devastating climate change.	
207-002	In Massachusetts, public support for clean energy is strong, and state and	Thank you for your comment.
	local officials are responding to this support with ambitious commitments. In	
	2016, state officials passed a law committing to 1,600 megawatts of offshore	
	wind energy within 10 years. Two years later, legislators opened the door to	
	doubling that commitment to 3,200 megawatts, and Governor Baker	
	promised he would do so.	
207-003	As the SEIS says, Vineyard Wind and other proposed offshore wind projects	Thank you for your comment.
	will help Massachusetts and other East Coast states to reduce their reliance	
	on polluting fossil fuels. Once completed, the Vineyard Wind project will	
	produce approximately 6 percent of the electricity consumed in	
	Massachusetts while avoiding 1.6 million tons of carbon dioxide annually,	
	the equivalent of taking 325,000 cars off the road. The project will also result	
	in a significant reduction in other pollutants, like nitrogen oxides and sulfur	
	dioxide, that harm public health.	
207-004	Vineyard Wind has shown a commitment to building a cooperative	Section 3.6.2 of the FEIS has been updated to reference the cooperative
	relationship with the project's host communities. Vineyard Wind is	agreement between Vineyard Wind and Vineyard Power. This section also
	partnering with Vineyard Power, an energy cooperative, to ensure that	includes information from the DEIS on the grants that would be provided by
	residents of Martha's Vineyard experience the economic benefits of offshore	Vineyard Wind for communities in southeastern Massachusetts.
	wind. The company has also committed to significant investments in	

Index	Comment Text	Response
Number	renewable energy and resiliency in communities throughout Southeastern Massachusetts.	
208-001	I have been going to meeting about the wind farms for years and no one can adequately answer my questions about decommissioning. I am also surprised the social justice warriors and the environmental activists sit quietly when the subject of decommissioning comes up. If this project was on land they would be screaming for enough bond monies to cover decommissioning and returning the soil to its previous unmolested state; not here! I believe there will never be enough money bonded to cover the decommissioning so I suggest that if the company in charge of decommissioning defaults, the electric companies that purchased the power be responsible for finishing the decommissioning. I was told in a meeting in RI that the five turbines outside of Block Island will not be removed, just the base will be cut 35 feet below the water line and everything else stays. These wind farms will change the ecosystem and the damage will be forever.	As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and other BOEM requirements, Vineyard Wind would be required to remove or decommission all installations and clear the seabed of all obstructions created by the proposed Project. Vineyard Wind would need to obtain separate and subsequent approval from BOEM to retire any portion of the Proposed Action in place. If the COP is approved or approved with modifications, Vineyard Wind would have to submit a bond that would be held by the U.S. government to cover the cost of decommissioning the entire facility. This explanation has been added to Section 2.1.1.3 of the FEIS.
208-002	There is no science to prove or disprove any claims or speculations made by fishermen as to what will happen. BOEM should do a study so we have a valid baseline, which means we should a moratorium for five years.	BOEM intends to assess the impact to fisheries with each project based on actual experiences with previous projects. Currently there are two demonstration-scale offshore wind facilities in the U.S., and the Vineyard Wind 1 project would be the first commercial scale project to provide valuable information to future assessments.
209-001	To reduce the amount of CO2, to reduce the drilling for oil, to reduce fracking should be our paramount goal. VW offers a clean energy source that will provide, not only jobs, but electricity for 400,00 homes and businesses. It will be a role model for other energy developers who trail behind their endeavor. It's the wave of the future staring us in the face and it needs to be given the green light to move forward.	Thank you for your comment.
209-002	Their proposal to allow fishing between the turbines is unlike anything done in Europe. Allowing them to be 1 nautical mile apart seems reasonable enough for any fishing vessel to navigate safely.	Thank you for your comment.
210-001	With Climate Change bearing down on us rapidly, New England expected to see higher and more rapid temperature rises, more extreme precipitation events than the rest of the country, stronger hurricanes, more extreme wind events, and sea-level rise. Therefore, obtaining electricity from a carbon free source such as wind power, which reduces carbon emissions, and thus reduces the pace of climate change, is terribly important.	Thank you for your comment.
210-002	In Marblehead, our Municipal Light Department, which supplies our electricity, is eager to be able to purchase reasonably priced electricity from renewable sources. Local resources are so constrained that we only have 12% Renewable Energy in our portfolio, as well as 26% nuclear. We purchase our	Thank you for your comment.
Index Number	Comment Text	Response
-----------------	--	---
	power through PSA and PPA's through MMWEC, Mass Municipal Wholesale Electric Corp. MMWEC needs wind options to provide its 22 Muni Light Plant members and currently it has only one small, land-based wind power source, Hancock Wind, which is built out as much as the location and land area allow, so we are all eagerly awaiting Vineyard Wind as an additional option. Sustainable Marblehead has taken the lead to pass a Warrant Article at Town Meeting in 2018, committing the Town to 100% carbon free energy. Many other towns in the Boston area including Natick, Arlington, Melrose, Concord, Wellesley, Belmont are all actively pursuing zero carbon emissions goals by 2040. This goal is more aggressive than Governor Baker's 2050 goal for Massachusetts. To reach these goals, all these communities will need more renewable energy sources in their portfolio. Therefore, we need more sources of renewable energy, and most of the communities in eastern Massachusetts are too densely populated to have the land area, for either land based wind-power, or solar at utility scale. Thus the offshore wind project of Vineyard Wind holds a very important potential for Massachusetts	
210-003	 I would urge that you adopt Proposed Action Alternative D1, for 3 reasons: 1) Surveying work that was done, to engineer turbine anchors for each unique location, resulted in some WTG not being in strict East West configuration, but all will have 1 nautical mile (NM) spacing. 2) The US Coast Guard has reviewed these alternatives, and has endorsed the 1x1 NM layout of Alternative D1, without need for additional transit lanes or strict East West layout. 3) Other alternatives such as E and F, would result in reducing the generating potential of Vineyard Wind, below what is needed and what would be financially feasible. 	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
211-001	The wind farms will be built by foreign companies, with foreign workers, and with foreign boats. The wind farm companies will circumvent the Jones Act. The profits will also go to Europe. Once again America loses. The number of American jobs generated is overinflated and not based on reality.	Section 3.6.1.1 of the FEIS references several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the anticipated growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions. Consideration of the nationality of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
212-001	The damage caused by our fossil fuel use has brought us to the edge of catastrophic consequences. If we are to successfully reduce and mitigate this threat, we have to move forward aggressively by developing clean, renewable	Thank you for your comment.

Index	Comment Text	Response
Number		
	energy sources now. While navigational safety, healthy oceans, protection of	
	migratory birds, and the tourism industry are all priorities, the wind farm	
	represents a way to improve the health of our planet.	
212-002	One of the most disruptive impacts of wind farm development on the ocean's	Section 3.4 of the SEIS discussed the reef effect on finfish. Therefore, no
	ecosystems is caused by the construction phase. Later, however, fish and	change to the FEIS is warranted.
	other sea life return as the turbine foundations act as artificial reefs that	
	support many layers of the ocean's food chain.	
212-003	The Coast Guard's recommended 1.2 mile spacing between turbines will	Section 2.5 of the FEIS has been added which includes the agency-preferred
	ensure navigational safety for fishermen and other vessels.	alternative.
212-004	The proposed density of turbines will allow for substantial energy	Thank you for your comment.
	production.	
213-001	I firmly believe that we need to increase our usage of renewable energy,	Thank you for your comment.
	while simultaneously decreasing our usage of fossil fuels. The	
	Supplementary Environmental Impact Statement (SEIS) covered an	
	expanded cumulative impact study for up to 22,000 MW of offshore wind	
	development. That is the equivalent of a fully built-out market and is	
	approximately twenty-five projects similar in scale to Vineyard Wind's	
	proposed project. Vineyard Wind 1 will produce 800MW of clean energy	
	which will help Massachusetts reach its Clean Energy Standards. This wind	
	farm will also produce enough clean energy to power 400,000 homes.	
	Vineyard Wind 1 will also save ratepayers more than \$1.4 billion in energy	
	costs during the first 20 years of the project.	
213-002	I hope BOEM permits this wind farm to move forward without any delay	Section 2.5 of the FEIS has been added which includes the agency-preferred
	and to select Alternative D2.	alternative.
214-001	I firmly believe that we need to increase our usage of renewable energy,	Thank you for your comment.
	while simultaneously decreasing our usage of fossil fuels. The	
	Supplementary Environmental Impact Statement (SEIS) covered an	
	expanded cumulative impact study for up to 22,000 MW of offshore wind	
	development. That is the equivalent of a fully built-out market and is	
	approximately twenty-five projects similar in scale to Vineyard Wind's	
	proposed project. Vineyard Wind 1 will produce 800MW of clean energy	
	which will help Massachusetts reach its Clean Energy Standards. This wind	
	farm will also produce enough clean energy to power 400,000 homes.	
	Vineyard Wind 1 will also save ratepayers more than \$1.4 billion in energy	
	costs during the first 20 years of the project.	
214-002	Particularly in the aftermath of COVID with the high level of unemployment,	Section 3.6.2 of the FEIS provides estimated job creation in Massachusetts
	this wind farm is needed all the morePermitting this wind farm to continue	resulting from the Vineyard Wind 1 Project. Section 3.6.1.1 of the FEIS has
	progressing without delay will allow these benefits to be realized sooner!	been updated to provide additional information and analyses of projected
		national job creation from Atlantic coast offshore wind development.

Index	Comment Text	Response
Number		
214-003	I urge BOEM to permit this project to move forward without delay and choose Alternative D2.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
215-001	"Our utilities are closely connected to our customers and we know that they	Thank you for your comment.
	want climate-friendly energy at a competitive price. Offshore wind offers our	
	region a unique opportunity to meaningfully expand renewable energy	
	without breaking the backs of ratepayers", said John G. Tzimorangas,	
	President and CEO of Energy New England.	
216-001	I am adamantly against any forward construction of the Vineyard wind	Thank you for your comment.
	project. There is simply not been enough scientific data collected about	
	harmful affects of this huge project. Comprehensive, peer reviewed reports on	
	fish ,marine mammals and shellfish should be completed before any other	
	work is done. This project is being built by foreign companies and built by	
	foreign workers this is nothing more than a policing of the American public!	
217-001	Ibelieve we need to change our primary source of energy. As a world, and	Thank you for your comment.
	particularly as a country, we need to move away from our dependence on	
	fossil fuels and instead shift our focus to renewable energy.	
217-002	Particularly in the aftermath of COVID with the high level of unemployment,	Section 3.6.2 of the FEIS provides estimated job creation in Massachusetts
	this wind farm is needed all the morePermitting this wind farm to continue	resulting from the Vineyard Wind 1 Project. Section 3.6.1.1 of the FEIS has
	progressing without delay will allow these benefits to be realized sooner!	been updated to provide additional information and analyses of projected
		national job creation from Atlantic coast offshore wind development.
217-003	I encourage BOEM to allow Vineyard Wind 1 to continue without delay, and	Section 2.5 of the FEIS has been added which includes the agency-preferred
	to also select Alternative D2.	alternative.
218-001	I applaud BOEM's lengthy stakeholder process to appropriately site offshore	Thank you for your comment.
	wind energy on the outer continental shelf.	
218-002	The wind lease areas sited on the outer continental shelf ensure a minimal	Thank you for your comment.
	impact to residents and mariners while maximizing the potential for new	
	large-scale renewable energy. Renewable energy is vital to reduce carbon	
	emissions, reduce reliance on fossil fuel power generation, and slow the	
	effects of climate change to which Cape Cod is particularly vulnerable.	
218-003	Vineyard Wind is working to develop offshore wind responsibly to minimize	Thank you for your comment.
	impacts to marine life, benthic habitat, and residents in the town of	
	BarnstableWhile the SEIS shows there will be some impact associated with	
210.004	the project, these are overwhelmingly negligible to moderate.	
218-004	At every turn, Vineyard Wind has demonstrated willingness to listen and	Thank you for your comment.
	modify their project to address reasonable stakeholder concerns. This	
	perspective has lead to a host community agreement with the 1 own of	
	Barnstable, adjusting turbine spacing to accomodate transit and commercial	
	tishing activities, (a significant compromise resulting in a reduction of total	
	generation capacity by roughly 13,000 megawatts total in the region),	

Index	Comment Text	Response
Number	adjusting cable landfall locations, proposed use of Automatic Detection Lighting Systems to reduce visual impacts, mitigation funds for fishermen, and innovations to improve real-time marine mammal monitoring technology.	
218-005	Vineyard Wind and the Town of Barnstable are working cooperatively to co-locate critically important municipal wastewater infrastructure concurrently with Vineyard Wind's installation of transmission cables in Barnstable roadways. While this watewater infrastructre is part of the town's Master Plan for wastewater expansion, the Vineyard Wind's plans allows the town to speed up the installation timeline while savng millions in road construction costs. Long-term, this wastewater infrastructure will help address issues with nitrogen-loading in the region's lakes, rivers and bays, a problem that causes health, safety, and environmental issues. Tackling this major water quality issue on Cape Cod is vital to maintaining our health and economy and Vineyard Wind has proven to be a strong partner and ally in assisting with local solutions, demonstrating how public-private partnerships can ultimately benefit entire communities	Section 3.6.2 of the FEIS lists grants and community assistance that Vineyard Wind would provide in southeastern Massachusetts. The detail provided in this comment is an example of the outcomes that can result from Vineyard Wind's investment in local communities.
218-006	I was pleased to see the SEIS acknowledges the existing impacts of climate change on marine life and habitatAs outlined in the SEIS, almost every resource examined is currently subject to pressure from climate change, including coastal habitats (3-6), benthic resources (3-11), finfish, invertebrates and essential fish habitat, marine mammals (3-37) and sea turtles (3-44). The SEIS notes that climate change, if not addressed, would result in ocean acidification, ocean warming, and sea level rise, and other effects that are likely to contribute or lead to "permanent changes of unknown intensity" (3-2) to terrestrial and coastal fauna, "the decline of benthic resources with calcareous shells" (3-14), "noticeable temporary and permanent adverse impacts" on finfish and invertebrate communities (3-30), "long term, possibly high consequence risks to marine mammals (3-38), and "long-term, high intensity risk to sea turtles (3-49). Launching the US offshore wind industry is a significant and necessary step towards combating its adverse effects and preserving natural resources for future generations.	Thank you for your comment.
218-007	I was pleased to see the SEISacknowledging the beneficial economic impacts of this project	Thank you for your comment.
218-008	Offshore wind energy is well-established in Europe and the Vineyard Wind 1 project has been extensively reviewed. While I support efforts to responsibly permit offshore wind energy from the first, it is time to move forward with large-scale offshore wind projects without delay, starting with Vineyard Wind 1. I urge BOEM to approve Vineyard Wind 1 without delay.	Thank you for your comment.

Index	Comment Text	Response
219-001	We must do everything in our power to mitigate climate change, so that	Thank you for your comment.
	young people such as	
	myself will have a future to look forward to. One key part of climate change	
	mitgation will be to approve renewable energy projects like Vineyard Wind 1	
	(VW1). That is why the proposed Wind Energy Facility must begin	
	construction/operation as soon as possible and must maximise the amount of	
	clean power generated.	
219-002	To this end, I ask BOEM to:	Section 2.5 of the FEIS has been added which includes the agency-preferred
	(1) Support "Alternative D2," the 1x1 nautical mile turbine layout - a	alternative.
	compromise proposed in response to commercial fisheries' concerns.	
219-003	(2) Oppose "Alternative F" that would add 2+ mile wide transit lanes within	Section 2.5 of the FEIS has been added which includes the agency-preferred
	wind farms because it A) reduces offshore wind buildout B) massively	alternative.
	impairs carbon reduction potential and C) is unnecessary for navigational	
	safety per the US Coast Guard	
219-004	(3) Support offshore wind jobs, ratepayer savings, and reduction of carbon	Thank you for your comment.
	emissions on a large scale	
219-005	(4) Stop Delaying: this has been studied and debated for decades. Oppose the	Section 2.5 of the FEIS has been added which includes the agency-preferred
	no-action Alternative G	alternative.
220-001	Now is the time to transition to an electric lifestyle powered by renewable	Thank you for your comment.
	energy generation. We cannot afford to delay the offshore wind industry any	
	longer.	
220-002	I fully support Vineyard Wind 1 under the assessment of the Supplementary	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Environmental Impact Statement through alternative D2, in specific regard to	alternative.
	the proposed 1x1 nautical mile turbine layout deemed permissible by the U.S.	
	Coast Guard.	
220-003	As a third generation resident on Martha's Vineyard I am hoping that our	Thank you for your comment.
	communities make the right choice. Private views, property values, and	
	sentiment for the fossil fuel industry should not outweigh the immediate	
	climate crisis that is manifesting on the very shores of Island residents.	
	Switching to cleaner/renewable energy sources is an imperative step in the	
	process of minimizing human impact on our planet, and preserving this	
220.001	beloved island: $L = \frac{1}{2} + 1$	
330-001	i ask you to support this win[d] farm and not simply be beholden to Big Oil	i nank you ior your comment.
5(2,001	for our energy needs.	
363-001	wind energy will help save our planet for our children and grand children.	i nank you ior your comment.
572.001	We are mining out of time to take meaningful action toward with a the	Them Is you for your comment
575-001	we are running out of time to take meaningful action toward mitigating the	

Index	Comment Text	Response
Number		
604-001	I believe that wind energy is part of a sustainable future for today's children	Thank you for your comment.
614-001	This is crucial to the continuation of our species.	Thank you for your comment.
631-001	It is a no brainer that wind farms will be an essential weapon to combat the impending threat we all face from climate change. Please stand tall and brave and do the right thing for ONCE. Leave the politics out of it. On a trip to Europe we were so amazed at the amount of wind farms we saw and felt dismayed that our beautiful country does not possess the wisdom and fore site we need from our politicians to move these projects in the right direction.	Thank you for your comment.
631-002	No one has the right to argue their view will be ruined from their waterfront home. What a joke, as those homes are usually the first to experience the wrath of mother nature. We don't have the luxury of time.	The potential impacts of climate change on coastal communities, and the potential role for offshore wind in addressing climate change, is addressed in the SEIS, Section 3.7.1 and 3.7.2. The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the offshore wind development. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations provided by Vineyard Wind that provide views of the 14 MW wind turbines as well as simulations of Vineyard Wind 1 combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment.
669-001	Nothing is perfect but as far as supplying this energy we need, offshore wind is as close as we are likely to get. Wind, unlike much of what we depend on, doesn't pollute and won't run out.	Thank you for your comment.
734-001	Offshore wind is essential to our future energy needs and to control climate change. Please move forward with Vineyard Wind and other projects to make this a reality.	Thank you for your comment.
752-001	I am hopeful this technology can be expanded in all other coastal areas where the wind makes it feasible.	Thank you for your comment.
765-001	I am writing to you as a supporter of the Union of Concerned Scientists, the Natural Resources Defense Council, the Sierra Club and other environmental organizationsThank you for championing this critical issue relating to renewable energy and climate change.	Thank you for your comment.
787-001	I totally support the effort to harness this form of energy to provide less polluting energy needs into the future	Thank you for your comment.
812-001	We need to look forward and act boldly toward clean energy, which must be the energy of the future. We need to look forward and act boldly toward clean energy, which must be the energy of the future.	Thank you for your comment.
812-002	These travel lanes [Alternative F] do not seem to be part of a productive way forward. Thank you for your consideration and attention.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
828-001	Our environment is dependent on utilizing eco-friendly ways to produce energy.	Thank you for your comment.
841-001	I think offshore wind farms are better than those on land, especially as there are no residential homes nearby.	While the FEIS does not compare offshore versus onshore wind energy development, Section 3.9.2 of the FEIS (and the SEIS) note that almost all wind turbines from offshore wind development included in the FEIS analysis would be more than 15 miles offshore.
900-001	I am very concerned for the health and viability of the planet our children and future generations will inherit. We have a duty to our communities, families and most importantly, children to ensure their safety and well being through sustainable policies.	Thank you for your comment.
902-001	Our planet is suffocating itself and depleting its natural resources. Once we've dug up the fossil fuels and coal, they can't be replaced not in our lifetime, at least. But wind is so much cleaner and it's renewable. That gives us far more bang for the buck, and it should last longer as well.	Thank you for your comment.
928-001	I support Vineyard Wind and a smaller boundary between each generator.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
956-001	Some environmentalists have expressed concern for migrating birds, but we know domestic cats kill many more than turbines could, however, purple blades have proven to significantly reduce mortality. I hope plans will keep this in mind.	Thank you for your comment.
957-001	Your study shows that electricity generation via offshore wind turbines will be safe and effective in the Northeast waters. Offshore wind is a valuable resource for electricity production as it can have low impact on the environment and high gains that reduce overall carbon emissions.	Thank you for your comment.
1002-001	To help fit offshore wind into our marine environment, developers planning to install offshore wind projects in the US Northeast have agreed to a standard layout of the turbines, with one nautical mile between each. This approach will create hundreds of "transit lanes" between turbines for boat travel.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
1038-001	With temperatures soaring in northern California and fire season upon us the move to wind and solar energy become even more urgent. In addition the jobs created to build these utilities are much needed during this time of economic crises.	Thank you for your comment.
1051-001	Locating enormous turbines that are obsolete the moment they are erected in precious fishing grounds near and around Cape Cod and Marthas Vineyard is an irreversible error. Wind power is not reliable with long periods of no output during lulls and stormsThe wind industry is industrializing the pristine waters off the Massachusetts coast while presenting a clear and	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action. Section 3.11 of the SEIS discussed impacts on commercial and for-hire recreational fisheries and Section A.8.3 discussed impacts on birds.

Index	Comment Text	Response
Number		
	present danger to our historical fishing industry and harmful to migratory birds.	
1051-002	The economics of wind power do not justify capital investment without subsidies from the federal government which contribute to a hidden cost through higher federal income taxes.	The SEIS relied on projections of employment, economic activity, local/state tax revenues, known investment in local ports and job programs, and grants to local communities and organizations, to reach a reasonable conclusions of beneficial impact within the geographic analysis area. Section 3.6.1.1 of the FEIS has been updated to include additional information on ongoing port facility improvements and projections of economic investment. The projections support reasonable conclusions that offshore wind would support jobs and businesses within the geographic analysis area. The analysis of employment and economic impacts within the geographic analysis area is valid regardless of federal and state subsidies.
1083-001	It is past time to keep throwing up objections to renewable energy projects - ESPECIALLY while continually permitting dangerous special allowances to carbon based energy facilities and projectsWE NEED CLEAN ENERGY.	Thank you for your comment.
1083-002	The Coast Guard is the expert on the matter of navigation and their assessments should be followedPlease approve the Vinyard Wind project with the densest safe configuration ASAP	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
1115-001	I am writing in support of the renewable energy project, Vineyard Wind 1 (VW1), the first ever utilityscale offshore wind farm in the US. Our current US government has weakened existing environmental rules and protections which are detrimental to mitigate climate change. This impact affects us all as citizens, but disproportionately affects lower-income citizens whom already live in more polluted areas. An estimated 2 million people, mostly communities of low-income and people of color, live near the Superfund sites (polluted land that require long-term response to remove hazardous waste contamination) most vulnerable to climate change. As a country, we need solutions to improve our environmental impact.	Thank you for your comment.
1115-002	Vineyard Wind 1 (VW1): VW1 is an 800MW project that will be located 15+ miles off the coast of Martha's Vineyard and will provide clean, renewable and cost-effective electricity to 400,000 homes and businesses in MA.	Thank you for your comment.
1115-004	VW1 will remove almost 1.7 million tons of CO2, 1,000 tons of NOx and 860 tons of SO2 from the atmosphere annually - the equivalent of taking 325,000 cars off the road.	Thank you for your comment.
1115-005	It is imperative that the Bureau of Ocean Energy Management approve this project as soon as possible without transit lanes. Adding transit lanes would further reduce generation capacity by 17,000+ megawatts and make it difficult to meet states' renewable energy target.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
1115-006	I am asking the Bureau of Ocean Energy Management to: Support "Alternative D2," the 1x1 nautical mile turbine layout - a compromise proposed in response to commercial fisheries' concerns. Oppose "Alternative F" that would add 2+ mile wide transit lanes within wind farms because it A) reduces offshore wind buildout B) massively impairs carbon reduction potential and C) is unnecessary for navigational safety per the US Coast Guard. Stop Delaying: this has been studied and debated for decades. Oppose the no-action Alternative G.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
1123-001	We need to cut dangerous greenhouse gas emissions in half by 2030, and totally by 2050 in order to keep global warming below 1.5 degrees celsius to prevent the rapid acceleration and impacts of climate change we are experiencing now. One of the big solutions is to transition to clean energy alternatives which includes wind power. Now is the time to make the switch to reverse global warming.	Thank you for your comment.
1152-001	Global Heating operates in much the same way as the coronavirus. By the time it is apparent to everyone that action is necessary - it will be too late. We must begin now to build the low-or-no carbon energy systems that we will depend upon in the future.	Thank you for your comment.
1165-001	We absolutely must find and fund clean energy if we are to maintain the standard of living here in the U.S. Other nations have been far ahead of the U.S. in developing clean energy sources.	Thank you for your comment.
1174-001	While I am a supporter of green energy, offshore wind is NOT the answer. It is an ecological disaster with bird strikes.	There is very little existing literature documenting actual collision related mortality with operating offshore wind facilities. As such, the analysis in the DEIS and SEIS relied upon the extensive body of literature on collision mortality with land-based WTGs. As discussed in the SEIS, there are several reasons why there are potential issues with using land based WTG collision mortality estimates in an assessment of potential offshore wind collision mortality, but it represents the best available science to quantify the potential for collision mortality associated with the Vineyard Wind 1 Project and the full build out of offshore wind development on the Atlantic OCS. Additionally, the SEIS discussed two studies of offshore wind facilities in Europe (Desholm 2006 and Skov et al. 2018) that used a variety of monitoring methods to monitor operating offshore WTGs for bird collision mortality. In both cases very little bird mortality was documented. The FEIS was updated to explicitly state these conclusions. Further, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital

Index	Comment Text	Response
Number		
		VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post- construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
1174-002	The blades cannot be recycled and are piling up all over the country with nowhere to go.	As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and other BOEM requirements, Vineyard Wind would be required to remove or decommission all installations and clear the seabed of all obstructions created by the proposed Project. Vineyard Wind would need to obtain separate and subsequent approval from BOEM to retire any portion of the Proposed Action in place. If the COP is approved or approved with modifications, Vineyard Wind would have to submit a bond that would be held by the U.S. government to cover the cost of decommissioning the entire facility. This explanation has been added to Section 2.1.1.3 of the FEIS.
1229-001	When I was growing up there were proposals for Offshore wind in sight of where I spent my summers. The grown-ups around me objected (to how it would affect the view?!) I went along with them. That was before I saw the absolute horrors of mountaintop removal and even worse the total ecological damage done by fracking. Now is the time for Wind and SolarIf we do not take care of the health of planet Earth, we will have more and more pandemics along with terrifying and destructive weather. We have the power and the ability to turn things around. We just must commit to clean energy NOW!!!	Thank you for your comment.
1231-001	Please approve this project!! We have to take decisive action on the climate crisis and this is an actionable step to do so. Hopefully this is the start of more of these types of projectsFinally, please support offshore wind jobs, ratepayer savings, and overall reduction of carbon admissions.	Thank you for your comment.
1231-002	Please approve Alternative D2 to reach a compromise with fisheries! Please do not approve Alternate F and G - we don't need more transit lanes (even the Coast Guard says it is unnecessary), and we can't delay actions like this further!	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
1235-001	I'm writing in strong support for offshore wind power development in the Northeast. I am deeply concerned about the climate crisis, and offshore wind is a key component in addressing our need for low-carbon electricity	Thank you for your comment.

Index Number	Comment Text	Response
1290-001	I hope you choose to support [offshore wind] as an effective resource. Other countries have proven the effectiveness of offshore wind as a low-impact and cost-effective resource. We would be unwise not to take advantage of it. It has been a proven means for countries to provide cheap, clean energy.	Thank you for your comment.
1321-001	Is strongly support proceeding with the permitting process for Vineyard Wind, BUT ONLY IF THEIR EFFECT ON BIRDS HAS BEEN STUDIED AND ACCOUNTED FOR!	There is very little existing literature documenting actual collision related mortality with operating offshore wind facilities. As such, the analysis in the DEIS and SEIS relied upon the extensive body of literature on collision mortality with land-based WTGs. As discussed in the SEIS, there are several reasons why there are potential issues with using land based WTG collision mortality estimates in an assessment of potential offshore wind collision mortality, but it represents the best available science to quantify the potential for collision mortality associated with the Vineyard Wind 1 Project and the full build out of offshore wind development on the Atlantic OCS. Additionally, the SEIS discussed two studies of offshore wind facilities in Europe (Desholm 2006 and Skov et al. 2018) that used a variety of monitoring methods to monitor operating offshore WTGs for bird collision mortality. In both cases very little bird mortality was documented. The FEIS was updated to explicitly state these conclusions. Further, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post- construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
1347-001	I support the Vineyard Wind project. We need an urgent shift to renewable energy sources, and this is a strong proposal as-is. MA needs to expand our green jobs, and energy sector.	Thank you for your comment.
1382-001	I strongly support efforts to wean the US off of fossil fuels since global warming is the number one problem in the world.	Thank you for your comment.
1437-001	I am encouraged that the Bureau is considering offshore wind in the Northeast. It is critical for us to invest in wind power and solar for our future	Thank you for your comment.

Index	Comment Text	Response
Number		
	and for our health. Fossil fuel companies emit dangerous air particulars into	
	our air, increasing sickness. Wind power is great solution for generating	
	energy for our needs. Please help move to protect our planet and ourselves.	
1 1 1 0 0 0 1	The larger areas we have for wind power benefits all of us.	
1440-001	Wind turbines will help fish to thrive in the waters around their bases.	Section 3.4 of the SEIS discussed the reef effect on finfish. Therefore, no
		change to the FEIS is warranted.
1457-001	Our dependence on high carbon producing electricity is one of the issues	Thank you for your comment.
	facing us as we try to protect our environment, so I am, along with concerned	
	scientists, offering you this letter.	
1565-001	With climate change heating up dramatically, shifting from fossil fuels to	Thank you for your comment.
	renewable energy such as wind energy should be an obvious choice.	
1573-001	Wind energy has no drawbacks even to the oil industry if they would invest	Thank you for your comment.
	in it rather than fight it.	
1610-001	We are at an important turning-point and must make decisions based on solid	Thank you for your comment.
	science. Wind is clearly one of our most promising sources of clean energy	
	as we move forward toward a more sustainable, healthy world.	
1612-001	It is essential that we shift our energy production away from the burning of	Thank you for your comment.
	fossil fuels and toward clean and renewable energy at this time. Please	
	support this shift where possible.	
1670-001	Because climate change is a looming crisis worse than covid, in both its long-	Thank you for your comment.
	term harm to human life and our livelihoods, as well as the economic damage	
	of dealing with the problem, clean energy must be prioritized in this	
	country Please give offshore wind, in particular the Vineyard Wind	
	project, the green light.	
1684-001	This would be a great step in implementing action for addressing rising	Thank you for your comment.
	climate change.	
1689-001	I strongly support offshore wind farms and encourage your agency to	Thank you for your comment.
	approve Vineyard Wind, a large offshore wind farm to help the East Coast	
	meet our energy needs.	
1689-002	However, I oppose unnecassarily limiting the size of the wind farm through	Section 2.5 of the FEIS has been added which includes the agency-preferred
	the extra transit lanes considered as Alternative F, as unnecessary and	alternative.
	damaging for clean electricity generation in that area and as setting a bad	
	precedent for future approvals.	
1721-001	We need clean air to breathe and to continue down the road of fossil fuels is	Thank you for your comment.
	nothing short of suicide. We need clean energy.	
1746-001	If the Coast Guard feels the one-mile separation is safe for navigation, that	Section 2.5 of the FEIS has been added which includes the agency-preferred
	should satisfy you. They are the experts.	alternative.
1757-001	Get onboard with Vinevard Wind. Get off oil and gas. Europe has had wind	Thank you for your comment.
	projects for 20+ years. It is way past time to utilize renewable energy.	5 5

Index	Comment Text	Response
1779-001	As an educator and environmental scientist I am familiar with our current energy situation with regards to greenhouse gas emissions. It is absolutely critical that we move quickly to establish alternative and renewable energy sources.	Thank you for your comment.
1793-001	Offshore wind is a major source for growing our economy, for reducing electricity bills, and addressing our need for low-carbon electricityWe need strong investment in offshore wind to ensure our economic future.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
1816-001	Projects such as these are critical for diversifying our energy grid, improving our economic resilience, reducing emissions of greenhouse gases and other pollutants and reducing our dependence on fossil fuels and legacy technologies.	Thank you for your comment.
1831-001	Clean renewable energy is necessary for the future of America. We need to use all options for energy to lower costs for consumers. I live in a 1 bedroom apartment and it can cost \$100 a month for heating/cooling. That is too much for such a small space.	Thank you for your comment.
1865-001	I believe that if the U S Coast Guard has approved a specific design for a wind farm, then the project should conform to that layout; primarily because any change would have to go through a vetting process, thereby delaying the project.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
1886-001	We MUST move forward with clean and cheap energy. Wind is a critical part of that solution.	Thank you for your comment.
1907-001	I do want to know if potential impacts on marine life, especially marine mammals such as whale and dolphins, was considered. Wind towers generate sound and I wonder how that sound will carry through the water and what impacts that might have?	Section 3.3.7.3, of the DEIS and Section 3.5.1 of the SEIS discussed the potential impacts associated with the proposed Vineyard Wind 1 Project, including the expected distance that noise associated with operational WTGS would reach ambient levels. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at 164 feet (50 meters; Miller and Potty 2017). Therefore, no change to the FEIS is warranted.
1966-001	This is another opportunity to ensure that the future for us, our children and grandchildren will experience an environment that is healthy and safe. I urge you to show a commitment to cheaper, cleaner energy.	Thank you for your comment.
2125-001	The move from fossil fuels to renewable energy sources is one of the greatest and most urgent issues faced by humanity. But to access that cleaner, greener energy, further- reaching power grids are required. Our cable solutions are the backbone of	Thank you for your comment.

Index	Comment Text	Response
Number		
	these next-generation grids, making connections where it was previously	
	impossible. Our offshore wind solutions bring power from sea to shore, with	
	larger, higher density cables and longer connections meaning we can harness	
	renewable energy sources where they're at their strongest and most abundant.	
5090-001	I can speak from Virginia's experience, sustainable clean energy is the only	Thank you for your comment.
10040.001	way forward.	
10048-001	Do NOT require unnecessary extra travel lanes, which will reduce the area	Section 2.5 of the FEIS has been added which includes the agency-preferred
10072 001	available for wind turbines!!!	alternative.
100/3-001	Clearly we need more, LESS POLLUTING ENERGY THAT IS WELL	Thank you for your comment.
	CONSTRUCTED. HOPING WE CAN DO THE SAME ON THE WEST	
10077-001		
100//-001	immediately	I nank you for your comment.
10008-001	Alternative E would be detrimental to this wind shore project please reject it	Section 2.5 of the FEIS has been added which includes the agency preferred
10098-001	Alternative r would be detrimental to this whild shore project, prease reject it.	alternative
10098-002	The Northeast needs the low-carbon electricity that offshore wind energy will	Thank you for your comment
10090-002	provide	Thank you for your comment.
10110-001	Obviously offshore wind is a proven commodity. There is no excuse for not	Thank you for your comment
10110 001	adding this to the mix of reliable and potentially bountiful renewable energy	
	options for the U.SCan vou steer clear of the politics and dark money.	
	sufficiently, in order to help advance the cause of moving reliable renewable	
	energy forward.	
10137-002	I urge you to proceed with the permitting process for Vineyard Wind, and to	Section 2.5 of the FEIS has been added which includes the agency-preferred
	oppose the extra transit lanes considered as Alternative F, which would	alternative.
	unnecessarily encumber the project and reduce its efficiency and efficacy.	
10142-001	We must START THINKING ABOUT AIR POLLUTION AND THE	Thank you for your comment.
	EFFECTS ON OUR RESPIRATORY SYSTEMS. WE SHOULD BE	
	EMBRACING NEW TECHNOLOGIES.	
10147-001	I fully support the development and use of off-shore wind turbines with	Thank you for your comment.
	"reasonable" precautions taken for marine life, shipping, fishing, and	
	recreational boat traffic. Don't kill a good idea with unreasonable guidelines	
	and red tape.	
10155-001	The Cape is already experiencing higher sea level. Places I learned to love as	Thank you for your comment.
	a child are markedly different. Climate change is real and it is time to do	
	everything we can to bring it under control. My family came to North	
	America in 1683, and in studying their history I have enjoyed getting to	
	know the Netherlands. Now there is a country where science and engineering	
1	are making a difference for the better. Time we follow their lead with turbines	

Index Number	Comment Text	Response
	off shore and on shore, energy efficient transportation, stewardship of the land and waters.	
10176-001	Please do not make this process even more costly and cumbersome to the department and the break thru companies who have already invested so much time and money. The extra transit lanes are not necessary and will only cause delay and chaos in ocean Wave powered energy. The environmental assessments and studies have all been done and approved. The extra transit lanes appear to be a mechanism to delay and sideline this exciting new technology! Please do not succumb to this politically motivated attempt to promote dirty oil dependence in our country!	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
10187-001	I am very hopeful that clean wind energy will help us to maintain clean air, clean water, and meet our energy needs.	Thank you for your comment.
10196-001	Our nationand the entire worldneeds to transition to renewable energy as soon as possible; extra transit lanes would reduce the area for offshore wind turbines, thus restricting our country's ability to generate clean energy and, quite possibly, setting a bad precedent for future renewable energy projects. Don't let this happen!	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
10239-001	Offshore wind is likely to be one of the most important renewable energy sources in the years to come. In addition to the Vineyard Wind project, I urge your agency to support expedited plans to develop offshore wind projects off the northern California and Southern Oregon coast.	Thank you for your comment.
10311-001	I am alarmed every day by melting at both poles of our planet, by higher planetary temperatures, wildfires, increasingly damaging storms. Because it is crucial to transition to clean energy, I strongly support proceeding with the permitting process for Vineyard Wind.	Thank you for your comment.
10311-002	I strongly oppose one proposal (Alternative F) under consideration that would limit the area available for wind turbines and reduce the amount of clean electricity generation.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
10314-001	This is as critical as the Covid issue. Unprecedented Climate Change needs a full on response.	Thank you for your comment.
10321-001	Another consideration, which seems to be forgotten, is wave action reciprocal power generation which should also be examined. A country like ours with as much coastline as we have should be giving this potential energy source serious consideration.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action.
10335-001	Fossil fuel dependency has ravaged our natural world, and will continue to do so at a pace that is unsustainable for life as we know it. Coastal communities like those on the Vineyard are already experiencing the effects of climate change. Fish populations that have inhabited these waters for generations are migrating farther north to seek colder waters. Additionally, we are seeing	Thank you for your comment.

Index	Comment Text	Response
Number		
	warm water fish like great white sharks more frequently off of our coast. And as the seas continue to rise, the fabled harbors of Menemsha, Vineyard Haven, Oak Bluffs, and Edgartown will be the first to go. The time is now to change the way we live and embrace the transition to an electric lifestyle that affords the same comforts of modern living that we are accustomed to. More importantly, it is imperative that we secure renewable energy resources capable of meeting our current and future electricity demands. Vineyard Wind 1, an 800 MW project with the potential to power over 400,000 across the cape, the islands, and the commonwealth that will essentially eliminate 1.6 billion metric tonnes of CO2 emissions each year, marks the beginning of a renewable future in Massachusetts and across the country. It must not be delayed any more	
10335-002	I fully support the Vineyard WInd 1 project under the assessment of the Supplement to the Draft Environmental Impact Statement, including the 1 x 1 nautical mile turbine layout deemed acceptable by the U.S. Coast Guard Vineyard Wind 1 represents the crucial first step in the right direction for our energy future. I urge you to approve the project in accordance with alternative D2 without further delay.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
10335-003	Vineyard Wind 1 has conducted the requisite surveying and research to ensure that the project minimizes environmental impacts, especially those associated with the critically endangered North Atlantic Right whale.	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. A detailed analysis of impacts to ESA listed species is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/ and the Biological Opinion issued by NMFS on September 11, 2020. Further, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required.
10335-004	In addition, Vineyard Wind 1 presents an unparalleled economic opportunity. Project development and maintenance will bring billions of dollars to the region and provide well paid jobs for thousands of workers across many disciplines During a time of significant economic uncertainty with the effects of the coronavirus expected to last for years to come, Vineyard Wind 1 offers much needed economic security for islanders and Massachusetts residents alike.	Section 3.6.2 of the FEIS and Tables 3.6-3, 3.6-4 and 3.6-5 provide estimated job growth, tax revenues, and economic input from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts.

Index	Comment Text	Response
Number		
10335-005	Through a partnership between Vineyard Wind and ACE MV, the project works to guarantee that long term operations and management positions will be filled by island residents.	Section 3.6 of the FEIS includes proposed mitigation, such as a local hiring plan, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and
		monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval.
10335-006	The proposed project also projects over \$1.4 billion dollars in ratepayer savings over the next 20 years.	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
10335-007	In specific regard to the SEIS, BOEM claims that Vineyard Wind 1 and offshore wind development as a whole will only have minor beneficial impacts. Frankly, I believe BOEM is vastly underestimating the long-term benefits of offshore wind and should consider that Environmental Justice communities include diverse groups whose health and well being will be positively impacted by clean offshore energy development.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
10346-001	I urge you to go forward with this project - the future, and possibility of so many new jobs, is brighter moving away from fossil fuel energy as other countries have.	Thank you for your comment.
10350-001	Let's not waste any more time. We need to move ahead for climate and people. Both are hurting, as is our planet. The science is clear.	Thank you for your comment.
10375-001	THERE IS NO QUESTION THAT TO PRODUCE ENOUGH RENEWABLE ENERGY TO ELIMINATE FOSSIL FUEL USE FOR SUCH, WE NEED TO DEVELOP MUCH OFFSHORE WIND PROJECTS.	Thank you for your comment.
10380-001	Time is short to mitigate the worst effects of climate disruption. Even using IPCC data, which is so thoroughly reviewed that it is out of date when published, we are already at a point where irreparable harm is being done. The world cannot afford to be overly cautious and restrained in our quest for carbon free energy.	Thank you for your comment.
10395-001	Global warming needs to be fought against by clean energy and this is one way to do it.	Thank you for your comment.
10399-001	In this age, when we are threatening the survival of humans because of global warming, it is definitely time to support non polluting, methods of producing needed power.	Thank you for your comment.
10413-001	It [offshore wind] also just seems to be the best choice on a "local" scale, through the amount of jobs it is expected to generate.	Section 3.6.2 of the FEIS and Tables 3.6-3, 3.6-4 and 3.6-5 provide estimated job growth, tax revenues, and economic input from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment

Index	Comment Text	Response
Number		in offshore wind resulting from growth of a wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
10414-001	I wholeheartedly support the Vineyard Wind Project. We need the clean energy Let's go. Let's get started.	Thank you for your comment.
10414-002	We don't need the extra transit lanes.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
10431-001	USA should immediately be moving to renewable energy sources like wind and solar.	Thank you for your comment.
10439-001	We really need to move forward with renewable energy, in the aggregate. The oceans is a very good source for wind, just as many of the plain state.	Thank you for your comment.
10439-002	NOAA and the US Coast Guard and the Army Corp of Engineers are very much trustworthy and thorough; therefore their studies carry a lot of weight. The plan which has been approved to date allows more consolidated power while still allowing space for fishing-at least those boats that stay closer to port. And having the same pattern throughout the wind farm is much safer, less confusing. And since it has a total smaller footprint, the shipping lanes and fishing areas for large commercial boats is more open.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
10482-001	It [offshore wind] is proven to work around the world We should look on both coasts of our countryIt is also important to be part of our recovery from the pandemic.	Thank you for your comment.
10521-001	As the skipper of a small classic sailing yacht, I transit the east coast waters every year. Nothing would give me greater pleasure than seeing turbines rising from the sea floor and reaching for the sky to capture the FREE wind that is always there for us to use. On the other hand, the thought or sight of drilling platforms, pipelines and all the other paraphernalia that accompany fossil fuel 'harvesting' horrify me. Expendable and filthy and dangerous all along their route from deep within the earth to our gas tanks and toothpaste tubes, it is time to leave fossil fuels where they belong. In our earth, not upon it!	Thank you for your comment.
10564-001	Wind energy has been identified as the cleanest energy source as it emits zero pollution but also does not involve harmful chemicals to be recycled at end of life.	Thank you for your comment.
10568-001	To lower our use of fossil fuels, we must turn to offshore windDeveloping clean energy is one of the most important actions to limit climate change quickly; therefore, I strongly support continuing to pursue the permitting process for Vineyard Wind.	Thank you for your comment.
10606-001	If you can't pilot a ship through a mile wide gap, you shouldn't be piloting a ship.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
10708-001	Following the guidelines set forward WITHOUT Alternative F, the beauty of our coastlines, the safety of marine mammals and the use of lanes for ship travel can coexist with Renewable Energy Development!	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
10717-001	I'm very much in support of this proposal! Wind energy will be a huge factor	Thank you for your comment.
	in any change we have of mitigating the climate change crisis. As a parent, I	
	want my kid to have a future that is safe, secure, and healthy - let's do this for	
	chance to create jobs, save money, and reduce our emissions dramatically	
10717-002	With that in mind I want to say that I: Support "Alternative D2" Oppose	Section 2.5 of the FEIS has been added which includes the agency-preferred
10/1/ 002	"Alternative F" and "Alternative G"	alternative.
10757-001	Renewable Energy is critical to the future of Humanity and all life on Our	Thank you for your comment.
	World. We cannot stall on such a important matter any longer.	
10758-001	Let us promote and invest in clean energy projects and end those that are environmental destructive.	Thank you for your comment.
10814-001	We are seeing, in the effects of fewer vehicles on roads, that climate change	Thank you for your comment.
	is human caused. Off shore wind generated energy is a huge factor in	
	mitigating fossil fuel emissions. Please be a force for moving ahead.	
10828-001	I am so happy to learn that use of off shore wind is being considered as an	Thank you for your comment.
	option for producing electricity. I hope that we will also consider wave	
10026 001	motion as another option.	
10836-001	This is an opportunity to advance our progress in replacing fossil fuels that must not be allowed to lapse.	I hank you for your comment.
10840-001	I hope that you will approve regulations for offshore wind energy that will	Thank you for your comment.
	supply a great deal of energy and will not interfere with navigation and will	
	not have negative environmental impacts. I believe that climate change is a	
	terribly important problem that will prove damaging both to the world	
	sources ASAP!	
10845-001	The fuel for wind energy is free and clean. I feel we are in desperate need of	Thank you for your comment.
	replacing our current expensive fuel dependent, environment polluting and	
	health degrading energy methods with clean, free, abundant wind and solar	
	power. With that in mind, I am in favor of proceeding with the current	
	Vineyard Wind permit without restriction.	
10861-001	Another problem is that Haste Makes Waste & many times in our urgency to	Resource sections of the FEIS include proposed mitigation, where applicable,
	do good we move too fast for our own good & the good of others. Someone	and Appendix D of the FEIS, which is a summary of all proposed mitigation
	may suffer as a result & there may be no quick remedies before much	considered, has also been updated to include modifications and/or additional
	suffering by many. So we need to take it slow by testing small areas first &	mitigation and monitoring measures. Additional mitigation and monitoring
	the first stars shows could start carlier	State recourse according. These additional mitigation management with Federal and
	the first steps above could start earlier.	State resource agencies. These additional mugation measures will be

Index	Comment Text	Response
Number		
		considered by decision makers and could be adopted in the Record of
		Decision and required as conditions of approval. Section 2.2.1 of the FEIS
10964 001	TAKE A ELICUTINTO CODENILACEN TAKE A LOOK AT THE LONG	These way for your comment
10804-001	I INE OF WINDMILLS SNAKING ACDOSS THE WATED IT IS	i nank you for your comment.
	ABSOLUTELY BEAUTIFUL - AND IT DOES NOT POLUTE THE	
	PLANET	
10868-001	I believe wind energy is a key element of the new energy economy.	Thank you for your comment.
10878-001	Large offshore wind farms as proposed will greatly improve our clean energy	Thank you for your comment.
	portfolio.	
10942-001	I urge that you allow all proposed offshore wind farms to move forward	Thank you for your comment.
	expeditiously as we have less than 10 years to cut carbon emissions	
	sufficiently to maintain global temperatures below 2 degrees. Not meeting	
	this goal endangers the future of both the US and the world.	
10949-001	Such wide transit lanes [Alternative F] seem to imply that large ships are out	Section 2.5 of the FEIS has been added which includes the agency-preferred
	of control in sea lanes. I don't believe it.	alternative.
10970-001	Due to the destructive nature of offshore oil platforms that have been	Thank you for your comment.
	approved over the years, I am hoping you find the offshore wind project a	
	much smarter, safer, environmentally appropriate alternative.	
10974-001	The worlds community of scientists has already stated that we only have until	Thank you for your comment.
	the year 2030 to reduce our global warming gas emission atmospheric levels	
	to what they were in 1990 or below. If we do not, life on this earth will end	
11005 001	abruptly due to global warming another climate change phenomenon!	
11005-001	I strongly oppose the extra transit lanes considered as Alternative F, as	Section 2.5 of the FEIS has been added which includes the agency-preferred
	unnecessary and damaging for clean electricity generation in that area. If the	alternative.
11024 001	Wind energy is assential to the health of our country and to containing	Thank you for your comment
11024-001	damage to the climate	
11030-001	I think we can all agree that we needed to wean ourselves off fossil fuels like	Thank you for your comment
11050 001	twenty years ago! We need all the smarts and help we can get to even	Thank you for your confident.
	begin to mitigate all the needless damage we've done by not embracing clean.	
	green energy sources sooner. Clean, green energy sources like wind.	
11032-001	As an electrical engineer with extensive expertise in U.S. energy policy and	Thank you for your comment.
	technology, I am convinced that offshore wind along with onshore wind,	
	solar, natural gas, hydroelectric, and nuclear, are essential for phasing out	
	coal-fired power plants. This needs to be done as soon as possible.	
11081-001	[T]he use of fossil fuels contributes to the devastating warming of our	Thank you for your comment.
	climate as well as many other additional environmental problems. By	

Index	Comment Text	Response
Number		
	allowing the construction of this offshore wind farm and additional wind	
	farms, we will be taking an active role in helping stop these impacts.	
11081-002	The Supplementary Environmental Impact Statement (SEIS) covered an	Thank you for your comment.
	expanded cumulative impact study for up to 22,000 MW of offshore wind	
	development. That is the equivalent of a fully built-out market and is	
	approximately twenty-five projects, which are similar in scale to Vineyard	
	Wind's proposed project. Vineyard Wind 1 will produce 800MW of clean	
	energy. This will help Massachusetts be able to reach its Clean Energy	
	Standards. This wind farm will also produce enough clean energy to power	
	400,000 homes.	
11081-003	Vineyard Wind 1 will also save ratepayers more than \$1.4 billion in energy	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
	costs during the first 20 years of the project and more than \$3.7 billion in	
	energy related cost savings over the lifespan of the project.	
11081-004	I urge BOEM to permit this project to move forward without delay and	Section 2.5 of the FEIS has been added which includes the agency-preferred
	choose Alternative D2.	alternative.
11084-001	We must utilize all options available to us in the search for how to transition	Thank you for your comment.
	into a renewable energy future.	
11092-001	As a world, and particularly as a country, we need to move away from our	Thank you for your comment.
	dependence on fossil fuels and instead shift our focus to renewable energy.	
11092-002	The Supplementary Environmental Impact Statement (SEIS) covered an	Thank you for your comment.
	expanded cumulative impact study for up to 22,000 MW of offshore wind	
	development. That is the equivalent of a fully built-out market and is	
	approximately twenty-five projects similar in scale to Vineyard Wind's	
	proposed project. Vineyard Wind 1 will produce 800MW of clean energy	
	which will help Massachusetts reach its Clean Energy Standards. This wind	
	farm will also produce enough clean energy to power 400,000 homes.	
11092-003	Vineyard Wind 1 will also save ratepayers more than \$1.4 billion in energy	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
	costs during the first 20 years of the project.	
11092-004	Especially in the aftermath of COVID with the high level of unemployment,	Section 3.6.2 of the FEIS and Tables 3.6-3, 3.6-4 and 3.6-5 provide estimated
	this wind farm is needed all the morePermitting this wind farm to proceed	job growth, tax revenues, and economic input from the Vineyard Wind 1
	without delay will allow these benefits to be realized sooner, and not	Project within Massachusetts and specifically within southeastern
	additional years down the line.	Massachusetts.
11092-005	I encourage BOEM to allow Vineyard Wind 1 to continue without delay	Section 2.5 of the FEIS has been added which includes the agency-preferred
	and to also select Alternative D2.	alternative.
11109-001	One of the most effective tools we have to reduce our greenhouse gas	Thank you for your comment.
	emissions is decarbonizing the electricity grid by building more renewable	
1	and low-carbon electricity generation.	

Index	Comment Text	Response
Number		
11123-001	Offshore wind is a key tool for protecting our precious planet, while also reducing electricity bills - while enabling carbon taxes (which we should have implemented decades ago).	Thank you for your comment.
11128-001	I do not think any particular energy option is best from a long term perspective. We should be looking out 20 years into the future and we must continue to promote and explore these alternate methods in order to evolve these technologies to their ultimate potential so that future generations will be allowed to choose what suits the world they live in.	Thank you for your comment.
11136-001	Because of the importance of clean energy, I compassionately support proceeding with the permitting process for Vineyard Wind, particularly with regards to stemming the tide of stopping the accelerated destruction of life sustaining qualities on this planet.	Thank you for your comment.
11149-001	It is crucial that non-carbon energy sources move forward quickly and without too much dilution.	Thank you for your comment.
11164-001	Please support offshore wind and send us into the future with better climate conditions.	Thank you for your comment.
11166-001	Please make sure all your best intentions are put forward and complete this project. Then start the next project. Keep moving ahead until we are free of fossil fuels.	Thank you for your comment.
11181-001	We all have a stake in securing for our children and their children's children a healthy environment. This project is a good start toward that goal.	Thank you for your comment.
11189-001	If the BOEM would consider the precedent set by offshore wind regulators in the European Union, I'm certain such extra transit lanes have likewise been considered to be unnecessary.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
11193-001	I believe the Coast Guards findings support my position. Let's go with one mile separation in case it is suitable for particular fields.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
11199-001	We need to include clean energy as part of our economic recovery and social justice efforts. Our kids are counting on us to make the right choice.	Thank you for your comment.
11214-001	I also urge finding a way to avoid killing and injuring migrating sea and other birds.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
11215-001	It is imperative that America move to clean energy rapidly. Fossil fuels are killing us, destroying the environment and jeopardizing our future. Offshore	Thank you for your comment.

Index	Comment Text	Response
Number		
	wind is a key tool for addressing these problems and reducing electricity bills	
11224 001	and our need for low-carbon electricity as well.	
11224-001	I m writing in support of the vineyard wind project proposed for installation	i nank you for your comment.
	in the Cana Cod region with strong interacts in the health of our acceptal and	
	and the Cape Courtegion with strong interests in the health of our coastar and	
	and the dire need to address carbon emissions to curb climate change. I am	
	completely in support of this project. Lurge the BOEM to approve the	
	Vineward Wind project, which will also have the way for other sustainable	
	offshore energy production in our region	
11228-001	This Project will provide new economic opportunities in the offshore wind	Section 3.7.1 and 3.7.2 of the SEIS provided information on projected
11220 001	industry. The offshore wind facilities on Martha's Vinevard alone will	employment and investment from Vinevard Wind including the location of
	provide as many as 40technical jobs, much needed for our Island community.	the operations and maintenance center with many of the long-term year-
	for the entire expected 25 years of the offshore wind project. In addition	round operations employees on Martha's Vinevard Section 3.6.2 of the FEIS
	Vinevard Wind will move toward a 100% U.S. workforce that captures the	has been updated to include information on the Community Benefit
	full economic benefits of this industry. Consistent, predictable projects	Agreement between Vinevard Wind and the Vinevard Power Cooperative.
	entering construction will allow workers to gain experience and	Section 3.6.2 of the FEIS has been updated to note the importance of the
	qualifications necessary to advance within the workforce and replace the	Vinevard Wind 1 Project as the east coast's first large-scale offshore wind
	Europeans over time. Moreover, although Vineyard Wind will utilize many	energy project. Approval could encourage and support continued investment
	systems and equipment that Europeans have developed and in place right	in other offshore wind projects and the creation of a domestic supply chain
	now in order to construct this first U.S. commercial wind farm, Vineyard	for the offshore wind industry in the eastern United States.
	Wind will push to promote development of U.S. manufacturing plants to	
	construct turbines and component parts for the subsequent wind farm projects	
	as well as to maintain this Vineyard Wind 1 Project over its expected 25 year	
	lifespan.	
11246-001	I care about moving electricity generation to truly sustainable sources and I	Thank you for your comment.
	care about the health of our oceans.	
11274-001	WE FULLY SUPPORT OFFSHORE WIND AND ESPECIALLY THOSE	Thank you for your comment.
	INSTALLATIONS THAT TAKE BIRD MIGRATIONS INTO	
	CONSIDERATION.	
11275-001	I expect the U.S. to take the lead in wind power in our hemisphereI would	Thank you for your comment.
	be proud to see offshore wind farms in my state, and hope this project is just	
	the first of many, moving the U.S. toward clean energy and preserving	
	energy independence.	
11283-001	It is time once again for the United States to become a leader. Moving away	Thank you for your comment.
	from fossil fuels and creating a healthier, sustainable future sends the right	
	message to the rest of the world.	
11284-001	As a resident of Rhode Island and follower of our offshore wind	Thank you for your comment.
	development, offshore wind presents clean energy, efficient use of resources,	

Index Number	Comment Text	Response
	and a job creator which the potential for new supply chains in the US and in our regionConsidering the importance of implementing clean energy systems now and bringing them onto the grid (along with making a model for future offshore wind farms), I support proceeding with the permitting process for Vineward Wind	
11284-002	I would also like to promote designating the areas around wind farms to be Marine Protected Areas, particularly restricting bottom towed fishing. It is important to mitigate environmental damage and promote the development of marine ecosystems, and as research has shown that wind turbines can contribute to a net increase in species abundance by creating a habitat for marine life, permitting based on habitat potential would have a positive effect for adjacent fisheries and marine ecosystems.	Section 3.4 of the SEIS discussed the reef effect, and Sections 3.4 and 3.11 discussed that fishing pressure may be substantially influenced by the presence of structures offshore, resulting in reduced local fishing pressure. However, it is not within the authority of BOEM to establish Marine Protected Areas or regulate fishing in a wind lease area or outside of a lease area. Therefore, no change to the FEIS is warranted.
11284-003	I oppose the extra transit lanes considered as Alternative F, as unnecessary and damaging for clean electricity generation in that area.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
11289-001	I believe that we need more renewable energy instead of fossil fuels, as fossil fuels contribute to climate change and to additional environmental problems. Allowing the construction of this offshore wind farm and additional wind farms will help in this endeavor.	Thank you for your comment.
11289-002	Permitting the construction of this wind farm will also create numerous jobs. Particularly in the aftermath of COVID-19 with the high level of unemployment, this wind farm is needed all the morePermitting this wind farm to proceed without delay will allow these benefits to be realized sooner, and not additional years down the line.	Section 3.7.1 and 3.7.2 of the SEIS provided information on projected employment and investment from Vineyard Wind. The FEIS has been updated this information with addition sources and analysis in Section 3.7.2 indicating the possible beneficial impacts of additional future offshore wind projects.
11289-003	Additionally, wind farms are financially viable and can in fact save ratepayers money. The Vineyard Wind wind farm will save ratepayers more than \$1.4 billion in energy costs during the first 20 years of the project. And Vineyard Wind 1 will also save ratepayers more than \$3.7 billion in energy related cost savings over the lifespan of the project.	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
11289-004	I urge BOEM to permit this project to move forward without delay and choose Alternative D2.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
11295-001	Having lived on Martha's Vineyard for many years, I have witnessed the effects of Climate Change as they have impacted the island community. As a world, and particularly as a country, we need to move away from our dependence on fossil fuels and instead shift our focus to renewable energy. The Supplementary Environmental Impact Statement (SEIS) covered an expanded cumulative impact study for up to 22,000 MW of offshore wind development. That is the equivalent of a fully built-out market and is approximately twenty-five projects similar in scale to Vineyard Wind's proposed project. Vineyard Wind 1 will produce 800MW of clean energy	Thank you for your comment.

Index Number	Comment Text	Response
	which will help Massachusetts reach its Clean Energy Standards. This wind farm will also produce enough clean energy to power 400,000 homes.	
11295-002	Vineyard Wind 1 will also save ratepayers more than \$1.4 billion in energy costs during the first 20 years of the project.	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
11295-003	There is even research that links fossil fuels to devastating public health and safety risks. According to the New York Time, it was recently reported that "high exposure to air pollution during the final trimester of pregnancy was linked to a 42 percent increase in the risk of stillbirth." We cannot stand to contribute to a future where someone's health and mortality are determined solely based on where they live, the socioeconomics the have, or their ethnicity.	Thank you for your comment.
11295-004	I hope BOEM permits this wind farm to move forward without any delay and to select Alternative D2.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
11320-001	[The Vineyard Wind Project] will help the local economy by providing much-needed jobs related to this project. In addition, alternative sources of energy are desperately needed and [the Vineyard Wind Project] will provide enough megawatts of energy to provide enough electricity for over 400,000 homes.	Thank you for your comment.
11320-002	[The Vineyard Wind Project] is also going to be located 15 miles offshore, not in sight of homes which has been the problem in past proposals.	The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the offshore wind development. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations provided by Vineyard Wind that provide views of the 14 MW wind turbines as well as simulations of Vineyard Wind 1 combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment.
11328-001	I care deeply about increasing America's offshore wind capabilities as a key way to combat climate change.	Thank you for your comment.
11332-001	Offshore Wind holds many benefits for our region. However, increasing navigational lanes beyond the 11 NM endorsed by USCG threatens offshore wind's future (no to Alternative F).	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
11332-002	The climate and our economy can not afford for Offshore Wind to be delayed.	Thank you for your comment.
11338-001	I would like to stress how important I think it is that we prioritize low-carbon electricity in the coming years, in order to make a better world for our children and grandchildren. Please proceed with the permitting process for Vineyard Wind.	Thank you for your comment.
11349-001	Offshore wind makes complete sense - It would be well positioned close to the end consumers of the energy produced. Offshore wind is a key tool for	Thank you for your comment.

Index	Comment Text	Response
Number		
	addressing our need for low-carbon electricity before it is too late to slow	
	down the most damaging impacts of climate change - much of which is	
	already inevitable.	
11351-001	As we move closer and closer to irreversible global climate change, it is	Thank you for your comment.
	essential that we transition to clean energy generation. That is why the	
	Bureau of Ocean Energy Management's work assessing offshore wind in the	
	Northeast is so important. Offshore wind is vital to reducing electricity bills	
	and addressing our need for low-carbon electricity.	
11385-001	Please help the environment by getting away from fossil fuels. Wind power is	Thank you for your comment.
	a step in the right direction. Please support this project.	
11766-001	I write to support the Vineyard Wind 1 offshore wind development and urge	Thank you for your comment.
	you to grant its final permits to begin construction. It will create clean	
	energy, much needed clean energy jobs, and an infrastructure to create more	
	in the futureNumerous scholarly, government, intergovernmental, and	
	private industry studies have shown that off-shore wind energy is a proven,	
	very cost-efficient technology that provides clean energy, local and regional	
	jobs, enhanced energy independence, excellent public relations, preparation	
	for future fossil-fuel and climate-change related regulations and public	
	demands, and even enhanced insulation from potential climate change related	
	lawsuits. Reducing fossil fuel use has also been shown to reduce public	
	health costs associated with the imapct of air pollution on asthma rates, lung-	
	related ailments, and other issuesOff-shore wind is also a key energy	
	technology of the present and the future - and one in which the USA is falling	
	behind. The opportunity to utilize our excellent natural, clean-energy	
	resources in the northeast USA should be a regional and national priority.	
11766-002	Moreover, this project would represent a significant private sector investment	Appendix A, Section A.8.1 of the FEIS has been updated to address air
	in clean energy jobs in a region hard hit by the economic impact of the	quality benefits of the displacement of fossil fuel electricity generation by
	historic COVID-19 pandemic.	offshore wind.
11826-001	As the President and owner of McAllister Towing, the Bridgeport Port	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
	Jefferson Steamboat Company and the Barnum Landing site that will be	several sources of projected employment and investment resulting from
	home to Vineyard Wind's 'Park City Wind' project, I am writing today to	growth of the wind energy industry along the Atlantic coast. While the
	express my full support for the Vineyard Wind 1 project and offshore wind	estimates are national, jobs are anticipated to be concentrated in and near the
	development more broadlyWith our long perspective on port infrastructure,	east coast states that would host offshore wind. This information was also
	we have seen port cities like Bridgeport left to die on the vine for far to long.	included in the SEIS (Section 3.7.2.1), and the FEIS provides additional
	For the first time in generations it feels like we are on the precipice of turning	detail and analysis. Section 3.6.2 of the FEIS has been updated to note the
	the proverbial tide. The offshore wind industry is in desperate need of port	importance of the Vineyard Wind 1 Project as the east coast's first large-scale
	development, a fact that will lead to the creation of thousands of local jobs	offshore wind energy project. Approval could encourage and support
	here in Bridgeport both during construction and operations and maintenance	continued investment in other offshore wind projects and the creation of a
	of the wind farmsWe know that the health of our ports is vitally important	

Index	Comment Text	Response
Number	to our regional economy, and we stand ready to help launch an industry that will dramatically enhance our effort to reduce the effects of climate change.	domestic supply chain for the offshore wind industry in the eastern United States.
11945-001	On balance we found the expanded discussion of cumulative impacts in the SEIS a sound addition to the original analysis presented in the DEIS especially in areas where the scope of analysis (geographic and otherwise) was increased.	Thank you for your comment.
11945-002	We acknowledge and support the description of potential benefits of future wind power generation buildout scenarios and encourage BOEM to continue to use the cumulative impact analysis as an appropriate vehicle for this discussion.	As was done in the SEIS, the FEIS utilizes the same framework and methodology for assessing planned action impacts.
11945-003	Our recommendations below highlight several areas where the cumulative impact discussion could be expanded to clarify the potential for impacts and how cumulative impacts will be addressed Construction activities account for the majority of air emissions associated with offshore wind energy development. The cumulative impacts from construction will vary over time depending on whether project construction periods for multiple projects are sequential or concurrent. We recommend that the discussion of cumulative air quality impacts be expanded to discuss whether the construction periods for the Vineyard Wind 1 project and other projects in adjacent lease areas will potentially overlap.	The SEIS included a discussion of what projects would overlap with the proposed Project within the geographic analysis area. As noted in the SEIS, the geographic analysis area was defined as the airshed within 15.5 miles (25 kilometers) of each area potentially impacted by the proposed Project, including the lease area, the on-land construction areas, and the mustering port(s). Section A.8.1.1 of the SEIS stated that the future offshore wind projects that may result in air emissions and air quality impacts within the air quality geographic analysis area included projects located within all or portions of the following lease areas: OCS-A-0486, OCS-A-0487, OCS A 0500, OCS-A-0501 South, OCS-A-0520, and OCS-A-0521. Section A.8.1 of the FEIS states that the Proposed Action, when combined with past, present, and reasonably foreseeable activities, could generate up to approximately 2,573,037 tons of construction emissions between 2021 and 2030. Construction overlap between projects would begin in 2022 based on the lease areas within the air quality geographic analysis area for analysis area. The first year of construction of Sunrise Wind and Revolution Wind would overlap with the second year of the proposed Project construction (2022) and the other wind projects within the air quality geographic analysis area would overlap with the Vineyard Wind 1 Project's operations.
11945-004	We encourage BOEM to take a broad/inclusive view of which projects to include in this part of the air quality analysis by incorporating projects planned for BOEM Lease Areas OCS-A 0517, 0486, and the western portion of 0487. Air emissions associated with the construction and operation of projects planned for these areas and from work to improve ports to support the wind industry, may contribute to air quality impacts associated with the Vineyard Wind project on the OCS, in state waters, or onshore. Current construction schedule projections in the Massachusetts and Rhode Island/Massachusetts lease areas do not appear to coincide, potentially reducing the intensity of construction period impacts but extending the	The geographic analysis areas used in this SEIS for all resource areas are based on the area of effects from the Proposed Action. The SEIS included a discussion of what projects would overlap with the proposed Project within the geographic analysis area. Certain projects were excluded from the geographic analysis area for air quality, because air quality impacts from the Proposed Action were not expected to overlap with those other projects. As noted in the SEIS, the geographic analysis area was defined as the airshed within 15.5 miles (25 kilometers) of each area potentially impacted by the proposed Project, including the lease area, the on-land construction areas, and the mustering port(s). Section A.8.1.1 of the SEIS stated that the future

Index	Comment Text	Response
Number		
	duration of impact over a longer period. Nonetheless, EPA recommends presenting a discussion of the cumulative air quality impacts of the lease areas identified above in the cumulative impact assessment.	offshore wind projects that may result in air emissions and air quality impacts within the air quality geographic analysis area included projects located within all or portions of the following lease areas: OCS-A-0486, OCS-A-0487, OCS A 0500, OCS-A-0501 South, OCS-A-0520, and OCS-A-0521. Section A.8.1 of the FEIS states that the Proposed Action, when combined with past, present, and reasonably foreseeable activities, could generate up to approximately 2,573,037 tons of construction emissions between 2021 and 2030. Construction overlap between projects would begin in 2022 based on the lease areas within the air quality geographic analysis area. The first year of construction of Sunrise Wind and Revolution Wind would overlap with the second year of the proposed Project construction (2022) and the other wind projects within the air quality geographic analysis area would overlap with the Vineyard Wind 1 Project's operations. Therefore, no change to the FEIS is warranted.
11945-005	EPA notes that recent interconnection queues for ISO NE, NYISO, and PJM indicate that new generating entrants will be made up of a mix of natural gas, dual fuel natural gas/oil, solar, wind and energy storage. We recommend that BOEM consider the interconnection queues for ISO NE, NYISO, and PJM when assessing impacts of electric generating units that would likely come online in the No Action Alternative and update the alternative accordingly.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS.
11945-006	While the current SEIS is based on actions and activities that are "reasonably foreseeable" it is by default an analysis conducted based on our current understanding of the environment in the project areas; how those areas are used by fishery resources, marine mammals, birds and numerous stakeholders; existing technology; construction techniques and other external forces driving wind power development such as the economy and public policy. As projects are constructed BOEM will have the ability to evaluate whether expected impacts occur at the same intensity as anticipated in the cumulative impact analysis. We encourage BOEM to use that knowledge to update and refine the cumulative impact analysis and to focus on how cumulative impacts associated with wind power development will be addressed over time.	Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
11945-007	In addition to tracking changes to technology and the marine environment over time, we encourage future cumulative impact analyses by BOEM to incorporate impacts from increases in onshore support facilities at repurposed and new port areas developed along the Atlantic seaboard. These support	The FEIS has been updated to address the benefits to port infrastructure. These benefits are addressed for the Vineyard Wind 1 Project, as well as for planned actions that would affect ports within the geographic analysis area. Benefits are discussed under the port utilization IPFs in Sections 3.6.1 and

Index	Comment Text	Response
Number	facilities will be necessary to support a rapidly growing wind industry and they have the potential to bring a range of benefits and impacts to host communities.	3.6.2 and Sections A.8.6.1 and A.8.6.2 (Appendix A) of the FEIS. For future projects, each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts including a review of planned actions.
11945-008	We continue to encourage BOEM to expand the executive summary of the cumulative impacts analysis with a focus on providing key takeaways regarding potential impacts and how they will be considered by BOEM across all lease areas. The summary would benefit from a narrative description of all moderate to major cumulative impacts anticipated that explains the causal factors for those impacts and strategies that can be implemented to address each impact. A focus on representing the impacts in a visual manner and providing appropriate supporting narrative summaries would also be helpful. Figure A.7- 17 from Appendix A could be brought forward to the executive summary as a key figure showing the eventual development that provides context for the long term cumulative impacts analysis with respect to a range of impacts including but not limited to marine mammals, navigation, fishermen and fisheries. Enhanced with color shading this figure could also show when each project lease area is expected to be developed (to the degree that information is available) over time, providing further context to understand the cumulative impacts of offshore wind energy development in and adjacent to the project area.	The information presented in the executive summary is purposefully high- level information, and the details of the impacts described are intended to be in the resource-specific sections of Chapter 3 and Appendix A of the FEIS.
11961-001	The new research found that the top 20 companies on the list have contributed to 35 percent of all energyrelated carbon dioxide and methane emissions worldwide, which adds up to 480 billion tons of carbon dioxide equivalent since 1965. That date is notable, since in 1965, the president of the American Petroleum Institute informed his industry about research into climate change caused by fossil fuels. The substance of the report is that there is still time to save the worlds peoples from the catastrophic consequence of pollution, but time is running out, said Frank Ikard in 1965, as Desmog reported.	Thank you for your comment.
11962-001	The wind farms will put the commercial fishing industry of America out of business and make us more dependent on foreign fish imports.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses how offshore wind development will potentially impact commercial fisheries. This includes a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas (Table 3.11-3 of the SEIS) if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. Section 3.10 and Appendix D of the FEIS discuss the voluntary revenue compensation funds established by Vineyard Wind and states that impacts or losses for which claims may be filed include lost revenues related to the Project's interference with fishing activities (if any)

Index	Comment Text	Response
Number		
<u>Number</u> 11968-001	would like to express our concern with Vineyard Winds proposed locations of their Turbine Windmills. The results of fish and the ocean resources has been detrimental in documented Norwegian wind turbines and locally in Narragansett Bay fishing area Through their operation these sites have disturbed and dispersed and damaged the fisheries near these turbines. Why is it the fishermen are treated as low hanging fruit that first gets pushed out of traditional fishing grounds to create "Sanctuaries" and Monument" Preserves and left to scrape a living in non traditional fishing areas. Now they are finally seeing they can make a feeble living in these nontraditional areas and we are pushed out to an energy project our tax money and higher energy bills are funding and twenty years from now they will be rotten at the bottom of the ocean Why are these sites not put in areas we do not fish? There is a big ocean out there and I'm sure the wind blows all over. Is it to help the profits of these multinational corporations instead of we the people? The ones your suppose to look out for! I can only hope that you reconsider these sites and find alternative locations that do not effect hard working fishermen that	Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing.
	supply a natural protein, unadulterated by foreign corporations and governments that is a tremendous healthy and economic engine for New	
11068.002	England and the better part of the East Coast of these United States.	The DEIG CEIG and Section 2.4 of EEIG addresses actuated interaction to the sight
11968-002	other species that will be harmed by these hundreds of wind projects all over the traditional feeding grounds ?	whales.
11973-002	The project will provide clean, renewable, and cost-effective electricity to 400,000 homes and business in Massachusetts and save ratepayers more than \$1.4 billion in energy-related cost savings over the life of the project.	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
11973-003	Offshore wind is a high capacity, domestic renewable energy resource that will improve energy security and reliability.	Thank you for your comment.
11973-005	We recognize and appreciate your role in understanding and balancing the varying needs of the offshore wind industry, commercial fishing, maritime navigation, and other uses. Late last year, after hearing from many stakeholders, the developers of the New England Wind Energy Areas (NE WEA) collaborated to propose a uniform, 1 x 1 nautical miles spacing between turbines, a layout that was recently endorsed by the United States Coast Guard (USCG). Despite this fact, the fishing industry has proposed additional transit lanes of at least 4 NMs (reflected in Alternative F of the SDEIS), a move that would severely constrain clean energy production and not meaningfully improve navigation or safety. Alternative "F" slashes the generation capacity of the project and puts the entire region at risk of not meeting energy demand even as many of New England's foscil fuel and	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number	nuclear nower plants are retiring. For these reasons, we appase the additional	
	transit lanes outlined in Alternate F. Implementation of those additional	
	transit lanes will only further constrain the economic and environmental	
	benefits of the industry.	
11973-006	This project is the culmination of more than ten years of exhaustive study and	Thank you for your comment.
	analysis, and extensive public consultation, to determine where offshore wind	
	could be built with the least possible impact on existing industries and the	
	environment. To grow a stable and prosperous offshore wind industry and	
	homegrown workforce, we need regulatory predictability and a clear pathway	
	forward. Further delay of Vineyard Wind 1 is not an option.	
11973-007	The rapid deployment of offshore wind is essential to achieve state and	Thank you for your comment.
	regional greenhouse gas emission reduction targets and limit the worst	
	impacts of climate change. Vineyard Wind 1 alone will avoid the emission of	
	almost 1.7 million tons of carbon dioxide per year, the equivalent of	
11002 001	removing 325,000 cars of the road.	
11983-001	The US Coast Guard has said that the standard nautical mile distancing in a	Section 2.5 of the FEIS has been added which includes the agency-preferred
	gria pattern would	alternative.
	accommodate the needs of fishermen, simpping, the Coast Guard's own	
	operations, and search and rescue. Alternative F would minimize energy	
	list of alternatives	
11984-001	What brings me here is not a single project, but the chance to comment based	Thank you for your comment
11901-001	on the broad scope of the SEIS, and all the projects that it encompasses. As I	
	expect you fully realize, offshore wind offers exciting prospects:	
	· It can offer large amounts of pollution-free generation, which many states,	
	including	
	along the Eastern seaboard, are demanding. That matters for reducing air	
	pollution from	
	fossil fuel power plants that affects, in particular, the often-marginalized	
	communities	
	that abut those plants. And it matters for reducing climate change's harmful	
	impacts—	
	Offehere wind generates at times that make it an excellent complement to	
	other	
	renewable energy resources, including because of its strength in winter	
	· Offshore wind can offer savings to electricity customers, thanks to the	
	strong cost	
	reductions that the industry has achieved, which are themselves thanks in part	

Index	Comment Text	Response
Number		
	to the	
	strong state policies that have prompted larger projects and offered	
	economies of scale.	
	· And offshore wind can offer economic development and jobs, with the	
	creation of an	
	entirely new industry, with all the project study, development, installation,	
	maintenance,	
	manufacturing, finance, and more that the industry entails. That job creation	
	potential	
	seems particularly important with high unemployment and an economy in	
	need of	
	rebuilding.	
11984-002	this SEIS's conclusion regarding air pollution (p. A-43) is notable:	Thank you for your comment.
	"The proposed Project and other future offshore wind projects will in fact	
	probably lead to reduced emissions from fossil fuel power-generating	
	facilities and benefit air quality. Under the No Action Alternative, additional,	
	more polluting, fossil fuel energy facilities would come or be kept on-line to	
	meet future power demand, fired by natural gas, oil, or coal." Also	
	noteworthy is the text immediately following, in which BOEM suggests that	
	the fossil impacts from not having built the first large-scale offshore wind	
	project in US waters "would be mitigated partially by other future offshore	
	wind projects surrounding the proposed Project area" (p. A-44). Yet it	
	challenging to envision subsequent offshore wind projects succeeding in the	
	near term if a first project failed to proceed not because of its merits but	
	because of the lack of such a smooth, science-based process—hence	
	theimportance of this proceeding (as noted below).	
11984-003	One area of consideration deserves particular attention and comment: The	Section 2.5 of the FEIS has been added which includes the agency-preferred
	spacing and layout of the turbines. When the five New England leaseholders	alternative.
	proposed to adopt a uniform 1x1 turbine layout, the same east-west/north-	
	south orientation, that was a solid response to many of the concerns	
	expressed about the prior plans and navigation through the projects. And in	
	its recent MARIPARS study, the US Coast Guard confirmed the	
	appropriateness of that spacing.	
	But spacing the turbines so much farther apart also appreciably reduces the	
	number of turbines and generation possible in the lease areas; Vineyard Wind	
	estimated a 13,000-megawatt reduction for the New England lease areas,	
	with a 30% reduction in potential clean energy. So we voice our strong	
	opposition to the SEIS's Alternative F, which would require additional transit	
	lanes beyond the hundreds provided by the 1x1 fixed orientation layout.	
	Alternative F would lead to a lot more lost potential. Fewer megawatts and	

Index	Comment Text	Response
Number		
	less generation would mean more air pollution impacts from the fossil fuel	
	generation that those turbines could have displaced, less savings on	
	electricity bills, fewer opportunities for economic development and jobs, and	
	a heightened impact on marine wildlife from the worsening impacts of	
	climate change. None of those should be acceptable outcomes, and we ask	
	you to reject Alternative F in particular.	
11984-004	In my almost three decades of working in the power sector, I have never seen	Thank you for your comment.
	an opportunity like we're seeing now with offshore wind. The lengthy	
	process to date, and now a strongly supportive SEIS, provide a strong basis	
	for moving forward, with appropriate attention to mitigation. What comes of	
	this process isn't about just one project; it's about every project in the queue	
	behind it, and about fidelity to science, and facts, and good decision making.	
11987-001	The climate crisis will destroy civilization if we dont seriously reduce fossil	Thank you for your comment.
	fuel plants.	
11991-001	We must invest as much as possible in clean, renewable energy, our future	Thank you for your comment.
	depends on it!	
11994-001	Offshore wind is a key tool for building a sustainable future for America. It	Thank you for your comment.
	will lower electricity bills, create jobs, and help to address the urgent need for	
	low-carbon electricity.	
12007-001	There is no reason for any traffic lanes. The law should not allow any traffic	Section 2.5 of the FEIS has been added which includes the agency-preferred
	that cant fit between or under the turbines. Anything else should be	alternative.
	prohibited by law and made to go around, just like the laws that protect our	
	dams around this country.	
12008-001	WHILE I AM CONCERNED ABOUT BIRDS AND OTHER ANIMALS	Thank you for your comment.
	FLYING INTO OFFSHORE WINDMILLS, I AM SURE THAT THESE	
	ISSUES CAN BE MITIGATED.	
12017-001	As a Rhode Island resident, I am aware that this project will have some	Thank you for your comment.
	detrimental environmental impacts, especially during construction. But,	
	Vineyard Wind's Draft Environmental Impact Statement Supplement	
	addresses the environmental impact concerns thoroughly.	
12017-002	The environmental catastrophe that is the currently progressing climate crisis	Thank you for your comment.
	should be enough to secure Vineyard Wind's place in our mitigation efforts.	
	After all, the October 2018 Intergovernmental Panel on Climate Change	
	(IPCC) report states that our planet must not exceed 1.5 degrees C of	
	warming. The report goes on to say, we humans must reduce our carbon	
	emissions 45% by the year 2030. It is now nearly two years after the IPCC	
	report and the carbon content of our atmosphere continues to increase. This	
	alone should be enough evidence to ensure that Vineyard Wind's	
	Construction and Operation Plan move forward.	

Index	Comment Text	Response
Number		
12017-003	Many people are losing their jobs, some temporarily, but others may be permanent. This project and, others like it up and down the U.S. Atlantic coast, will provide many good jobs at a time when they will be desperately needed. A recent study found that the U.S. offshore wind industry will create over 80,000 jobs in the next ten years. Vineyard Wind states they expect to create 3,600 jobs for this project. These jobs will be high paying (many unionized) as Vineyard Wind has pledged to sign Project Labor Agreements (PLA's). The green economy is here now and waiting to be tapped.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Section 3.6.1.1 of the FEIS provides estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. Jobs and investment are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
12019-001	We commend the BOEM on the comprehensive and thorough analysis contained in the SEIS. The SEIS confirms our strong belief that offshore wind energy can be developed in a manner consistent with and protects wildlife, sensitive habitat, and maritime uses such as commercial fishing and marine navigation.	Thank you for your comment.
12019-002	We note the statement in the SEIS that "The proposed Project and other future offshore wind projects will in fact probably lead to reduced emissions from fossil fuel power-generating facilities and benefit air quality." According to the SEIS, without offshore wind development, "additional, more polluting, fossil fuel energy facilities would come or be kept on-line to meet future power demand, fired by natural gas, oil, or coal." We support the continued development and growth of offshore wind. Offshore wind energy is critical for meeting the clean energy goals of the Cape & Islands region, New England and beyond. The untapped offshore wind resource along the U.S. Eastern Seaboard is one of the most powerful in the world and within reach of densely populated areas where energy demands are high and new resource options are few. In our region, offshore wind holds the potential to provide over 50% of the potential clean energy resource for our region.	Thank you for your comment.
12019-003	In our region, offshore wind holds the potential to provide over 50% of the potential clean energy resource for our region. The potential to create 83,000 jobs and deliver \$25 billion in annual economic input by 2030 are additional important benefits. While we understand that this resource must be bult responsibly, to transition our grid to locally sourced clean energy, the need to move forward is urgent, and projects such as Vineyard Wind should advance as quickly as responsible development will allow.	Thank you for your comment.
12019-004	We support the East-West One Nautical Mile Wind Turbine Spacing without transit lanes (Alternative D2). This Alternative would require that the wind turbine generators are oriented in an east-west direction and have a minimum	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
	spacing of 1 nautical mile between them. This could reduce conflicts with	
	existing ocean uses, such as commercial fishing and marine navigation. We	
	believe that this Alternative allows for continued coexistence between a new	
	industry and existing marine users, such as the commercial fishing industry,	
	while protecting the marine environment and setting a path forward.	
	Requiring additional transit lanes, deemed unnecessary by the US Coast	
	Guard would result in Project delay and damage to the offshore wind	
	industry.	
12019-005	We also support the Covell's Beach Landfall Alternative (Alternative B).	Section 2.5 of the FEIS has been added which includes the agency-preferred
	This Alternative would limit the cable landfall to only Covell's Beach. We	alternative. Vineyard Wind has indicated that New Hampshire Avenue
	believe that doing this could reduce impacts on environmental and	landfall location is no longer a consideration as they have received all the
	socioeconomic resources, particularly impacts on Lewis Bay.	necessary state and local permits for the Covell's Beach landfall site.
12019-006	We believe the SEIS provides sufficient information supporting the	Thank you for your comment.
	development of the offshore wind industry, including the Vineyard Wind	
	Project, and the much-needed clean renewable energy resource it will	
	provide. We urge BOEM to complete this review in a timely fashion, provide	
	a pathway for this project to move forward recognizing the immense	
	refinement and compromise, and avoid unnecessary measures that will	
	further delay and jeopardize our ability to get clean energy into the grid.	
12025-001	Green Energy Consumers affirms that the Supplement to the Draft EIS	Thank you for your comment.
	demonstrates copious environmental, economic, societal, and energy benefits	
	from the proposed Vineyard Wind Project. We urge the Bureau of Ocean	
	Energy management to fully permit the project at the earliest possible	
	opportunity so that these benefits can begin flowing to New England	
	ratepayers, the regional economy, and the environment.	
12025-002	Developing offshore wind in New England over the next five years is	Thank you for your comment.
	essential to achieving the climate goals of Massachusetts, Rhode Island, and	
	other states, as well as meeting the Paris Agreement, to which several	
	Governors have committed through Executive Order. The inexpensive,	
	reliable renewable energy that offshore wind can provide will be our lifeline	
	as we transition to a low carbon future. That transition can't wait, and every	
	additional delay in the development of Vineyard Wind, the first large scale	
	offshore wind project in the region, is one more significant barrier to meeting	
	our greenhouse gas emissions reductions goals.	
12025-003	Significant alterations to the project, such as the incorporation of wide vessel	Section 2.5 of the FEIS has been added which includes the agency-preferred
	transit lanes, would reduce the project size, hindering both the economics of	alternative.
	the project and the region's ability to use this clean energy to meet	
	decarbonization targets. Alternative D1 provides the best compromise	
	between natural resource conservation concerns, fishing concerns, economies	

Index Normhan	Comment Text	Response
Number	of scale, and our elimete and energy needs. This elternative has been	
	or scale, and our chinate and energy needs. This alternative has been	
12035-001	With the climate crisis upon us, it is time to address how electricity is	Thank you for your comment
12033-001	produced in the United States. We can no longer afford the carbon emissions	Thank you for your comment.
	from coal oil and gas. We must develop renewable energy sources	
	including offshore wind. The hurning of fossil fuels harms species in the	
	ocean as waters warm and acidify This is hannening right now. The Bureau	
	of Ocean Energy Management must promptly approve the Vineyard Wind	
	project We have less than 10 years to decarbonize our electric grid	
12035-002	Federal state and local regulators along with experts in the field have done.	Thank you for your comment
12033 002	extensive environmental reviews to ensure that the ocean environment will	Thank you for your comment.
	be protected as the Vinevard Wind project is developed.	
12041-001	It is unfortunate that what should be an all-encompassing study (such as this	The FEIS incorporates, where appropriate, the Final MARIPARS.
	SEIS) has partially based its findings on the MARIPARS report, which used	
	incomplete information, contained inaccurate calculations according to its	
	own guidance standards, and used arbitrary justifications by the U.S. Coast	
	Guard in coming to its conclusions. Several factual and legal objections were	
	raised in that process by the FAB, RODA, and others, which were never	
	responded to or addressed.	
12041-002	The Draft SEIS should not rely on the MARIPARS report's findings, given	The USCG is a cooperating agency to the FEIS that is the leading agency on
	the inadequacies of that report and other reports relied upon for its findings,	navigational matters; and, therefore, BOEM relies on - and does not question
	and that the Draft SEIS must propose alternatives based on corrected	- the USCG's expertise and analyses for purposes of informing the
	information and calculations. The FAB strongly urges BOEM to account for	navigational impacts in the EIS. The FEIS has been updated, in appropriate
	Dr. Sproul's expert opinion on the issues present in the MARIPARS report	sections, to reflect the Final MARIPARS results. Dr. Sproul's studies were
	and correct these issues as they present in the SEIS through the development	provided to USCG as comments on their Draft MARIPARS. USCG
	of new alternatives. If not, BOEM is choosing to act arbitrarily and	considered those comments in formulating the Final MARIPARS, which did
	capriciously in releasing clearly biased findings in the SEIS.	not adopt Dr. Sproul's recommended transit lane widths.
12042-001	• Anglers are already feeling the impacts of climate change as waters warm,	Thank you for your comment.
	sea levels rise, species migrate northward, and anglers experience more	
	intense storms – responsibly developed offshore wind power is a key source	
120.42,002	of clean energy that will reduce pollution driving climate change.	
12042-002	• In addition, the offshore wind turbine structures are likely to become fishing	Section 3.4 of the SEIS discussed the reef effect on finitish, and Sections 3.10
	hot-spots due to the artificial reef effect, just as they have at the Block Island	and 3.11 of the SEIS discussed that recreational fishing may improve near
	wind Farm.	olishore wind energy structures. Therefore, no change to the FEIS is
12042 002	In general, we believe that representional fighting immedia should be wild not	warranted.
12042-003	from commercial in the SEIS. While there are many eventeering income the	Section 5.10 of the SEIS discusses impacts on recreational fishing and
	impacts are not likely to be at the same level. For instance, gear	recreational fishing specifically gear loss. Within Section 2.11, the impacts
	entanglement loss and damage is negligibly impactful to a for hire	on for-hire recreational fishing are distinguished from impacts on commercial
Index	Comment Text	Response
-----------	--	---
Number		
	recreational vessel, but seem conflated at multiple points in the SEIS. Given overall minimal, temporary impacts and likely benefits from the reef effect, recreational vessels will see little to no detrimental effects and some positive.	fisheries when there are expected differences, such as maneuverability within the WDA or increased opportunities from a greater abundance of structure- oriented species being present near the structures. Additionally, some of the impact ratings for the IPFs and sub-IPFs differ between commercial fisheries and for-hire recreational fishing (e.g. space use conflicts). Table 3.10-1 of the FEIS has been updated to reflect a minor impact on the for-hire fisheries from gear loss.
12042-004	For-hire rec vessels should be compensated for lost revenue during construction, based on verifiable data that demonstrates fishing activity in the project area. If this data is difficult to obtain or verify, compensation could mirror what was done for the Block Island Wind Farm where industry groups were given financial resources to increase marketing of charter fishing.	Section 3.10.2 and Appendix D of the FEIS has been updated to discuss the voluntary revenue compensation funds established by Vineyard Wind and states that impacts or losses for which claims may be filed include lost revenues related to the Project's interference with fishing activities (if any). The different voluntary revenue compensation funds refer to fishery participants, vessels, and fishing interests, including vessel owners and operators, vessel crews, shoreside processors, vessel supplier and support services, and other entities that can demonstrate losses directly related to the Vineyard Wind 1 Project.
12042-005	The SEIS should clarify that any impacts to HMS for-hire vessels is likely to be constrained to construction. Because of the reef effect referred to into the SEIS, it is highly likely that migrating HMS will be attracted to the turbine foundations. This was witnessed first-hand with mahi-mahi present at BIWF when the turbines were placed, and BIWF more resembles near-shore fish species and habitat.	The SEIS and FEIS discuss likely beneficial and adverse impacts on for-hire recreational fisheries. As discussed in the SEIS and FEIS, adverse impacts could occur during operations and maintenance from the presence of structures, including space use conflicts and navigation hazards. Section 3.10 of the FEIS was updated to clarify that HMS would be attracted to wind turbine foundations.
12042-006	• BOEM should consider guaranteed recreational fishing access outside of construction and maintenance as a permit condition. Many developers have assured anglers that this will be the case, but a permit condition will ensure its guaranteed. This guarantee is essential to ensuring recreational anglers can benefit from the reef effect of turbine structures.	Section 3.10.2 of the FEIS has been updated to state that while temporary restricted access areas (safety zones) may be set up around active construction areas where applicable, BOEM does not have the authority to restrict vessel access to the WDA during operations. In addition, the USCG has stated that they do not intend to restrict access to the WDA during operations. The USCG's authority to establish safety zones only extends to the boundary of the territorial waters of the United States, which is 12 nautical miles from shore and outside the WDA. BOEM's lack of authority to restrict vessel traffic would apply equally to commercial and recreational vessels.
12043-001	Like many, we were hopeful when BOEM decided to undertake an updated cumulative impacts assessment. This analysis is critical in setting the stage for a major new industry, and has the potential to lock in good science and a solid foundation for this development.	Thank you for your comment.
12043-002	we are disappointed by the analysis of cumulative impacts to birds. At points in this section, the authors draw debatable conclusions without providing substantive supporting information or methodology. Some	While the overall response of marine birds to offshore wind development on the Atlantic OCS is unclear at this time, the analyses contained in the DEIS and SEIS utilized the best available science to determine potential impacts.

Index	Comment Text	Response
Number		
Number	critically important issues are neglected altogether. This consistently minimizes the impacts of offshore wind on birds, and we are concerned that this has resulted in a substantial underestimate of the likely adverse effects across all scenarios (Table ES-2).	Where appropriate, the FEIS has been updated in response to new information and comments received during public engagement. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to further clarify bird use of the OCS and inform future developments on the OCS. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and
12043-003	With regard to Vineyard Wind, we are concerned that there is no plan to monitor bird collisions, nor is there a plan to provide compensatory mitigation for these impacts. This leaves us without any ability to understand these potentially significant effects, which is particularly troubling given that this project would set the precedent for the massive industry build-out and cumulative bird impacts that are to follow.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
12043-004	For these reasons, we do not support Vineyard Wind or any other proposed offshore wind project that neglects to include the fundamental and vital elements of bird collision monitoring and associated compensatory mitigation. We ask that the developer and agencies commit to providing these necessary measures, and develop plans for implementation immediately. We urge substantial revisions and improvements to this analysis. We support, and are excited by the promise of offshore wind	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction

Index	Comment Text	Response
Number	energy. But this development must come with a full understanding of the	monitoring will be developed in coordination with applicable stakeholders.
	likely impacts to wildlife, and a plan to mitigate these impacts.	Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
12043-005	Among our key concerns, the SEIS provides an unacceptably weak and inadequate assessment of the number of birds likely to be killed or injured in collisions with offshore wind turbines. This analysis provides a review of collisions at onshore turbines, which is a dubious comparison to begin with, and fails to review more relevant (albeit limited) literature about bird collisions in the offshore realm.	As pointed out by the commenter, there is very little existing literature documenting actual collision related mortality with operating offshore wind facilities. As such, the analysis in the DEIS and SEIS relied upon the extensive body of literature on collision mortality with land-based WTGs. As pointed out by the commenter and discussed in the SEIS, there are several reasons why there are potential issues with using land based WTG collision mortality estimates in an assessment of potential offshore wind collision mortality, but it represents the best available science to quantify the potential for collision mortality associated with the Vineyard Wind 1 Project and the full build out of offshore wind development on the Atlantic OCS. Additionally, the SEIS discussed two studies of offshore wind facilities in Europe (Desholm 2006 and Skov et al. 2018) that used a variety of monitoring methods to monitor operating offshore WTGs for bird collision mortality. In both cases very little bird mortality was documented. The FEIS was updated to explicitly state these conclusions. Further, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post- construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be co
12043-006	The SFIS cites a single land-based study among several that have been	The FEIS provides an undated discussion of land based WTG mortality
120-3-000	conducted and does not consider the fact that the study is now eight years	studies and includes an additional reference (Frickson et al. 2014) that
	old, and thus total the total mortality estimate is outdated given the ranid	reported similar findings to Loss et al. (2013) These studies represent the
	build-out of the onshore wind energy industry.	best available science for estimating the potential for collision mortality of

Index	Comment Text	Response
Number		
		North American bird species. To date, no studies have addressed the cumulative mortality of North American bird species at operating onshore wind facilities. The total number of operating WTGs has increased since publication of Loss et al. (2013) and Erickson et al. (2014), and thereby the overall total mortality of birds is expected to be higher. Although there are more turbines since the Loss et al study, the number of birds killed per turbine per year is expected to remain relatively constant given that the variations in mortality estimates relating to facility-level and regional differences were accounted for in Loss et al. (2013) and new onshore wind facilities would be expected to follow similar trends.
12043-007	It goes on to suggest that the bird species that are killed by onshore turbines are unlikely to encounter offshore turbines, which in at least one important instance is entirely incorrect	Section A.8.3.1 of the FEIS provides an updated discussion of the potential for avian species to encounter operating offshore wind turbines. As discussed in the FEIS, 75 percent of the documented onshore mortality is composed of groups (small passerines, diurnal raptors, doves, pigeons, and upland game birds) that would not be expected to frequently encounter offshore operating WTGs associated with offshore wind development in large numbers. Second, factors such as landscape features and weather patterns that influence collision risk are different on the OCS compared to onshore wind facilities. Within the Atlantic Flyway, much of the bird activity is concentrated along the coastline concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014).
12043-008	Table A-9 is intended to predict the number of birds that will be killed by currently anticipated offshore wind facilities on the Atlantic each year. The report acknowledges that the list of species is incomplete – species that we know traverse wind energy areas are not considered, including species of conservation concern. It is unclear whether this analysis takes into account that bird species differ in their vulnerability to collisions with turbines due to their flight patterns and behavior.	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling.

Index	Comment Text	Response
12043-009	The data is heavily skewed – for example, it is estimated that between $0 - 1,346$ Red-throated Loons will be killed each year, but the median is 6 birds. This provides a false sense of the breadth and scale of likely impacts, inappropriately minimizing the perception of risk. Perhaps some of this is based on sound data and analysis, but it is difficult to assess, as the description of the methods is limited to a couple of sentences and footnotes, and no details are provided as to what data were used. This does not provide the clear, transparent, robust analysis that we need to adequately assess the risk of bird collisions with offshore wind turbines.	The commenter's point about the distribution of fatality estimates being skewed is correct and obvious from the table in the desist. The commenter's accusation of "minimizing" risk is misleading. To advert misinterpretation of the results, BOEM has expanded this section in the FEIS to include a full description of methods and include the data that was used in the collision modeling.
12043-010	Bird collisions at offshore wind facilities has been minimally studied despite the abundant opportunity presented by the European offshore wind industry. Skov et al. (2018) is considered one of the most, if not the most, robust of these, and this consisted of cameras on two turbines in the interior of a single facility. They found that of 15 birds that were documented flying perpendicularly to the rotor blades within the rotor-swept zone, 6 (40%) collided with the turbines.	Generally, bird collisions with wind turbines is a relatively rare event, something that is rarely witnessed at land based turbines. Detecting collisions offshore is extremely challenging and has been documented in a few studies, including Skov et al (2018). While Skov et al. (2018) did document a total of 6 collisions when birds were traveling perpendicular to the operating WTGs, a majority (293 of 299) of birds within the rotor swept zone (+ a 10 meter buffer) were observed crossing the rotor swept zone with adjustments in their flight path, often parallel to spinning rotor blades (Skov et al. 2018).
12043-011	In considering the results of this [Slov et al. 2018] and other European studies of offshore bird-turbine collisions, are the locations comparable to the locations being considered in the U.S. in terms of the density of birds? Do the species documented there behave similarly to the birds at the U.S. locations? Are there conditions at the U.S. locations that might lead to a greater number or proportion of strikes? The SEIS considers none of these factors, instead concluding that annual mortality is expected to be low.	Unlike the planned development on the US Atlantic OCS, the majority of the offshore wind development in Europe is relatively close to shore where bird densities tend to be greater, in part due to being closer to some nesting colonies. In addition, the European wind farms that are further out usually between large land masses (e.g. North Sea), thus creating more opportunities for birds to move from the shore of one land mass to another. The Skov et al study was conducted at the Thanet Wind Farm located relatively close to shore where, as an example, the density of some of the same species of gulls are 3 to 10 times greater than at location of the proposed project. The FEIS has been updated to include this information.
12043-012	Further, we are concerned that analysis of collision risk does not appear to take the effect of inclement weather conditions into account. Fog, rain, and high winds can not only obscure vision, but make flight more erratic. Some seabird species increase flight heights in high winds, increasing the likelihood of flying in the rotor swept zone (Ainley et al. 2015).	Section A.8.3.2 of the FEIS includes an updated discussion of collision risk and inclement weather events. As described in FEIS, while Ainley et al. (2015) suggest that inclement weather causes changes to flight altitudes and could result in mass mortality of migrating birds, studies of European wind facilities do not show this to be the case. Oversea migratory movements of birds have been shown to nearly, or completely, cease during periods of inclement weather (Fox et al. 2006; Pettersson 2005, Hüppop et al. 2006). The collision risk modeling presented in the FEIS relied upon flight height data from Johnson et al. (2014) that was derived from thousands of observations, likely under varying weather and wind speed conditions, and thereby capturing many of the conditions identified by the commenter.

Index	Comment Text	Response
Number		
12043-013	We recommend a revised estimation of the number of birds that will be killed each year by offshore wind turbines by the project and cumulatively (Table A-9). This estimate must provide clearly articulated methods and reference to all supporting data, and include all species potentially at risk.	Section A.8.3.1 of the FEIS includes an updated discussion of collision risk modeling. As discussed in the SEIS, a total of 75 birds across 12 modeled species are expected be killed by the anticipated 2,021 operating WTGs associated with the anticipated development on the Atlantic OCS annually, however, annual mortality may be as high as 3,481 birds across these 12 species due to uncertainties in data inputs. The proposed Project represents up to approximately 5% of the WTGs (100 of 2,021 WTGs). While not all species potentially present within the offshore wind lease areas were modeled, the modeling results of those species with sufficiently robust occurrence and behavioral characteristics datasets represent a variety of species with representative behaviors and flight characteristics. These estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling
12043-014	Without these [post-construction monitoring] data, it is impossible to know if actual collision impacts are occurring at a sustainable level relative to species population sizes. Of particular concern, this makes it impossible to know whether these facilities are having an impact on Endangered Species Act (ESA)-listed species and other species of concern (see "ESA-Listed Bird Species Are Not Considered" section below). This amounts to providing a "blank check" for bird mortality based on weak analysis, and results in a high degree of uncertainty. This is unacceptable, and sets the stage for unnecessary and avoidable conflict.	A detailed analysis of impacts to ESA listed species is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. Vineyard Wind has drafted a framework for their Bird Monitoring Plan which is included in Appendix F of the FEIS. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
12043-015	We note that bird collision monitoring is standard practice for onshore wind	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and
	facilities. There is no reason that offshore wind development should be held	monitoring measures that would be implemented to avoid, minimize, and
	to a different standard. To the contrary, a cautionary approach should be	mitigate adverse impacts on birds. Vineyard Wind's Bird Monitoring Plan,
	taken given that this is a new industry in the U.S., for which we yet have little	which is a framework being developed in consultation with BOEM, is
	understanding of the likely impacts. These data would also inform future	included in Appendix F of the FEIS. These measures include, but are not

Index	Comment Text	Response
Number		
	wind energy facility planning, including siting and impact minimization measures.	limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. Surveys for bird carcasses are commonly used to monitor collisions at land-based wind facilities. Obviously, these types of surveys are not practical in the offshore environment. However, developers are required to report bird carcasses found on structures (see Append D). In addition, developers are required to finalize a bird and bat post-construction monitoring plan prior to the commencement of operations that includes measures to monitor bird exposure to the facility to better understand impacts. Data collected from these activities will be useful in informing current and future offshore wind development projects. Vineyard Wind has drafted a framework for their Bird Monitoring Plan which is included in Appendix F of the FEIS
12043-016	We recognize that there is not yet any fully validated, commercially available technology to monitor collisions at offshore wind facilities. However, there are systems that have been used to varying degrees of effect, and there are a number of systems that are being further evaluated.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. As additional monitoring methods and technologies become available, BOEM could require their use in subsequent approval processes for fiture offshore development.
12043-017	We recommend that Vineyard Wind, and all other offshore wind facilities being planned in the U.S., utilize the best available technology to monitor bird collisions once facilities are constructed. Until a system or systems are	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not

Index	Comment Text	Response
Number		
	fully validated and commercially available, we recommend that these facilities be used as study sites for testing this technology, thus moving this important work forward and gathering data about collisions in U.S. waters.	limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. As additional monitoring methods become available, BOEM could require their use in subsequent approval processes for future offshore development.
12043-018	We further recommend that all facilities be required to make hird collision	BOEM intends to make the results of the post construction monitoring
12043-018	data publicly available, providing transparency and an opportunity for informed discussion about minimizing impacts as this industry grows	available to the public, either by posting monitoring reports on Project-
12043-019	Finally we recommend that all facilities be required to commit to upgrading	Section A 8 3.2 and Appendix D of the FEIS include undated mitigation and
12042 020	to improved collision monitoring technology when it becomes available.	monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
12043-020	Many conclusions are drawn without providing supporting evidence. In some	As depicted in Figures A.8.3-1 and A.8.3-2 in the SEIS, total avian
	of these instances, the conclusions drawn are questionable. For example, the	abundance for species with high collision sensitivity and displacement
	SEIS suggests that a low at-sea range overlap with wind energy development	sensitivity are low in the proposed Vineyard Wind 1 Project area, as well as
	areas for a given species (i.e., 1 able E-10) indicates a low mortality rate.	within all of the offshore wind lease areas on the Atlantic OCS. As such,
	I here are several steps that are missing in this logic, including understanding	collision and displacement impacts are expected to be low. Additionally, an
	of demographic effects of the impact, subfleties in species range	updated discussion of collision risk is provided in Section A.8.3.1 of the
	status. We suggest that a more appropriate conclusion would be that	operating WTGs. Given the very low expected mortality, demographic

Index	Comment Text	Response
Number	insufficient information exists to draw such a conclusion, and that further study is needed.	effects would not be expected. Further, as cited in the SEIS, many of the species that exhibited high avoidance rates in the Skov et al. (2018) study are same species that are expected to occur on the OCS and modeled as part of the analysis in the SEIS. Therefore, no change to the FEIS is warranted.
12043-021	To provide another example, we disagree with the blanket conclusion that a permanent beneficial impact may result from placing structures in marine waters because the prey base for some bird species may increase. As the SEIS acknowledges, only some bird species may realize these benefits. No consideration is given to which species are affected positively and negatively, and which among these are more at-risk from a population perspective. The SEIS correctly acknowledges that for those species that might benefit from an increase in prey availability, that this would be likely to serve as an attractant to turbines, putting vulnerable species at risk of fatal collisions with turbines, potentially resulting in a significant net negative impact. For the above reasons, without further research it is unclear whether the presence of structures in marine waters are a net positive or negative for birds, and there is good reason to hypothesize that the net result is negative.	While some risk of attraction to structures associated with offshore wind development exists, the net result has neither been empirically measured nor calculated on the Atlantic OCS. Certain species such as cormorants and gulls have been shown use structures for roosting, but would not be expected to be at higher collision risk due to the fact that typical flight altitudes are well below the Rotor Swept Zone. Conversely, while gulls attracted to structures may fly in the RSZ, they have been shown to have a very high avoidance rate (Skov et al. 2018) and would not be expected to have at higher risk of collisions. As discussed in the updated Appendix D, Vineyard Wind would provide an annual report of any dead or injured birds discovered on Project vessels or structures, containing the following information: species, photos to confirm species, location, date, and other relevant information. This information will be used to further clarify the risk associated with attraction to offshore structures and could lead to additional monitoring and/or mitigation measures that would be required for future offshore development.
12043-022	We see similarly weak analyses and debatable conclusions drawn in the discussion about displacement, habitat loss or fragmentation effects and other elements of the SEIS analysis.	Section 8.3 of the FEIS uses the best available information, and thus complies with the procedural requirements of NEPA to predict potential impacts on birds from the Proposed Action. The comment is too broad to understand the concerns the commenter has with those portions of the document.
12043-023	We recommend a full review and revision of the section focused on birds, with more robust analysis and subsequently reassessed impact statements.	Section 8.3 of the FEIS uses the best available information, and thus complies with the procedural requirements of NEPA to predict potential impacts on birds from the Proposed Action. The comment is too broad to understand the concerns the commenter has with those portions of the document.
12043-024	More specifically, we recommend that conclusions regarding impacts of the Preferred Action and Alternatives (Table ES-2, pg. ES-5) be revised to indicate "minor to moderate" instead of "negligible to minor and potentially minor beneficial," given the minimal science and associated high uncertainty on which this conclusion is based. For the same reason, we recommend that conclusions for cumulative impacts be revised to indicate "moderate to major."	While there is some underlying uncertainty around the around the response of bird species to the introduction of operating offshore WTGs on the Atlantic OCS, BOEM believes that the impact rating determinations, as defined in Table 3-1 of the SEIS, are appropriate given the low expected use of the WDA, as discussed in the updated Section A.8.3 of the FEIS. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the

Index	Comment Text	Response
Number		
		exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. Given the implementation of the mitigation and monitoring measures to the FEIS is warranted.
12043-025	Further, we recommend additional scientific studies to determine the level of impact of the project to better inform future cumulative impacts of additional offshore wind projects.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
12043-026	The SEIS neglects to evaluate the impacts of offshore wind energy development on land birds within the Atlantic Flyway. Large numbers of such birds make nocturnal migratory flights in fall from the northeastern U.S. to wintering grounds in the Caribbean and South America. For example, DeLuca et al. (2015) found that the Blackpoll Warbler, a songbird weighing less than half an ounce, makes a nonstop fall migratory flight from New England / Southeast Canada as far as northern South America. La Sorte and Fink (2015) found that another nine species follow a similar fall migration pattern, including species of conservation concern such as Bicknell's Thrush.	Section A.8.3.1 of the FEIS includes an updated discussion of collision risk to nocturnal passerine migrants. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants (including the blackpoll warbler), while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014).
12043-027	As was found by the U.S. Fish and Wildlife Service's Avian Radar Project in the Great Lakes, nocturnal migrant birds are likely to fly within the rotor-	Section A.8.3.1 of the FEIS includes an updated discussion of collision risk to nocturnal passerine migrants. As shown in Robinson Willmott et al.

Index	Comment Text	Response
Number	swept zone of offshore wind turbines off the Atlantic coast, creating risk of collisions. What's more, these birds migrate in flocks, so any such instance may result in relatively large numbers of birds being killed during a single event.	(2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014).
12043-028	There are many unknowns on this topic [nocturnal migrants]. For example, it is unknown whether nocturnal migrants' flight behavior off the Atlantic coast make them more or less likely to come in contact with turbines, or if weather or other conditions may make this collision risk more likely. Regardless, there is every likelihood that these birds may fly within the rotor-swept zone of offshore wind turbines, creating risk of collisions with an unknown degree of impact.	Section A.8.3.1 of the FEIS includes an updated discussion of collision risk to nocturnal passerine migrants. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014).
12043-029	Robust studies should be initiated immediately to evaluate the risk of nocturnal migratory land bird collisions with offshore wind facilities in the Atlantic. These studies must be conducted at a scale and with a degree of precision to provide assurance that the data are sufficient to inform assessment of risk.	Section A.8.3.1 of the FEIS includes an updated discussion of collision risk to nocturnal passerine migrants. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014). Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, including nocturnal passerine migrants, and other measures. Post- construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
12043-030	the SEIS does not address likely impacts of the currently anticipated buildout of the	A detailed analysis of impacts to ESA-listed species (including roseate tern, piping plover, and Rufa red knot) is provided in the revised BA that was
	offshore wind industry to bird species listed under the Endangered Species	submitted to the USFWS, which can be found at the following link:
	Act. This includes the endangered Roseate Tern, the threatened Rufa Red	https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. In all
	Knot, and threatened Piping Plover, all of which are known to traverse wind	cases BOEM determined that the Vineyard Wind I Project "may affect, but is not likely to adversely affect" any of the ESA-listed species that may occur in

Index	Comment Text	Response
Number		
	energy areas. This would seem to be the most important element of such an analysis, yet it is neglected.	the Project Area. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds, including ESA-listed species. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post- construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. Project-specific ESA consultations will be required for all future offshore wind development. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Project-specific ESA consultations will be required for all future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making
12043-031	Individual offshore wind facility plans evaluate their likely impacts to ESA- listed species. This includes the demonstration project for Dominion Wind in Virginia, consisting of two turbines located far from the U.S. breeding areas for Roseate Terns. However, the environmental assessment for this project acknowledges that there is a minimal collision risk for Roseate Terns. How is it that when the full complement of projects off the Atlantic coast is considered, that it wasn't deemed to warrant discussion, let alone a conclusion that significant impacts are likely?	A detailed analysis of impacts to ESA-listed species (including roseate tern, piping plover, and Rufa red knot) is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. In all cases BOEM determined that the Vineyard Wind 1 Project "may affect, but is not likely to adversely affect" any of the ESA-listed species that may occur in the Project Area. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional

Index	Comment Text	Response
Number		
		mitigation measures could be considered by decision makers and
		incorporated into the Record of Decision. These measures would apply to
		only the Vineyard Wind 1 Project, but not other future offshore wind
		development. Project-specific ESA consultations will be required for all
		future offshore wind development. Monitoring and mitigation requirements
		for other future offshore wind development may be driven by lessons learned
		from the Vineyard Wind 1 Project, but will be part of a separate decision
		making process. Further, BOEM is currently working with USFWS to
		develop a programmatic consultation regarding impacts to ESA listed species
		arising from anticipated offshore wind development on the Atlantic OCS.
12043-032	A robust analysis of likely impacts of the currently anticipated buildout of the	BOEM is currently working with USFWS to develop a programmatic
	offshore wind energy industry on ESA-listed bird species should be provided.	consultation regarding impacts to ESA listed species arising from anticipated
		offshore wind development on the Atlantic OCS. A detailed analysis of
		impacts to ESA-listed species (including roseate tern, piping plover, and Rufa
		red knot) is provided in the revised BA that was submitted to the USFWS,
		which can be found at the following link: https://www.boem.gov/Vineyard-
		Wind-Consultation-Documents/. In all cases BOEM determined that the
		Vineyard Wind 1 Project "may affect, but is not likely to adversely affect"
		any of the ESA-listed species that may occur in the Project Area. Project-
		specific ESA consultations will be required for all future offshore wind
		development. These measures would apply to only the Vineyard Wind 1
		Project, but not other future offshore wind development. Project-specific
		ESA consultations will be required for all future offshore wind development.
		Monitoring and mitigation requirements for other future offshore wind
		development may be driven by lessons learned from the Vineyard Wind 1
		Project, but will be part of a separate decision making process.
12043-033	Compensatory mitigation is needed to offset adverse impacts of the Vineyard	If compensatory mitigation measures are proposed by Federal and State
	Wind project. Given the current technology, there are no viable options for	resource agencies with expertise on the topic, these will be considered by
	effectively minimizing the impacts of the project to the extent needed to	decision makers and may be incorporated into the Record of Decision.
	protect birds from harmful and long-term impacts.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and
		monitoring measures that would be implemented to avoid, minimize, and
		mitigate adverse impacts on birds. These measures include, but are not
		limited to, installation of bird deterrent devices, use of ADLS, installation of
		digital VHF receivers and acoustic monitoring devices to estimate the
		exposure of ESA-listed species and other migratory birds, preparation of a
		post-construction monitoring plan, and other measures. Post-construction
		monitoring will be developed in coordination with applicable stakeholders.
		Additionally, annual monitoring reports will be used to assess the need for
1		reasonable revisions to the monitoring plan. Additional mitigation and

Index Number	Comment Text	Response
		monitoring measures may arise from consultations and coordination with Federal and State resource agencies.
12043-034	Furthermore, migratory birds pose significant conservation challenges, as many originate from other regions and actions to increase their populations require significant investment of time and resources to restore equivalent habitat. The breadth of species potentially affected, and the migratory nature of these species will require such environmental compensatory mitigation.	As discussed in the FEIS, initial development of WDAs on the Atlantic OCS was selected such that impacts to resources, including migratory birds, were minimized to the greatest extent practicable. Further, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
12043-035	Further, the SEIS does not consider impacts to many of the species occurring in the area that are likely to be affected, resulting in what is likely a gross underestimate of the potential losses of birds. The number of birds affected is uncertain due to the lack of available technology to accurately measure impacts (e.g., collisions) on a species level or the fate of those birds after a collision event (e.g., injury, morbidity, or mortality).	Section A.8.3.1 of the FEIS provides an updated discussion of the potential for collision mortality. The modeled estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.

Index Number	Comment Text	Response
12043-036	We further note that in this interim period where incidental take of bird species protected by the Migratory Bird Treaty Act (MBTA) is not being considered illegal, that the agencies still have conservation obligations under frameworks apart from ESA and MBTA. Based on studies of ESA-listed species alone (discussed above), it seems likely that birds protected by federal laws will be killed in collisions with turbines under the currently anticipated industry build-out scenario. As such, compensatory mitigation should be provided for bird mortality resulting from this development, and particularly for species of conservation concern.	If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
12043-037	Directed mitigation can result in meaningful beneficial outcomes. For example, the Montrose Settlements Restoration Program, a \$63M mitigation package compensated for migratory seabirds in Mexico, efforts in part which led to the recovery and de-listing of Pacific Brown Pelican.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision
12043-038	Mitigation more effectively compensates for impacts when conducted on a project-, species- and population-specific basis. This model is encouraged for offshore wind energy development impacts.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.

Index	Comment Text	Response
Number		
12043-039	However, if a project-by-project approach proves difficult to operationalize, a compensatory mitigation fund could be developed and administered by trustees of federal agencies. Following the model of other forms of development, this would most appropriately be funded by the developers whose actions are resulting in the impacts, with funding amounts based on likely or actual impacts	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
12043-040	Quantifying compensatory mitigation for birds should initially be based in a revised estimate of the number of birds that will be killed in collisions with turbines (i.e., Table A-9 in the SEIS), including ESA-listed species and nocturnal migrants.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
12043-041	Evaluating mitigation necessary to effectively compensate for these losses should utilize resource equivalency analysis, which accounts for the fact that birds at different life stages do not functionally equate in conservation importance (e.g., one additional hatchling does not functionally replace a breeding adult bird). This approach has been used extensively for addressing losses of birds to oil spills and contaminants in California. For example, under NEPA, the Damage Assessment and Restoration Plan / Environmental Assessment for the Luckenbach Spill called for a number of mitigation projects to compensate for the losses of migratory birds in distant countries where those species originate, such as Mexico, Canada and New Zealand, in	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and

Index	Comment Text	Response
Number		-
	the amount of \$21M (CDFW 2006). Quantities and supporting analyses should be re-evaluated as collision monitoring data become available, and additional mitigation provided as necessary.	monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
12043-042	Seabirds are wide-ranging, long lived, and have delayed maturity and low fecundity; these unique lifehistory traits require substantial and long-term commitment to reach the offset needed.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
12043-043	Given that compensatory mitigation is time-consuming from concept to success, we urge the developers and agencies to commit to this, and initiate action as soon as possible. Effective compensatory mitigation should be considered for breeding, winter and non-breeding roost sites. For example, establishment of protected areas, predator control, and habitat restoration are needed for key species such as Roseate Terns, Red Knots, and Piping Plovers.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
12044-001	The approval of the Vineyard Wind project is essential in the United States' fight against climate change. Vineyard Wind not only represents a large development opportunity, but a new energy future for the entirety of the eastern coast of the US. The Vineyard Wind project will curb the tide of the worst effects of climate change across the region, while also benefiting the	Thank you for your comment.

Index Number	Comment Text	Response
	local fishing industry. While there may be short term negative impacts from this development, the long term benefits of providing clean power to millions of Massachusetts homes far outweighs those drawbacks.	
12044-002	The largest concern of the Environmental Impact Statement thus far has been the potential interruption to recreational and commercial fishing operations. However, this report has also stated that most of the environmental effects will be minimal to negligible, and some early research into the Block Island Offshore Wind Installation has shown that the underwater structure can have a net positive impact on local fish populations. This positive impact on fish populations from the Vineyard Wind project will create long term benefits for the Northeastern fishing industry.	Section 3.4, 3.10, and 3.11 of the SEIS discusses likely adverse and beneficial impacts on finfish, recreational fishing, and for-hire recreational fishing, including a potential increase in structure-oriented species and an increased opportunity for recreational and for-hire recreational fishing. Therefore, no changes to the FEIS are warranted.
12044-003	Epifauna have been found to live on these structures without damaging the structural integrity and benefit local fish feeding grounds. Studies across wind farms in Europe have shown that these areas actually have larger quantities of fish compared with the fishing waters outside of these wind farms. Offshore wind farms may prove a vital tool in aiding and possibly restoring fish populations along the East Coast for years to come. The long term preservation of fisheries along the East Coast through wind development will ensure the long term survival of many species and the fishing industry as a whole.	The Section 3.3, 3.9, and 3.10 of the FEIS discuss how the creation of hard- bottom habitat (from scour and cable protection) and the foundations would benefit structure-oriented species and pelagics. Section 3.10 of the FEIS has been updated to include a study from the U.K. stating that lobsters do not leave the offshore wind facilities and that catch rates are not different adjacent to these areas either. Therefore, no changes to the FEIS are warranted.
12044-004	As someone who has lived the majority of their life within ten miles of the ocean, the threat of rising sea levels from global warming is very real and very costly. The Vineyard Wind project benefits the region as a whole, and helps reduce local air pollution from fossil fuel burning power plants, which is a necessary step toward long term environmental stability.	Thank you for your comment.
12044-005	There are increasingly more and more technological options to reduce the impact to existing ocean wildlife populations by both monitoring local species locations in real time, particularly the North Atlantic Right Whale, and also reducing underwater noise impact during the installation process. The use of new technologies along with promoting these new energy projects can help America stay at the forefront of the environmental movement.	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met.
12044-006	While there may be short term interruptions to the local fishing industry as noted in the Environmental Impact Statement, ignoring the long term benefits of this project is shortsighted.	Section 3.4, 3.10, and 3.11 of the SEIS discusses likely adverse and beneficial impacts on finfish, recreational fishing, and for-hire recreational fishing, including a potential increase in structure-oriented species and an

Index	Comment Text	Response
Number		increased opportunity for recreational and for-hire recreational fishing. Additionally, the long term benefits of job creation and investment in marine infrastructure resulting from offshore wind development is discussed in Section 3.7.1 and 3.7.2 of the SEIS. Therefore, no changes to the FEIS are warranted.
12044-007	Now is a critical moment for Massachusetts and the United States. Within my lifetime the devastating impacts of Climate Change will be felt and they will be felt most acutely in coastal regions such as Martha's Vineyard. Having seen the devastating impacts of tidal surges during Hurricane Sandy, I know that climate change will only make these instances more frequent, deadlier, and costlier. It is the moral imperative of the federal government to ensure the long term survival of the United States against the threat of climate change. For both the benefit of the local fishing industry and the offshore wind industry, this project needs to move forward.	Thank you for your comment.
12045-001	The American maritime industry has been on the decline for decades. There are fewer opportunities as strong as the Vineyard Wind Project to bring back American jobs. The US maritime industry already employs over six-hundred thousand Americans, and the offshore wind industry has the potential to increase that number by 15%, providing good, paying jobs to blue collar workers in these hard hit coastal communities. But this potential for American jobs can only be reached with the approval of the Vineyard Wind project by the American Bureau of Ocean Energy Management. The fishing industry can work in tandem with this new wind industry to revitalize American ship building, port infrastructure, and east coast fisheries. With these two industries working together we can build a stronger and more energy independent America to leave for our children.	Section 3.6.2 of the FEIS has been updated to conclude that a moderate beneficial impact on employment and economic activity would result from offshore wind development in the RI and MA Lease Areas. It also notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind. Section 3.6.2 of the FEIS notes the beneficial impact of providing additional diversity for maritime industries, and has been updated to explain that the New Bedford Port Authority, Massachusetts Clean Energy Commission, and Vineyard Wind are cooperating to develop supply chain and support opportunities, with a focus on fishing businesses. The supply of marine workers provides an experienced workforce with relevant skills.
12049-002	Offshore wind is a high capacity, domestic renewable energy resource that will improve energy security and reliability. The rapid deployment of offshore wind is essential to achieve state and regional greenhouse gas emission reduction targets and limit the worst impacts of climate change.	Thank you for your comment.
12049-004	In order to realize the many benefits – both economic and environmental - of Vineyard Wind 1 and future projects, the industry needs certainty that offshore wind can and will be permitted in the US. Without this certainty, the US will lose out on significant investment and economic benefits. According to the American Wind Energy Association (AWEA), the offshore wind industry will invest roughly \$57 billion in the US by 2030 if states continue to meet their procurement goal, and will create more than 80,000 jobs in the next ten years, with economic output reaching upwards of \$25 billion per year by 2030. The business sector needs confidence that demand in the US	Thank you for your comment.

Comment Text	Response
offshore wind market is real. This means that projects in the permitting and	
levelopment timeline must be permitted in a timely and reasonable manner.	
This starts with Vinevard Wind 1. If we launch this industry now, the	
potential for additional jobs multiplies exponentially, with the potential for	
undreds of thousands of jobs in different parts of the country.	
To the Bureau of Ocean Energy Management: I recognize and appreciate	Section 2.5 of the FEIS has been added which includes the agency-preferred
your role in understanding and balancing the varying needs of the offshore	alternative.
vind industry, commercial fishing, maritime navigation, and other uses. Late	
ast year, after hearing from many stakeholders, the developers of the New	
England Wind Energy Areas (NE WEA) collaborated to propose a uniform, 1	
a 1 nautical miles spacing between turbines, a layout that was recently	
endorsed by the United States Coast Guard (USCG). Despite this fact, the	
ishing industry has proposed additional transit lanes of at least 4 NMs	
reflected in Alternative F of the SDEIS), a move that would severely	
constrain clean energy production and not meaningfully improve navigation	
or safety. Alternative "F" slashes the generation capacity of the project and	
outs the entire region at risk of not meeting energy demand even as many of	
New England's fossil fuel and nuclear power plants are retiring. For these	
easons, I oppose the additional transit lanes outlined in Alternate F.	
This project is the culmination of more than ten years of exhaustive study and	Thank you for your comment.
analysis, and extensive public consultation, to determine where offshore wind	
could be built with the least possible impact on existing industries and the	
environment. To grow a stable and prosperous offshore wind industry and	
nomegrown workforce, we need regulatory predictability and a clear pathway	
forward. Further delay of Vineyard Wind 1 is not an option.	
As a NYC resident the realities of climate change became glaringly obvious	Thank you for your comment.
after hurricane sandy destroyed my neighborhood in Staten Island. Climate	
change was no longer a far off, "could be" consequenceit showed up on our	
loorsteps and could no longer be ignoredI applaud BOEM for their due	
filigence and urge you to approve construction on the first commercial scale	
wind farm in the US. And to the fisherman, I want to remind you that climate	
change is real. There are no jobs on a dead planet.	mt 1 0
Climate change threatens not only marine animal populations but the human	Thank you for your comment.
population and our quality of life. Developing CO2 free energy sources is a	
rital part of our future survival as a species and this should be taken into	
account when weighing the impacts of offshore wind development. Climate	
change will eventually destroy many of the fish populations offshore that	
	Comment Text ffshore wind market is real. This means that projects in the permitting and evelopment timeline must be permitted in a timely and reasonable manner. his starts with Vineyard Wind 1. If we launch this industry now, the otential for additional jobs multiplies exponentially, with the potential for undreds of thousands of jobs in different parts of the country. o the Bureau of Ocean Energy Management: I recognize and appreciate our role in understanding and balancing the varying needs of the offshore <i>v</i> ind industry, commercial fishing, maritime navigation, and other uses. Late ist year, after hearing from many stakeholders, the developers of the New ingland Wind Energy Areas (NE WEA) collaborated to propose a uniform, 1 1 nautical miles spacing between turbines, a layout that was recently indorsed by the United States Coast Guard (USCG). Despite this fact, the shing industry has proposed additional transit lanes of at least 4 NMs reflected in Alternative F of the SDEIS), a move that would severely onstrain clean energy production and not meaningfully improve navigation r safety. Alternative "F" slashes the generation capacity of the project and uus the entire region at risk of not meeting energy demand even as many of leasens, I oppose the additional transit lanes outlined in Alternate F. his project is the culmination of more than ten years of exhaustive study and nalysis, and extensive public consultation, to determine where offshore wind ould be built with the least possible impact on existing industry and onegrown workforce, we need regulatory predictability and a clear pathway prward. Further delay of Vineyard Wind 1 is not an option. Is a NYC resident the realities of climate change became glaringly obvious fter hurricane sandy destroyed my neighborhood in Staten Island. Climate hange was no longer a far off, "could be" consequenceit showed up on our oorsteps and could no longer be ignoredI applaud BOEM for their due iligence and urge you to approve construction on the first commercial

Index	Comment Text	Response
Number		
12059-001	The SEIS and the NEPA cumulative impacts analysis are very comprehensive and inclusive. Given that Commercial transit lanes have already been carved out of the established WEAs, and the wind industry has proposed a uniform 1 x 1 nm turbine layout, I am against the additional 2 to 4-mile wide transit lanes within wind farms as they are unnecessary and reduce renewable energy potential.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12059-002	To best understand the changes in marine species extent and abundance from the cumulative impacts of the turbines, project specific monitoring should be required before, during and after construction.	Thank you for your comment.
12059-003	BOEM should require recreational fishing access outside of construction and maintenance as a permit condition to guarantee that recreational anglers can benefit from the reef effect of turbine structures.	Section 3.10.2 of the FEIS has been updated to state that while temporary restricted access areas (safety zones) may be set up around active construction areas where applicable, BOEM does not have the authority to restrict vessel access to the WDA during operations. In addition, the USCG has stated that they do not intend to restrict access to the WDA during operations. The USCG's authority to establish safety zones only extends to the boundary of the territorial waters of the United States, which is 12 nautical miles from shore and outside the WDA. BOEM's lack of authority to restrict vessel traffic would apply equally to commercial and recreational vessels.
12063-001	Reducing the size of the wind farm is purely a move to prop up and protect the oil and natural gas industry. Lets let the BOEM use science for the full size wind farm.	Thank you for your comment.
12066-001	VW 1 will save ratepayers more than \$3.7 billion in energy related cost savings over the life of the project.	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
12066-002	Vineyard Wind and the other developers of the New England WEA in late 2019 proposed to develop all future projects with a uniform 1 x 1 Nautical Mile (NM) layout throughout the lease areas. <u>While the 1 x 1 NM layout eliminates 30% of the area's potential energy production</u> , it addresses the main comments from the commercial fishing industry raised during the comment period of the Vineyard Wind 1 project. The uniform layout creates over 200 transit lanes throughout the entire wind development area. The uniform 1 x 1 NM layout, <u>without</u> any additional, extraneous transit lanes, has been assessed by the United States Coast Guard (USCG) compared to proposals <u>with</u> transit lanes in its MARIPARS (Massachusetts Rhode Island Port Access Route Study) that was released in May 2020. The USCG endorsed the 1 x 1 NM layout <u>without transit lanes</u> , finding that the standard and uniform grid pattern will create multiple navigation safety corridors.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12066-003	Adding transit lanes in addition to a uniform 1 x 1 NM turbine spacing (larger than anywhere in the world) would significantly impact the viability	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
	of all projects in the area. Vineyard Wind and other OSW developers are	
	opposed to the adoption of this alternative F. The additional spreading out of	
	wind generation due to additional transit lanes would result in substantial	
	technical challenges, delays, cost increases to consumers, and more	
	environmental impacts from offshore wind development, with marginal gains	
	and as USCG identifies, potentially greater conflict among transiting and	
	fishing vessels due to funneling.	
12066-004	Transit lanes proposed by RODA come with a real cost. If enacted, we	Section 2.5 of the FEIS has been added which includes the agency-preferred
	would: Lose 400MWs of clean, renewable, cost effective electricity	alternative.
	(equivalent of 200,000 fewer homes and businesses in MA) through the loss	
	of 33 turbine positions	
12066-005	Offshore wind power development represents a generational opportunity for	Although the Project Labor Agreement is not addressed in the FEIS, Section
	the hardworking men and women in the building trades, creating good paying	3.6.2 provides projections of estimated direct job creation by the Vineyard
	jobs with good benefits. Vineyard Wind has made outreach to organized	Wind 1 Project in Massachusetts, and primarily in southeastern
	labor a priority, and they've pledged to sign Project Labor Agreements	Massachusetts. Section 3.6.1.1 of the FEIS has been updated with projections
	(PLAs) to ensure both fair compensation and to meet the highest construction	of national growth in investment and jobs resulting from the Atlantic coast
	standards. A recent study found that the offshore wind industry will create	offshore wind industry.
	more than 80,000 jobs in the next ten years, with private investment reaching	
	upwards of \$25 billion per year by 2030.	
12066-006	Offshore wind is central to our state and our region's goals of reducing	Thank you for your comment.
	greenhouse gas emissions to limit the effects of climate change. The project	
	will generate clean, renewable, cost-competitive energy for over 400,000	
	homes and business across the state while reducing carbon emissions by	
	more than 1.6 million tons per year, the equivalent of taking 325,000 cars off	
	the road.	
	o NOx emissions cut by over 1,000 tons per year	
	o SO2 cut by 860 tons per year	
12066-007	With regard to fishing specifically, the report says that any impact would be	Thank you for your comment.
	moderate. The report also says "the impacts [of the project] are anticipated to	
	be adverse in the near-term but may become neutral over time if fishing	
	practices adapt to the presence of structures.	
12066-008	The SDEIS identifies numerous natural resources that are being impacted by	Thank you for your comment.
	climate change. Launching the offshore wind industry in the United States	
	is a significant and necessary step towards combating its adverse effects and	
	preserving natural resources for future generations. Failure to act will almost	
	ensure that we experience the worst effects of climate change, a factor that	
	will do far more to disrupt the fishing industry than the development of wind	
	lease areas that were selected primarily because they have the least amount of	
	exposure to fishing.	

Index	Comment Text	Response
Number		
12066-009	Whether it's peaker plants or simply dirty old power generators, the siting of these facilities has fallen disproportionally on both low income and communities of color. The effects – particularly around public health – have been devastatingWe cannot stand for a future where someone's health and mortality are determined simply because of where they live, their economic circumstances or their ethnicity. The policy choice is clear on public health: pursue renewables for our electricity or continue to get our power from sources that have major public health impacts, typically on disadvantaged communities.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
12066-010	The offshore wind industry will invest roughly \$70 billion over the next ten or fifteen years if states continue to meet their procurement goals. International offshore wind suppliers are establishing US-based operations in anticipation of offshore wind energy construction. If we launch this industry now, the potential for additional jobs multiplies exponentially, with the potential for hundreds of thousands of jobs in different parts of the country.	Thank you for your comment.
12066-011	Vineyard Wind has voluntarily committed to implement an Aircraft Detection Lighting System (ALDS) that will drastically limited visual impact of lights on the turbines. The SDEIS reports that ADLS would only activate aviation warning lighting on WTGs when aircraft enter a predefined airspace to occur 235 times during the year, with a total of 3 hours and 49 minutes	Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address night sky impacts. Vineyard Wind has committed to use ADLS at night to greatly reduce nighttime impacts of aviation safety lighting on the wind turbines.
12066-012	Due to the distance between the reasonably foreseeable wind development and the nearest cultural resources, in most instances exceeding 15 miles (24.1 kilometers), WTGs within individual projects would appear relatively small on the horizon, and the visibility of individual structures would be further affected by environmental and atmospheric conditions such as vegetation, clouds, fog, sea spray, haze, and wave action. Additional mitigations, such as the use of non-reflective off-white and light grey paint on offshore structures, could reduce the visibility of offshore structures and further reduce the magnitude of impacts on cultural resources.	BOEM utilized all information provided in the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. The description of impacts is located in Sections 3.8.2-3.8.5, and when considered against the criteria determining the intensity of impacts (i.e., whether they are minor, moderate, etc.), located in Section 3.8.6, the impacts are of a moderate nature.
12066-013	The process for identifying the wind lease areas began a decade ago, and the sites that were eventually identified and defined by the federal government, after years of stakeholder input, were chosen specifically because they were NOT heavily fished areas.	Thank you for your comment.
12066-014	The SDEIS points out how small of a percentage of the fishing industry the project actually impacts: "The WDA would only account for a small portion of the exposed revenue in the New England and Mid-Atlantic regions. The average annual percentage of total Mid-Atlantic and New England fishery revenue exposed by fishery within only the WDA (2021) would be less than 0.5 percent for all fisheries" This impact would only be realized if the	Thank you for your comment.

Index	Comment Text	Response
Number	industry ceases to fish in the lease areas or doesn't make up lost caught in other area.	
12066-015	The Federal review does not consider mitigation in its evaluation of impacts but does indicate that mitigation can reduce those impacts. For example, the Vineyard Wind 1 project will provide roughly \$38 million of mitigation to fishermen. The assessment of Major impacts is based on the premise that zero mitigation will be offered to fishermen. The amount of funding VW has allocated for migration far exceeds estimates for possible losses, based on the best available data.	Thank you for your comment.
12066-016	Studies and surveys that have evaluated the impacts of offshore wind facilities on tourism found that established offshore wind facilities in Europe did not result in decreased tourist numbers, tourist experience, or tourist revenue and that Block Island's WTGs provide excellent sites for fishing and shell fishing (Smythe et al. 2018).	The 2018 study and literature review referred to in this comment (Smythe et al. 2018) provided material summarized in Section 3.10.1 of the SEIS. Therefore, no change to the FEIS is warranted.
12066-017	A survey-based study found that for prospective offshore wind facilities (based on visual simulations) about 68 percent of respondents indicated that the visibility of turbines would neither improve nor worsen their experience	The comment refers to one finding from the study "Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism" (Parsons et al. 2018); other results of the study are summarized in Section 3.10.1 of the SEIS. Overall the study supports the SEIS finding that while certain seaside locations on the southern coast of Nantucket and Martha's Vineyard could experience a small reduction in recreational and tourism activity, the visible presence of WTGs from limited shore locations would be unlikely to impact shore-based recreation and tourism in the geographic analysis area as a whole. Therefore, no change to the FEIS is warranted.
12066-018	Reported trip loss (respondents who stated that they would visit a different beach without offshore wind) averaged 8 percent when wind projects were 12.5 miles offshore.	The comment refers to one finding from the study "Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism" (Parsons et al. 2018); other results of the study are summarized in Section 3.10.1 of the SEIS. Overall the study supports the SEIS finding that while certain seaside locations on the southern coast of Nantucket and Martha's Vineyard could experience a small reduction in recreational and tourism activity, the visible presence of WTGs from limited shore locations would be unlikely to impact shore-based recreation and tourism in the geographic analysis area as a whole. Therefore, no change to the FEIS is warranted.
12075-001	We should promote wind energy projects. You don't need evacuation sirens with windmills!	Thank you for your comment.
12081-001	I understand that shifting away from fossil fuels is crucial to protecting [the ocean]. Warming temperatures are causing local species to migrate north, ocean acidification is destroying ecosystems, and increasing storm severity and sea-level rise are threatening our coastal communities.	Thank you for your comment.

Index Number	Comment Text	Response
12081-002	I browsed a number of the comments and it is clear that there are many misconceptions around the industry and a disconnect between fossil fuels and the impacts on the ocean. I would strongly encourage Vinyard Wind to initiate a public engagement campaign to help increase understanding around the risks v.s. benefits of offshore wind to New Englanders. In particular, work with someone who specializes in communicating science with the public/public engagement and who has training in communicating with the public on climate change.	Thank you for your comment.
12083-001	My main concern how long will it take for the energy provided to offset the total (unsub-devised) cost? Is it within the lifespan of the equipment? If not, then no.	This EIS provides an evaluation of both beneficial and adverse effects of the Proposed Action and the alternatives to the Proposed Action. BOEM is confident that the socioeconomic information included in the FEIS is adequate to support the evaluation of the merits and drawbacks of each alternative with respect to the potential impacts the project could have. Also, because qualitative considerations may not be adequately captured using a monetary cost-benefit analysis, BOEM does not believe that a monetary cost- benefit analysis would best allow us to assess important qualitative considerations relevant to the choice among alternatives
12085-001	Most electricity production in this country is done using fossil fuels, and this is by far the largest source of carbon and other pollutants causing climate change, which leads to pandemics and extreme weather, and loss of life, property, and TAX DOLLARS. In all seriousness, we are in dire need of as much clean energy technology and as fast a transition off of fossil fuels as possible!!!!	Thank you for your comment.
12100-001	This is a huge opportunity and significant step in creating the renewable energy our nation needs.	Thank you for your comment.
12110-001	In short I believe it extremely important to start further diversifying are energy sources as fossil fuels become more scarce.	Thank you for your comment.
12145-001	Let not forget covid19 has damaged our lifestyles and our work opportunities. We can turn back from this disaster with the approval of this project.	Section 3.6.2 of the FEIS and Tables 3.6-3, 3.6-4 and 3.6-5 provide estimated job growth, tax revenues, and economic input from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment in offshore wind resulting from growth of a wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12148-001	The world cannot wait any longer. Time is of the essence in keeping warming to 1.5 set C.	Thank you for your comment.

Index	Comment Text	Response
12171-001	Offshore wind power is the backbone of a carbon free energy system for New England. It is the most basic step in mitigating climate change for our area.	Thank you for your comment.
12173-001	Please approve the Vineyard Wind project. I am AGAINST a wind farm being erected in the pristine waters off the coast	The SEIS discusses likely impacts from offshore wind development on
	of Martha's Vineyard. These huge wind turbines will obstruct commercial fishing grounds, disturb the natural environment (including migratory patterns of wildlife in the sea and air), there will be malfunctioning turbines which can leak oil, they will obstruct vessel and air navigation, threaten endangered species such as the right whale Let's leave this piece of the earth to remain natural and please keep it wild and untouched.	access to commercial fishing grounds (Section 3.11), migration of birds and fish (Section A.8.3 and 3.4), accidental releases throughout IPF tables (e.g. Table 3.4-1), vessel and air navigation (Section 3.13 and 3.14), and marine mammals (Section 3.5). Therefore, no change to the FEIS is warranted.
12173-002	It will be as if living with a city in the ocean with light and noise pollution,	Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations and night sky impacts. Vineyard Wind has committed to use ADLS at night to greatly reduce nighttime impacts of aviation lighting. Vineyard Wind would also use white or light grey color as described in Appendix D to reduce visibility against the horizon. New visual simulations provide views of the Vineyard Wind 1 14 MW WTGs as well as simulations for Vineyard Wind 1 wind turbines combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment. Section 3.10.1 and 3.10.2 of the SEIS addressed noise from construction and operation of offshore wind; those findings are also included in the FEIS.
12173-003	there will be constant traffic to maintain the turbines and the workers/maintenance vessels will congest our harbors, land and ferry systems.	Sections 3.11.1 through 3.11.5 of the FEIS discuss impacts to vessel traffic and port utilization. On average there will be approximately one vessel trip per day during the Project's operational period related to inspection and maintenance activities (COP Volume I; Epsilon 2020a).
12173-004	We do not need to encourage more people here by offering work opportunities, it's already overcrowded!	Section 3.6.2 of the FEIS finds that the workforce required for the Vineyard Wind 1 Project would have negligible impacts on the population and housing supply within the geographic analysis area. This information was also provided in the DEIS.
12173-005	This is an extremely costly project that will need constant maintenance. It will be unlikely to save much on energy bills and very likely to disrupt the environment, a huge cost to us and future generations!	Thank you for your comment.
12178-001	I believe that it is important that we always recall this truth in our decision- making: Healthy Planet = Healthy People = Healthy Economy. This principle can and should guide us.	Thank you for your comment.
12181-001	We understand and are enthusiastic about the positive economic, environmental, and other advantages that offshore wind brings to this country. We know that offshore wind is a proven industry elsewhere in the world that has created thousands of jobs and revitalized many communities;	Thank you for your comment.

Index Number	Comment Text	Response
Number	we can achieve those advantages here, too. Also, to be on the cutting edge of	
	this new industry is an exciting opportunity for this region.	
12183-001	To avoid repetition, I adopt the comments that my firm, Hinckley Allen, made in its letter dated July 24, 2020 (BOEM-2020-0005-12181). I will add	Thank you for your comment.
	that offshore wind should be seen as the new frontier for this country to use	
	as an additional block for a strong economy. Diversity of energy sources is	
	critically important for the future of our country, particularly economically.	
	Equally important is the creation of new jobs and billions in investment here.	
	economy	
12185-001	We really need alternative, clean energy and now is the time.	Thank you for your comment.
12186-001	Combatting climate change is the mission of our generation, and it must be	Thank you for your comment.
	addressed urgently! Offshore Wind is the most scalable and inexpensive	
	carbon free power generation technology there is on the planet. The United	
	States has fallen behind many countries in Europe and the Far East including	
	China in deploying this technology. We have been talking about this	
	technology in this country for the better part of two decades without much to	
	show for it. The United States can be the largest market for Offshore Wind in	
	the world in just a few years. We will enjoy the benefits that market position	
	creates both from an environmental standpoint as well as economic	
	standpoint with hundreds of thousands of jobs being created by these	
12196-001	The impression I get from reading the material is that 1 Nautical mile	Section 2.5 of the FFIS has been added which includes the agency-preferred
12190 001	between turbines is more that enough.	alternative.
12199-001	As a Massachusetts resident near the coast, I am incredibly supportive of the	Thank you for your comment.
	Vineyard Wind project, as well as other offshore wind projects in the area. I	
	have seen first hand the erosion of the coast, the impact on the ecology and	
	our communities that climate change and our reliance on carbon has had. We	
	need to invest in clean energy and we need to invest in it now. The US has	
	fallen behind other developed countries in our push to deploy offshore wind.	
	The impact on our economy, long term sustainability and job creations has	
	already been shown for these projects. Let us be a leader domestically, and	
	ultimately internationally, in pursuing clean energy and job creation through	
1.0.0.0.0.1	offshore wind.	
12202-001	Inlet Seafood is the largest catcher and packer of seafood in NYS. We want	Thank you for your comment.
	to show our support for the offshore wind industry in the U.S. We relaize that	
	there will be an enormous impact to our community through jobs in the	
	offshore wind industry. Offshore wind has the potential to drive economic	
	recovery and stimulate all coastal economies.	

Index	Comment Text	Response
Number		
12208-001	As an organization representing hundreds of businesses and organizations	Thank you for your comment.
	around the shore region we are looking forward to the great economic impact	
	this industry brings to our region and country. Although the offshore wind	
	industry is relatively new here in the U.S., we are aware of the potential it has	
	to create thousands of jobs and bring billions of dollars to our local	
	economies. It is our opinion that, during these trying economic times,	
	offshore wind has the potential to help drive an economic recovery in our	
	state, particularly in coastal communities.	
12212-001	WindServe Marine supports Alternative D2, which is the proposal for 1x1	Section 2.5 of the FEIS has been added which includes the agency-preferred
	nautical mile spacing in a uniform east-west grid layout. This reflects the	alternative.
	joint proposal of all wind farm developers holding a lease in the area south of	
	Martha's Vineyard, and it is the proposal that the Coast Guard determined	
	would facilitate navigation safety and search-and-rescue in its MARIPARS	
	report.	
12212-002	Conversely, Alternative F, which would impose 4-mile wide vessel transit	Section 2.5 of the FEIS has been added which includes the agency-preferred
	lanes within wind farms, is not supported by the industry nor the U.S. Coast	alternative.
	Guard, which determined such lanes could actually reduce navigation safety	
	and increase danger and risk to mariners.	
12220-001	On December 19, 2018, APCC issued a public statement endorsing the	Thank you for your comment.
	Vineyard Wind project, becoming the first nonprofit environmental	
	organization in the nation to do so. The decision to support the project	
	followed comprehensive review by APCC of the project's multiple state	
	regulatory filings through the Massachusetts Environmental Policy Act	
	(MEPA) process, as well as the release of the Bureau of Ocean Energy	
	Management's Draft Environmental Impact Statement for the project. The	
	additional analysis provided by BOEM in the SEIS is thorough and well	
	thought-out, including a detailed study of the potential impacts of a	
	"reasonably foreseeable" scenario for offshore wind development along the	
	east coast within the next decade, based on an assumption of future offshore	
	wind energy generation of more than 25 times the size of the Vineyard Wind	
	1 project. APCC believes the information provided in the SEIS supports	
	development of the offshore wind industry, including the Vineyard Wind	
	project, and the much-needed clean renewable energy it will provide.	
12220-002	We also believe the analysis points to the proposed 1 x 1 nautical mile (NM)	Section 2.5 of the FEIS has been added which includes the agency-preferred
	turbine layout <u>without transit lanes</u> (Alternative D2) as the alternative for the	alternative.
	Vineyard Wind project having the least impact and most benefits. APCC is	
	very concerned that inclusion of six four-mile-wide transit lanes through the	
	greater offshore wind lease area, as proposed by the Responsible Offshore	
	Development Alliance, would significantly reduce overall wind energy	

Index	Comment Text	Response
Number		
	production capacity and result in the failure of regional states to meet their	
	clean energy production goals.	
	After a very long and careful analysis by BOEM, the U.S. Coast Guard and	
	others, the 1 x 1 NM layout without transit lanes stands out as the reasonable	
	compromise. It allows for coexistence between the new offshore wind	
	industry and existing marine uses, such as the commercial fishing industry,	
	while protecting the marine environment and setting a path forward for clean	
	energy production.	
12220-003	APCC recognizes that any large-scale project will inevitably have some	Thank you for your comment.
	impacts, and Vineyard Wind is no exception. However, the SEIS makes clear	
	that for nearly every resource of concern reviewed, such as fishing,	
	endangered species, habitats, coastlines and cultural resources, climate	
	change is identified as the major threat producing some of the greatest	
	impacts. In the Northeast at a minimum, climate change impacts from	
	warming waters and ocean acidification will do more to disrupt the fishing	
	industry than the development of offshore wind. Geographical shifts in fish	
	and lobster populations to cooler waters are already documented. The SEIS	
	concludes that, if not addressed, climate change will have significant adverse	
	impacts on fisheries, marine mammals and avian species and contribute or	
	lead to "permanent changes of unknown intensity" to these resources. APCC	
	agrees with BOEM's analysis.	
12220-004	Offshore wind is a high capacity, domestic renewable energy resource that	Thank you for your comment.
	will improve energy security and reliability by reducing reliance on fossil	
	fuels and supporting the transition to a renewable energy grid. The rapid	
	deployment of offshore wind is essential to achieve state and regional	
	greenhouse gas emission reduction targets and limit the worst impacts of	
	climate change. Vineyard Wind will launch the offshore wind industry in the	
	U.S. and provide clean, renewable electricity to 400,000 homes and	
10000 005	businesses in Massachusetts.	
12220-005	APCC therefore urges BOEM to move forward with no further delays in the	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Vineyard Wind EIS process, with Alternative D2 and the Covell's Beach	alternative. Vineyard Wind has indicated that New Hampshire Avenue
	landing as the selected alternatives.	landfall location is no longer a consideration as they have received all the
10001 001		necessary state and local permits for the Covell's Beach landfall site.
12221-001	Further, it is less often that an industry so locally focused develops during a	Sections 3.6.1 and 3.6.2 of the FEIS address potential beneficial impacts of
	time when the coastal communities are struggling to deal with aging	the Vineyard Wind I Project and other offshore wind development in
	infrastructure and increased climatic pressures.	providing investment in port intrastructure, and in relation to potential
12222 001		adverse impacts of climate change on coastal communities.
12222-001	Offshore wind, supported by developments such as the Vineyard Wind I	I hank you for your comment.
	project, has potential to become a means for providing a secure supply of	

Index	Comment Text	Response
Number	affordable, decorbonized anargy to the US economy as the world increasingly	
	relies on a breader portfolio of energy sources over the coming decades	
12222 002	In the 2010 edition of DNV CL's Energy Transition Outlook	Thealt you for your commont
12222-003	(https://ato.dnygl.com/2010/nower.gumly.use/) an independent forecast of	Thank you for your comment.
	anargy demand and supply to mid century, we forecast that 20 per cent of all	
	alobal electricity production will come from wind energy by 2050, with 12%	
	from offshore wind and 18% from onshore wind. Today, offshore wind	
	sumplies 0.2% of global electricity production and onshore wind sumplies	
	1.1% We forecast offshore wind to reach about $10%$ of total wind	
	non-duction by mid contury. This points to wind becoming a 'new	
	conventional' rather than a challenger technology	
12222 004	According to the American Wind Energy Association (AWEA), the offenere	Thank you for your comment
12222-004	wind industry has the notential investment of \$57 hillion in the US by 2020 if	Thank you for your comment.
	states continue to most their renewable energy producement goals. However	
	bistory has shown that capital project investments will go where they are	
	uvelcomed. Providing greater certainty that offshore wind can and will be	
	nermitted in the US will enhance the attractiveness of the US market	
	encouraging the industry to continue their investments in the US economy	
	and a sustainable energy future	
12225-001	I am in favor of moving forward with all wind projects. It is high time we	Thank you for your comment
12223 001	faced the climate crisis head on with viable solutions.	Thunk you for your commone.
12228-001	This should be approved with little hesitation. We need to be investing in	Thank you for your comment.
	renewable energy and the Martha's Vineyard Wind farm is the first step	
	towards our renewable future.	
12229-001	The Business Network for Offshore Wind strongly encourages the Bureau of	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Ocean Energy Management to reject Alternative F and adopt Alternative D2.	alternative.
	By approving the full configuration of the Vineyard Wind project in	
	adherence to the One Federal Decision Permitting Timeline, the Department	
	of the Interior will send a clear message to the OSW market and investors	
	that the U.S. is open for business and intends to be a central player in a global	
	energy industry that will expand to \$1 trillion by 2040The Network and its	
	members strongly support Vineyard Wind's proposal and its commitment to	
	installing the project's turbines in a grid layout with 1 nautical mile ("NM")	
	spacing between turbines in the east-to-west direction, and 1 NM between	
	turbines in the north-to-south direction.	
12229-002	Vineyard Wind will be the first utility-scale OSW project in U.S. waters, and	Thank you for your comment.
	the Network supports BOEM's deliberate consideration and commitment to	
	environmental protection as it approves this vanguard offshore energy	
	installation.	

Index	Comment Text	Response
Number	Clabelly, the first half of 2020 saw a record \$25 hillion in OSW final	Thealt you for your comment
12229-005	investment decisions, more than offsetting investment declines observed in	i nank you for your comment.
	global investment in solar, onshore wind, and biomass projects during the	
	same period U.S. It is clear that globally and in the United States OSW is	
	an energy technology that is eminently canable of shrugging off the	
	challenges imposed by COVID. This solidifies OSW's role as an	
	infrastructure sector that is well-positioned to kickstart America's economic	
	recovery.	
12229-004	As a result, approving the Vineyard Wind project is consistent with the spirit	Thank you for your comment.
	of a recently issued Executive Order. On June 4, 2020, the White House	
	issued an Executive Order (EO) on Accelerating the Nation's Economic	
	Recovery from the COVID-19 Emergency by Expediting Infrastructure	
	Investments and Other Activities. The EO notes that "regulations and	
	bureaucratic practices have hindered American infrastructure investments,	
	kept America's building trades workers from working, and prevented our	
	citizens from developing and enjoying the benefits of world-class	
	infrastructure." The Network could not agree more: responsibly developed	
	U.S. OSW projects are world-class infrastructure projects, and they will serve	
	as unparalleled engines of both immediate-term economic recovery and	
	longer-term sustainable economic development.	
12229-005	The Department of the Interior's approval of Vineyard Wind's Construction	Section 3.6 of the FEIS has been updated to provide summary projections of
	and Operations Plan (COP) will unleash a wave of private sector investment.	regional and national job creation and investment from studies used in the
	More importantly, this approval will begin a domino effect that will	analysis for the SEIS as well as additional studies. Although projections
	ultimately put tens of thousands of hard-working Americans from across the	specific to the geographic analysis area are not available, the FEIS uses the
	economic spectrum and from all walks of life – including the building trades,	larger scale projections to support a reasonable conclusion that impacts on
	vessel captains and decknands, accountants, dockworkers, economists,	employment and economic activity within the geographic analysis area
	drivers, atterneys, areas and avery	house a moderate beneficial rating and is a change from the minor baneficial
	imaginable angingering disginling among many other occupations, had every	impost given in the SEIS
	work	impact given in the SEIS.
12229-006	Vinevard Wind will also significantly contribute to energy security and	The FEIS like the SEIS addresses the positive climate impacts of the
12229 000	improve local air quality in New England	proposed Project and future offshore wind projects in Section A 8.1. Air
	improve recur un quanty in recti England.	Quality.
12229-007	Section 1 ("Purpose") of the June 4, 2020 EO makes clear that	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect BOEM's
	"[u]nnecessary regulatory delays will deny our citizens opportunities for jobs	anticipated date for a decision on the COP. BOEM has worked as
	and economic security, keeping millions of Americans out of work and	expeditiously as possible to address the abundant and varied comments
	hindering our economic recovery from the [COVID-19] national	received on the SEIS.
	emergency." This is precisely why the Vineyard Wind project must be	
	approved in accordance with Vineyard Wind's One Federal Decision	

Index	Comment Text	Response
Number		
	Permitting Timeline (published February 7, 2020). Adherence to this	
	established permitting timeline will enhance regulatory certainty and increase	
1	investor confidence in the U.S. OSW industry.	
12229-008	Furthermore, Section 5(b) of the EO specifically directs the Secretary of the	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect BOEM's
	Interior to use all authorities (emergency and otherwise) to "expedite work	anticipated date for a decision on the COP. BOEM has worked as
	on, and completion of, all authorized and appropriated infrastructure, energy,	expeditiously as possible to address the abundant and varied comments
	environmental, and natural resources projects on Federal lands that are within	received on the SEIS.
	the authority of each of the Secretaries to perform or to advance." Vineyard	
	Wind specifically qualifies under this provision of the EO, because, pursuant	
	to the Outer Continental Shelf Lands Act, all submerged lands lying seaward	
	of state coastal waters (i.e. the land lying between 3 NMs offshore and the	
	exclusive economic zone boundary 200 NMs offshore) are considered	
	Federal lands. Furthermore, this analysis applies to all 22 GWs of proposed	
	Atlantic OSW capacity contemplated under the cumulative impacts analysis	
	of the SEIS. This is because the OSW lease areas from which the 22 GWs	
	will be derived lie upon federally regulated portions of the Outer Continental	
10000 000	Shelf.	
12229-009	The Network recommends that, consistent with the text and spirit of the June	Section 2.5 of the FEIS has been added which includes the agency-preferred
	4, 2020 EO, the Secretary of the Interior should utilize all authorities to	alternative. In addition, the timelines for required environmental permits and
	advance and complete the Vineyard Wind federal permitting process in strict	consultations have been updated in Table 1.3-1 of Appendix A of the FEIS.
	compliance with the One Federal Decision Permitting Timeline published	
	Peoruary 7, 2020. Careful adherence to the February 7, 2020 One Federal	
	Vineyand Wind's 1x1 NM configuration which is a reasonable communication	
	vineyard wind's 1x1 NM configuration, which is a reasonable compromise	
12220 010	Solution, will send a clear message that the U.S. is open for business.	T-11-12-1 in Annualize D-fd- EEICharles and to 14-14- and a table most
12229-010	By contrast, the failure to issue a Record of Decision (ROD) on December	Table 1.5-1 in Appendix B of the FEIS has been updated to reflect the most
	18, 2020 approving v ineyard wind – or, alternatively, issuing a ROD that	recent status of the required environmental permits and consultations for the
	requires a dramatic reconfiguration of the vineyard wind facility at this fate	proposed Project.
	stage – would represent a monumental lost opportunity for robust creation of	
12220 011	In terms of market signals, the approval of a severely reconfigured Vineward	Section 2.1.5 of the SEIS addressed the technical and practical challenges
12229-011	Wind project is a requiring a 2 NM or 4 NM wide transit lane would be	that could occur in Alternative E were implemented. Therefore, no changes to
	tantamount to no approval at all. This will have drastic broader negative	the FEIS are warranted
	economic ramifications and would serve to further deepen the staggering	the FEIS are warranted.
	COVID-19-related recession that is now being experienced by Americans	
	across the width and breadth of the United States Such a decision would	
	hamper American economic recovery and would exacerbate the exact	
	regulatory uncertainty and unnecessary delays that the June 4 2020 FO seeks	
	is a set of a neer unity and annecessary delays that the sume 4, 2020 EO seeks	

Index	Comment Text	Response
Number		
12229-012	The SEIS considers approximately 22 GWs of U.S. Atlantic OSW capacity to be reasonably foreseeable. Such a pipeline of projects would generally be considered sufficient to trigger large manufacturing investments, and clear market signals that the U.S. OSW pipeline is advancing will lead to building of American vessels of all types.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
12229-013	Given that European and Asian OSW markets continue to surge, sophisticated multinational Tier 1 suppliers may elect to focus their attention on those markets, rather than the U.S. OSW market. The failure to issue a ROD approving Vineyard Wind may well lead investors to conclude that it is unlikely that U.S. OSW projects can complete the permitting process. Seeing this continuing uncertainty, Tier 1 suppliers will elect to continue making manufacturing investments in more certain markets such as Europe, or to expand Asian manufacturing investments, rather than investing in U.S. OSW manufacturing facilities. By approving Vineyard Wind, the Department of the Interior can send a clear message to the international OSW market and investors that the U.S. is open for business.	Chapter 1 of the FEIS has been updated to specify that approval of the first commercial-scale offshore wind facility in the US could lead to increased developer confidence and a mature supply stream, which would translate to additional economic and employment opportunities in the region.
12229-014	Finally, Section 6 of the June 4, 2020 EO concerns the National Environmental Policy Act ("NEPA"), which governs the federal permitting process for Vineyard Wind, including the subject SEIS. This Section of the EO notes that the Council on Environmental Quality ("CEQ") has provided federal agencies with flexibility and alternative arrangements for complying with NEPA in emergency situations, like the COVID-19 pandemic and the associated economic recession. CEQ "has appropriately provided alternative arrangements in a wide variety of pressing emergency situations[,] including threats to energy security and employment and employment and economic prosperity." The Network, and the U.S. OSW industry as whole, strongly encourage the Department of the Interior to work with CEQ to ensure that the Vineyard Wind federal permitting process strictly complies with the One Federal Decision Permitting Timeline published on February 7, 2020. This approval will be a critical step in enabling Vineyard Wind to deliver the benefits that it can provide in terms of triggering investment and putting Americans back to work.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect BOEM's anticipated date for a decision on the COP. BOEM has worked as expeditiously as possible to address the abundant and varied comments received on the SEIS.
12229-015	The SEIS covers virtually the entire U.S. East Coast, and appears intended to serve as a template for the evaluation of potential impacts associated with	Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	future OSW projects. While it may be appropriate for BOEM to acknowledge the existence of future OSW projects, the Network and its members caution	require an analysis of impacts and the selection of the preferred alternative.

Index	Comment Text	Response
Number	against according the same weight to the potential impacts of those projects relative to OSW projects undergoing active federal review. Potential projects, though real, remain unformed, and it is reasonable to infer that those potential projects will adjust to lessons learned from the construction of the first utility-scale OSW projects in U.S. waters.	
12229-016	Future OSW projects are likely to use turbines with larger nameplate capacities than those considered in the SEIS, which reducing impacts by decreasing the number of offshore structures. Additionally, there may be adaptive management measures gleaned from the monitoring of constructed OSW projects that could enable reduce their long-term impacts. In these ways, near-term OSW development is anticipated to evolve to support a lower incremental impact when compared to the Proposed Activity.	As noted in Section 1.7.1.1 of the SEIS, it is difficult to predict turbine capacity and spacing or other future engineering for planned but currently unscheduled offshore wind awards. Therefore, BOEM used reasonably foreseeable assumptions for the analysis and no change to the FEIS is warranted.
12229-017	The Network is in no way recommending that the cumulative impacts study be re-performed, in fact we adamantly urge against that. We are just identifying the risks and uncertainties associated with an analysis of this scope and breadth.	As noted in Appendix A of the SEIS, BOEM assumed that all offshore wind developments offshore Massachusetts and Rhode Island would have 1 x 1 nautical mile spacing. This assumption was made based on the developers' agreement made among the developers and does not preclude the selection of another alternative by the decision maker. BOEM further assumed that wind development offshore other states, with the exception Virginia, is assumed to occur at the same density as 1 x 1 nautical mile spacing, but no particular layout orientation or foundation spacing is assumed as ocean users offshore different states may have different patterns of movement or considerations than projects in leases offshore Massachusetts and Rhode Island. Therefore, no changes to the FEIS are warranted.
12229-018	Regarding the prospective template that the SEIS may provide for future evaluation, the Network recognizes that the vast geographic extent of the cumulative analysis presents a substantial workload for federal agencies, developers, and stakeholders in developing and reviewing large volumes of material. This undertaking is above and beyond the substantial diligence already inherent in BOEM's standard OSW permitting and approvals processes. This added workload could strain existing resources and adversely impact OSW project federal permitting timelines, while providing only a marginal improvement in the identification of potential impacts as compared to those standard processes.	Thank you for your comment.
12229-019	The SEIS states in Table 3.2-1: "In submerged habitats, warming is altering ecological relationships and the distributions of ecosystem engineer species, likely causing permanent changes of unknown intensity gradually over the next 3 years." On page 3-98, however, the SEIS reads: "Commercial fisheries and for-hire recreational fishing may be affected by climate change". These statements are somewhat contradictory.	Section 3.10 of the FEIS has been updated to clarify that climate change is currently impacting fisheries.

Index	Comment Text	Response
Number		
12229-020	It is the Network's position that it is beyond question that climate change will	Thank you for your comment.
	have impacts on fishing. This conclusion is supported by the following:	
	• Food and Agriculture Organization (FAO) of the United Nations, Technical	
	Paper 672, Impacts of climate change on fisheries and aquaculture, 2018 (the	
	"FAO study"), states on page 1: "Aquatic systems that sustain fisheries and	
	aquaculture are undergoing significant changes as a result of global warming	
	and projections indicate that these changes will be accentuated in the future."	
	• On page 95, the FAO study goes on to examine historical trends within US	
	waters in the Northwest Atlantic from 1968 to 2007. "There were clear	
	poleward shifts consistent with warming in many fish stocks." This statement	
	clearly shows the historical impacts of climate change in an area that includes	
	the areas under study in the SEIS.	
	• The FAO study continues with regard to the Atlantic coast, "projected	
	warming until 2060 is expected to modify the habitats in terms of suitable	
	water temperatures of85 percent of [the fishery target species] in the	
	United States of America" (pg. 95).	
	This statement shows the FAO's projected future impacts of climate change.	
	The National Oceanic and Atmospheric Administration ("NOAA") issued	
	Technical Memorandum NMFS-F/SPO-89, Climate Impacts on U.S. Living	
	Marine Resources: National Marine Fisheries Service Concerns, Activities	
	and Needs, in August of 2008 (the "NOAA study"). Page 2 of the	
	introduction section of the NOAA study states: "Depending upon the	
	duration and magnitude of the climate change, species may persevere through	
	periods of adverse conditions, temporarily shift their distributions or	
	behaviors, or modify their ranges, behaviors and movements over the long	
	term. At the extreme, species may be extirpated from whole regions and	
	potentially become extinct". The position expressed in the NOAA study is	
	certainly consistent with FAO's conclusions, and is also consistent with	
	Table 3.2-1 of the SEIS. NOAA is clear that species extinction is the extreme	
	case, but nonetheless it is possible, due to climate change.	
12229-021	The NOAA study covered the key climatic changes that impact marine	Thank you for your comment.
	ecosystems, including temperature change, increased ocean acidification, and	
	loss of sea ice. The latter concern introduces less saline water from the Arctic	
	and can drive salinity patterns and distribution as far south as Georges Bank	
	and beyond (page 5). Each of these elements are expected to contribute to	
	shifting behaviors, distributions, and/or ranges of key species as well as	
	potential extinction.	
12229-022	At this point, there is no consensus on what the precise effects of climate	Thank you for your comment.
	change will be on fisheries along the U.S. Atlantic coast and southern New	
	England in particular. However, the United States, and the planet more	

Index	Comment Text	Response
Number	broadly, are already entering uncharted territory in terms of climatic	
	changes. It is clear that climate change poses a very real threat and will have	
	an impact on commercial fisheries and for-hire recreational fishing along the	
	US Atlantic coast and southern New England	
12229-023	The SEIS states on page 3-98: "Overall it is anticipated that there will be no	Thank you for your comment
12229 025	impact on climate change as a result of offshore wind projects alone, though	Thank you for your commone.
	they may beneficially contribute to a broader combination of actions to	
	reduce future impacts from climate change." The SEIS considers	
	approximately 22 GWs of U.S. Atlantic OSW capacity to be reasonably	
	foreseeable. These OSW GWs will be injected into the onshore electricity	
	systems operated by ISO New England, NYISO, and PJM. Based on the	
	annual CO2 emissions and net generation for these three grid operators, the	
	interconnection of 22 GWs of OSW would result in an estimated 8%	
	reduction in carbon emissions in those regions. On a planetary scale, the total	
	emissions reductions from these projects might be considered small, but the	
	reduction is quite significant in terms of decarbonizing the electricity supply	
	of the Eastern Seaboard. Relative to other renewable energy technologies,	
	OSW is a cost-effective and viable means of delivering large quantities of	
	clean electricity to coastal load centers. Approving the Vineyard Wind	
	project sends the right signal: that America is open for business and ready to	
	take a leadership role in this global clean energy industry.	
12229-024	Examining the cumulative impacts of structures, the SEIS states in Table	The cumulative impact rating of major impacts on commercial and for-hire
	3.11-1: "The cumulative impacts from the presence of structures on	tisheries is driven mostly by changes to fish distribution/availability due to
	navigation hazards with the Proposed Action when combined with past,	ongoing climate change, reduced stock levels due to ongoing fishing
	present, and reasonably foreseeable future activities would be major on	mortality, and permanent impacts due to the presences of structures. The
	commercial and for-nire recreational fisheries if offshore wind projects in the	proposed action would contribute to the overall impact rating primarily
	RI and MA Lease Areas do not all adopt a uniform 1x1 natureal fine w1G	anough impacts from the presence of structures including havigation hazards,
	2 11 1 makes clear that major sumulative impacts to fisheries are expressly	from Table 3.10.1 refers to payigation bazards, which is one component of
	conditioned upon a failure to adopt uniform 1x1 NM spacing. By contrast	the individual IPFs ranging from negligible to major impacts on fisheries. See
	because the Joint Developer Agreement Layout does adopt a uniform 1x1	Section 3 10 2 and 3 10 2 1 of the FEIS for additional discussion
	NM spacing for the MA/RI WEA, the impacts will be less than major. The	
	Joint Developer Agreement Layout is consistent with both the Draft and	
	Final MARIPARS and BOEM's assumptions for future OSW development	
	of up to 22 GWs as described in Section A.4 of the Draft SEIS.	
12229-025	It is also important to recognize that the MARIPARS was specifically	As noted in Appendix A of the SEIS, BOEM assumed that all offshore wind
	tailored for the unique circumstances of the MA/RI WEA. While the uniform	developments offshore Massachusetts and Rhode Island would have 1 x 1
	1x1 NM spacing may be appropriate for the MA/RI WEA, the	nautical mile spacing. This assumption was made based on the developers'
	recommendations made by the MARIPARS should be construed as	agreement made among the developers and does not preclude the selection of
	applicable to the MA/RI WEA only, and not determinative with respect to	another alternative by the decision maker. BOEM further assumed that wind
Index	Comment Text	Response
-----------	--	--
Number		
	other currently existing WEAs, or any future OSW lease areas that may be	development offshore other states, with the exception Virginia, is assumed to
	delineated. Designing an optimized layout for an OSW array requires a case-	occur at the same density as 1 x 1 nautical mile spacing, but no particular
	by-case consideration of site conditions and other highly localized factors.	layout orientation or foundation spacing is assumed as ocean users offshore
	Rigidly imposing the recommendations of the MARIPARS across other	different states may have different patterns of movement or considerations
	presently-existing projects or WEAs, or future lease areas, would not	than projects in leases offshore Massachusetts and Rhode Island. Therefore,
	adequately address the need for an area-specific analysis.	no changes to the FEIS are warranted.
12229-026	Based on the foregoing, the 2 NM or 4 NM wide transit lanes considered by	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	Alternative F would have impacts to the aforementioned species due to	that could occur in Alternative F were implemented. Therefore, no changes to
	increases in the length of the Vineyard Wind project's export and inter-array	the FEIS are warranted.
	cables.	
12229-027	Climate change must be a principal consideration in the decision to approve	Thank you for your comment.
	Vineyard Wind. As related previously, climate change presents an existential	
	threat to commercial fishing interests, not only in southern New England, but	
	along the entire Eastern Seaboard. The deployment of 22 GWs of U.S.	
	Atlantic OSW capacity that the SEIS assumes to be reasonably foreseeable	
	will provide a significant positive cumulative impact by providing significant	
	climate mitigation benefits.	
12229-028	Given the uniform IxI NM Joint Developer Agreement Layout, USCG has	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS
	made a final determination that transit lanes are unnecessary. In fact, the	and that Alternative D2 is consistent with the study.
	inclusion of transit lanes will directly constrain the U.S. OSW industry's	
	ability to mitigate climate change, the end result being even greater negative	
	impacts upon fisheries in southern New England and along the Eastern	
12220.020	Seaboard.	
12229-029	The SEIS considers approximately 22 GWs of U.S. Atlantic OSW capacity	Section 5.6 of the FEIS has been updated to provide summary projections of
	Association ("AWEA") states U.S. OSW will support up to 82,000 jobs and	has been undeted to have a moderate beneficial rating with record to
	\$25 billion per year in economic output by 2020, while also delivering	amployment and economics and is a change from the minor heneficial impact
	investment in critical coastal infrastructure. This nineline of projects is	given in the SEIS. In addition, the EEIS concludes in Section 3.6.5 that
	considered sufficient to trigger large manufacturing investments: however	Alternative F would have "incrementally smaller beneficial impacts due to
	reducing the area by transit lanes will reduce the overall economic benefit	notentially lower levels of job creation and economic investment in offshore
	that will be realized.	wind."
12229-030	UMass Dartmouth's Public Policy Center conducted a study examining the	The text in Section 3.6.2 of the FEIS has been updated to more clearly
	contribution to employment and economic development to be made by the	explain the calculation leading to the employment projection, which is in job-
	800-MW Vineyard Wind project. The study considered impacts to both the	years rather than jobs. The cited study estimates approximately 1,100 FTE
	economy of the Commonwealth, and the regional economy of southeastern	job years during construction and installation, and approximately 80 FTEs
	Massachusetts ("SEMA"), and found:	lasting 25 years during operations and maintenance. Multiplying the 80 FTEs
	• The Vineyard Wind project will support an estimated 3,180 direct FTE job	over 25 years, the study concludes that operations would result in 2,000 FTE
	years in Massachusetts across all phases over the project period under the	job years; therefore, direct employment would total approximately 3,100 FTE
	Base scenario and 3,658 direct FTE job years in Massachusetts in the High	job years. The UMASS Dartmouth study's projections for job creation, tax

Index	Comment Text	Response
Number		
		revenues, and economic output are given in FEIS Tables 3.6-3, 3.6-4 and 3.6-
	• The 800 MW project will produce nearly \$79 million in direct valueadded	5 (Appendix F, cited in Section 3.6.2) and contribute to the FEIS conclusion
	Impacts for Massachuseus and just under \$170 million in direct output.	that the Proposed Action would result in a moderate beneficial impact within
	• The study estimates that the amount paid in state and local taxes as a result	the geographic analysis area.
	Vineyand Wind project is \$14.7 million in the Dass seeperis and \$17.0	
	million in the High scenario	
12220-031	A reduction in the WEA iconardizes the project's economic potential and	Section 2.1.5 of the SEIS addressed the technical and practical challenges
12229-031	undermines public sector investment BOEM has entered long-term lease	that could occur in Alternative E were implemented. Therefore, no changes to
	contracts with developers and received lease navments in return for material	the FFIS are warranted
	use of the defined areas in the ocean Reducing the WEA in a substantial	
	manner results in unstable public policy and creates market uncertainty. A	
	substantial material change in the WEA could lead to re-evaluation of the	
	private sector infrastructure investments. This could ultimately affect the	
	United States or any State's (with an offshore wind policy commitment)	
	ability to secure the supply chain and facilities required to create jobs and	
	develop the offshore wind industry.	
12229-032	The Business Network for Offshore Wind and its members strongly	Section 2.5 of the FEIS has been added which includes the agency-preferred
	encourage BOEM to reject Alternative F and adopt Alternative D2 in the	alternative.
	Final SEIS. This approval should occur in strict compliance with the One	
	Federal Decision Permitting Timeline published February 7, 2020.	
12229-033	Offshore wind is poised to make an immediate positive impact on America's	Thank you for your comment.
	economic recovery from the COVID-19 pandemic. The approval of Vineyard	
	Wind is the first step to asserting America's position in this \$1 trillion global	
	energy industry, which is a one-in-a-generation economic opportunity in a	
	cutting-edge industry. This is directly consistent with the Administration's	
	focus on infrastructure and the spirit of the June 2020 Executive Order	
	encouraging the development of world-class intrastructure as a means of	
12220 024	Dy annoving Alternative D2 DOEM will calidify investor confidence and	These transformation and the second
12229-034	drive the U.S. offshore wind industry forward into reality. Make no mistake	Thank you for your comment.
	the failure to issue a ROD approving Vinevard Wind will likely have	
	catastrophically pegative consequences and hundreds of millions of dollars	
	in high-tech manufacturing investments will be made in markets outside the	
	U.S. This is an entirely avoidable outcome.	
12229-035	BOEM should not require additional transit lanes. The United States Coast	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Guard has determined that, from a navigational perspective, the transit lanes	alternative.
	are not necessary given the agreed-upon 1 x 1 nautical mile Joint Developer	
	Agreement Layout.	

NT 1	
Number	
12229-036 Economic development in southeastern New England associated with the Section 2.1.3 of the FEIS has been updated to reflect the F	inal MARIPARS
Vineyard Wind would also be constrained by the inclusion of transit lanes. and that Alternative D2 is consistent with the study.	
12231-001 The Earth's temperatures and CO2 levels are rising steadily due to humans Thank you for your comment.	
and we need to act quickly to mitigate these threats.	
12231-002 I have been involved in the permitting process since Vineyard Wind first Thank you for your comment.	
came to Cape Cod. The cable for Vineyard Wind 1 will cross about nine	
miles of our town. The Vineyard Wind team has worked closely with the	
town to develop a host agreement. Their team has been thorough, meticulous	
and accommodating throughout the process. This project will be good for our	
town and deliver reliable energy.	
12231-003 The design of the wind farm itself, 14 miles south of Martha's Vineyard, has Section 2.5 of the FEIS has been added which includes the	e agency-preferred
been revised many times and it is the product of extensive data collection and alternative.	
collaboration. To ask the developers now to add a 3-4 mile transit corridor	
would be onerous and unnecessary.	
12231-004 The fishing fleet in New England is a vital part of our Blue Economy and we Thank you for your comment.	
should listen to their concerns. In the present design, the wind towers will	
have small footprints and they will be a mile apart in a grid, allowing straight	
transit routes in many directions and room enough to trawl between them.	
This project should go forward. The company has created a fishing liaison	
12231-005they [Vineyard Wind] have an extensive agreement to protect the Section 3.4.2 and Appendix D of the FEIS discuss updated	d mitigation and
endangered North Atlantic right whales. monitoring measures that would be implemented to avoid.	, minimize, and
mitigate adverse impacts to marine mammals, specifically	the NARW, and
include measures outlined in the referenced agreement. The	hese measures
include, but are not limited to avoidance of peak NARW p	presence, use of
sound attenuation technologies, use of PSOs, PAM, soft st	tart procedures,
snut down procedures, and other measures.	<u> </u>
12239-002 We remained concerned about the proposal for a 4 nautical mile wide transit Section 2.5 of the FEIS has been added which includes the	e agency-preferred
lane inrough the wind energy areas (wEA). If adopted and extended to other alternative.	
turking regiting from the South Fork. Develution and Sumige Wind regions	
and other developers would see similar connective losses. These losses are in	
addition to those realized by a shift to how x how spacing, which significantly	
reduced the number of available turbine positions in the WEA by 30% Based	
on the USCC's report it is our understanding that the uniform spacing is	
more than sufficient for safe navigation by creating over 200 transit lanes	
throughout the WEA and represents a fair compromise between the offshore	
wind industry and other ocean users	
12241-001 We need to make sure every effort for clean energy is done with the goal of Section 2.5 of the FEIS has been added which includes the	e agency-preferred
maximum chance for success. I strongly oppose unnecessary travel lanes in alternative	agency preteriou

Index	Comment Text	Response
Number		
	the permitting process for Vineyard Wind. Rather than ensuring success for	
	this project, the reduced area available for offshore wind turbines will	
	sabotage the megawatts expected to be gained.	
12242-001	The US offshore wind sector represents a unique opportunity to create new	Thank you for your comment.
	Jobs, generate clean energy and help states reach their renewable energy	
	targets. With current unemployment rates elevated due to the COVID	
	pandemic, offshore wind growth presents a critical opportunity for our	
	country. According to the American Wind Energy Association (AWEA), the	
	offshore wind industry will invest roughly \$57 billion in the US by 2030 if	
	states continue to meet their procurement goals. Communities in southern	
	New England have tremendous potential to benefit from clean energy and	
	economic development opportunities from offshore wind.	
12242-002	To maximize these opportunities, the business sector needs confidence that	Section 2.5 of the FEIS has been added which includes the agency-preferred
	demand in the US offshore wind market is real, and it remains important that	alternative.
	projects are permitted and developed in a timely and reasonable	
	mannerThere is a great opportunity for the US to generate clean energy,	
	create jobs and address climate change challenges. Adding extra transit lane	
	requirements and continued stays could put into question the viability of	
10040.001	these projects.	
12243-001	The US offshore wind industry has for over a decade been working to	Thank you for your comment.
	become a viable sector of the US economy. Many companies, suppliers,	
	union works and local manufacturers have been waiting patiently for this	
	industry to arrive in the US. Ambitious plans exist to revive abandoned ports	
	and upgrade local infrastructure with the benefit of providing clean energy. In	
	addition, skills and knowledge are being transferred to the U.S. workforce	
	with the expectation that this industry will become a reality. These workers	
	are not looking to develop these offshore wind skills for enjoyment, but to	
	Windle united to work. Please consider what is at stake if vineyard	
	Federal Design Demitting Timeling Much investment will helt the	
	rederal Decision Fermitting Timeline. Much investment will halt the	
	homentum that has developed through the years and leave the country	
12244 001	benind the rest of the globe in this critical energy sector.	
12244-001	As a conege student of color in wassachusetts, I am in full support of the	ish growth toy revenues and economic input from the Vinceral Wind 1
	V ineyard wind project because of the increase in job opportunities that win	Broiget within Messachusetta and specifically within southeastern
	uncertain so projects that aim to greate jobs, conceilly once that hereft the	Massachusetts Additionally Section 2.6.1.1 of the EEIS has been undeted
	environment are essential	with estimates from several sources of projected employment and investment
	environment, are essential.	in offshore wind resulting from growth of a wind energy inductry along the
12243-001	create jobs and address climate change challenges. Adding extra transit lane requirements and continued stays could put into question the viability of these projects. The US offshore wind industry has for over a decade been working to become a viable sector of the US economy. Many companies, suppliers, union works and local manufacturers have been waiting patiently for this industry to arrive in the US. Ambitious plans exist to revive abandoned ports and upgrade local infrastructure with the benefit of providing clean energy. In addition, skills and knowledge are being transferred to the U.S. workforce with the expectation that this industry will become a reality. These workers are not looking to develop these offshore wind skills for enjoyment, but to apply them in the field of work. Please consider what is at stake if Vineyard Wind's project doesn't receive timely approval of it's permit under the One Federal Decision Permitting Timeline. Much investment will halt the momentum that has developed through the years and leave the country behind the rest of the globe in this critical energy sector. As a college student of color in Massachusetts, I am in full support of the Vineyard Wind project because of the increase in job opportunities that will occur in the area. The job market for recent college graduates is incredibly uncertain, so projects that aim to create jobs, especially ones that benefit the environment, are essential.	Thank you for your comment. Section 3.6.2 of the FEIS and Tables 3.6-3, 3.6-4 and 3.6-5 provide estimate job growth, tax revenues, and economic input from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investmer in offshore wind resulting from growth of a wind energy industry along the

Index	Comment Text	Response
Number		
		Atlantic coast. While the estimates are national, jobs are anticipated to be
12244 002		concentrated in and near the east coast states that would nost offshore wind.
12244-002	In addition to job creation, the environmental benefits of this project will	I nank you for your comment.
	nave positive effects on the local community. Renewable energy is the best	
	possible avenue to ensure that public health is a priority and that all residents	
	have access to clean air. The negative effects of climate change	
	deserves to be at a disadvantage based on their athricity or location and	
	Vineward Wind's project can help to mitigate some of these issues	
12246 001	Vineyard wind's project can help to initigate some of these issues.	Thenk you for your comment
12240-001	and jobs potential of the US offehore wind industry. Continue the wind	i nank you for your comment.
	industries' afforts to replace our energy needs with alternative forms that will	
	not make alimate changes worse	
12251 001	General Comment: Given that this SEIS is to be a bluenrint for future	Thank you for your comment
12231-001	applications of offshore wind turbines BOEM should use this SEIS to	Thank you for your comment.
	establish some firm and defined criteria for this and future applications such	
	as: What constitutes a minor vs material change to project parameters	
	submitted in the initial EIS Project Design Envelope should be defined.	
12251-002	Visual impact criteria based on studies using outdated small turbine	BOEM is in the process of developing guidelines and minimum standards for
12201 002	technology should not by applied to projects with new state of the art super-	visual impact assessment. The analysis in Section 3.9 of the FEIS has been
	sized turbines. A defined criteria for minimum coastal setbacks and low	revised to include evaluation of simulations of the 14 MW WTGs provided
	impact lighting system requirements should be established based on the land	by Vinevard Wind (available for viewing at https://www.boem.gov/vinevard-
	use along the affected coastline and the height of the turbine. This is how	wind-cumulative-visual-assessment). BOEM has prepared a Visual and
	virtually every local government in the country regulates the height of	Seascape/Landscape Impact Memorandum to further discuss visual impacts
	structures in their jurisdiction.	of the proposed Project. Mitigation measures that have been updated and
		evaluated in the FEIS are described in Appendix D. Additional monitoring
		and mitigation, if required, will be developed in coordination with applicable
		Federal, State, and local resource agencies and/or other stakeholders.
12251-003	Table ES-1 and throughout: The SEIS uses a 14MW turbine as the maximum	Turbine sizes vary by manufacturers and Vineyard Wind has provided as part
	considered under the proposed PDE. The turbine is shown as having a hub	of their COP the dimensions of the 14 MW WTG.
	height of 473' and a blade tip height of 837' above MLLW. However, the GE	
	12 MW turbine has a hub height of 493' and a blade tip height of 853' (these	
	numbers are also referenced in Tables included in Appendix A). Therefore	
	the PDE should be based on the taller 12 MW turbines.	
12251-004	Section 2.2.1 This section includes the following: "minor changes to the PDE	Vineyard Wind's initial submittal of their COP included a PDE of 8-10 MW
	to allow for the possibility of using WTGs of a higher capacity". The	WTGs, and the latest version of the COP has increased the upper limit to be
	increased size from the initially proposed 8 MW turbine to the 14MW	14 MW as discussed and analyzed in the SEIS.
	turbines is 20%. BOEM should not consider this a "minor" change. What	
	would BOEM consider a major change? BOEM should formally establish	

Index	Comment Text	Response
Number	what modifications the applicant can make before they are required to	
	completely re submit a new EIS. This should not be subjective	
12251 005	Completely re-submit a new Ers. This should not be subjective.	Thank you for your comment
12231-003	SEIS is not correct. The "No Action" alternative simply assumed that if this	Thank you for your comment.
	project was not approved another would be constructed elsewhere in the	
	lease areas with essentially the same impacts as the project being considered	
	The lease areas were never a guarantee that a project of any specific canacity	
	could be built. In fact the FIS for the Maryland lease area only considered the	
	impact of site investigations and related survey work. The "No Action"	
	alternative should assume that nothing is built and that other projects more	
	compatible with commercial fiching vessel pavigation recreation tourism	
	and other potentially negative impacted stakeholders could be constructed	
	also other potentially negative impacted stateholders could be constructed	
	or substantially reduce the negative impacts to these stakeholders	
12251-006	Chapter 3 Tourism Impacts Studies (Smythe et all 2018, and Parsons&	The analysis in Section 3.9 of the FEIS has been revised to include evaluation
12231-000	Firestone 2018) cited to show that negative tourism impacts are reduced	of simulations of the 14 MW WTGs provided by Vinevard Wind (available
	hased on specific distances of the project from shore (15 miles) were both	for viewing at https://www.boem.gov/vinevard-wind-cumulative-visual-
	based on 6 MW turbines (574' blade tip beight and 492' rotor diameter)	assessment) and BOFM has prepared a Cumulative Visual and
	Another study that does explicitly find significant negative impacts to coastal	Seascape/Landscape Impact Memorandum [might end up being a report] to
	resort property values and that the SEIS uses to support the 15 mile threshold	further discuss visual impacts of the proposed Project
	(Lutzever et al 2017) was based on 5MW turbines. Turbines now under	further discuss visual impacts of the proposed in geet.
	consideration are 50% taller and more than double the blade swept area of the	
	6 MW. These studies need to be updated to determine a new "neutral	
	distance" using these "supersize" turbines since the visual impact will be	
	substantially greater at the distances determined by the studies.	
12251-007	Section 3.10 The SEIS credits recreational fishing improvements around the	The cited report indicates that little legal authority currently exists to limit
	turbines as justification that the project would have minor beneficial impacts	access to the offshore wind development area. The report states that USCG
	on Tourism and Recreation. However, a recent report "Legal Limits on	authority to limit vessel access by establishing safety zones or restricted areas
	Recreational Fishing Near Offshore Wind Facilities" (2020 Webster and	is limited to U.S. territorial waters less than 12 nautical mile from shore. The
	Porter) notes numerous instances where Federal agencies could limit public	Magnuson-Stevens Fishery Conservation and Management Act (MSA)
	access to offshore wind farms for recreational fishing. The SEIS should at a	governs fisheries management in federal waters and could authorize area
	minimum acknowledge this possibility.	closures in beyond 3 nm from shore as part of fishery management plans.
		Finally, access could be restricted if an offshore wind area is designated as a
		national marine sanctuary under the National Marine Sanctuary Program,
		which authorizes the Secretary of Commerce to establish such sanctuaries for
		marine areas of special national significance. Fishing can be permitted within
		these areas.

Index	Comment Text	Response
Number		
12251-008	Section 3.10 In order to protect tourism and cultural resources, BOEM should mandate the use of ADLS technology for FAA tower lighting for any tower lights visible from the coastline.	Sections 3.10.1 and 3.10.2 of the SEIS stated that use of ADLS for offshore wind other than Vineyard Wind 1 would reduce visual impacts for the combined scenario. Vineyard Wind has committed to use ADLS at night to greatly reduce nighttime impacts of aviation safety lighting on the wind turbines. BOEM is in the process of developing guidelines and minimum standards for other offshore wind development. Each applicant will be required to submit a COP that describes the proposed FAA lighting scheme. Therefore, no change to the FEIS is warranted.
12251-009	Section C1.14 There are no studies or reliable information regarding the potential impact of turbines larger than 6 MW on recreation and tourism or coastal property values. There are no studies or reliable information cited regarding the cumulative impact of multiple industrial scale wind farms on recreation and tourism or coastal property values. A study on the true visual impact of offshore wind turbines, particularly those of larger sizes (Offshore Wind Turbine Visibility and Visual Impact Threshold Distances, Sullivan 2017) is ignored.	Section 3.10.1 of the SEIS summarized studies that provide insight into visitor preferences related to the visual impact of offshore wind. No changes to the FEIS are warranted. The study suggested in this comment uses a survey format to explore the visibility of offshore wind development in Great Britain. The findings explore the extent to which the wind turbines are visible or a visual focus, and do not explore the effect on visitors, tourists, or recreation. The study finds that for the smaller turbines viewed in the survey, "At a distance of approximately 16 km (10 mi)the observed wind facilities were not a major focus of visual attention. At a distance of approximately 29 km (18 mi)the observed wind facilities would likely not be noticed by a casual observer."
12251-010	Appendix D: "Project Configuration That Does Not Interfere With Existing Public Views: several commenters recommended an alternative where the proposed Project could not be seen from the coast of Nantucket, or in views that are culturally significant to tribes. No other specifics for this alternative were provided; therefore, based on the description provided this alternative would require the proposed Project be built at a distance of greater than 35 miles (56.3 kilometers) in order for it not to be viewed from the coast of Nantucket, based on the curvature of the earth. Thus, this alternate would require eliminating all 106 turbine placement locations proposed under Vineyard Wind's COP, would require a longer OECC, and would result in increased duration of vessel trips during construction and operations. Furthermore, this alternative would allow for less than the 80 WTGs within the southern portion of the lease area OCS-A0501. These technical challenges would potentially foreclose the Project's economic feasibility. Therefore, this alternative would effectively be the same as selecting Alternate G (no Action)". By the SEIS's earlier definition of the No Action alternative G and it's analysis of that alternative as stated earlier in these comments, the SEIS simply assumed that another project of similar size and scope would be built elsewhere in the lease area. However, if BOEM were to apply the "not visible over the horizon" criteria suggested by the commenters (or some similar distance criteria related to the size of the turbine) to all	BOEM utilized all information provided in the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. The description of impacts is located in Sections 3.8.2-3.8.5, and when considered against the criteria determining the intensity of impacts (i.e., whether they are minor, moderate, etc.), located in Section 3.8.6, the impacts are of a moderate nature.

Index Number	Comment Text	Response
Tumber	offshore wind turbine projects, this would significantly reduce many of the	
	negative cultural, economic, recreation and tourism impacts of this Project	
	and the cumulative impacts of future projects. Results much different than	
	those suggested by the No Action Alternate G as currently stated in the SEIS.	
12251-011	Finally The SEIS should not assume that placing turbines further offshore	Thank you for your comment.
	will make any project economically unfeasible. Just as technology	
	improvements are creating larger and more efficient turbines, so are these	
	same advances moving towards deeper foundations and floating platforms	
	which will make more distantly located turbines economically possible.	
12253-003	Projects in the permitting and development timeline must be permitted in a	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
	timely and reasonable manner. This starts with Vineyard Wind 1. If we	several sources of projected employment and investment resulting from
	launch this industry now, the potential for additional jobs multiplies	growth of the wind energy industry along the Atlantic coast. While the
	exponentially, with the potential for hundreds of thousands of jobs in	estimates are national, jobs are anticipated to be concentrated in and near the
	different parts of the country.	east coast states that would host offshore wind. This information was also
		included in the SEIS (Section 3.7.2.1), and the FEIS provides additional
		detail and analysis.
12253-004	The developers of the New England Wind Energy Areas (NE WEA)	Section 2.5 of the FEIS has been added which includes the agency-preferred
	collaborated to propose a uniform, 1 x 1 nautical miles spacing between	alternative.
	turbines, a layout that was recently endorsed by the United States Coast	
	Guard (USCG). Despite this fact, the fishing industry has proposed additional	
	transit lanes of at least 4 NMs (reflected in Alternative F of the SDEIS), a	
	move that would severely constrain clean energy production and not	
	meaningfully improve navigation or safety. Alternative "F" slashes the	
	generation capacity of the project and puts the entire region at risk of not	
	meeting energy demand even as many of New England's fossil fuel and	
	nuclear power plants are retiring. For these reasons, I oppose the additional	
	transit lanes outlined in Alternate F.	
12253-005	This project is the culmination of more than ten years of exhaustive study and	Thank you for your comment.
	analysis, and extensive public consultation, to determine where offshore wind	
	could be built with the least possible impact on existing industries and the	
	environment. To grow a stable and prosperous offshore wind industry and	
	homegrown workforce, we need regulatory predictability and a clear pathway	
	forward. Further delay of Vineyard Wind 1 is not an option.	
12253-006	Further, the successful deployment of this project sets the stage for Atlantic	Thank you for your comment.
	Coast energy sufficiency which will be more compelling with each coming	
	decade.	
12258-001	The expansion of offshore wind capacity is essential for decarbonization and	Thank you for your comment.
	for realizing the greenhouse gas emission reduction commitments of the New	
	England states. Vineyard Wind 1 will not only play a key role in reducing	

Index	Comment Text	Response
Number		
	carbon emissions in Massachusetts and throughout New England, but will	
	also create well-paying jobs in a rapidly expanding industry.	
12258-002	In the Northeast, electric sector emissions have already dropped substantially	Thank you for your comment.
	since 1990, largely due to cheap and abundant natural gas. In order to further	
	decarbonize the electric sector, the region must turn to zero-emissions	
	resources. Today, offshore wind provides significant opportunity for	
	emissions reductions due to high capacity factors, technological	
	advancements, and economies of scale. Last year, the use of wind energy	
	avoided 189,000,000 metric tons of carbon emissions, while also delivering	
	significant reductions in local pollutants.	
12258-003	In order to increase the accessibility of navigation and fishing around	Section 2.5 of the FEIS has been added which includes the agency-preferred
	proposed project areas, offshore wind developers have made significant	alternative.
	concessions to propose industry-wide east-west grid layouts with one nautical	
	mile of spacing between turbines. Thus, NECEC supports the "Alternative	
	D2" layout of Vineyard Wind 1. The east-west grid pattern with one nautical	
	mile of separation between turbines will be adequate for fishermen, military,	
	and commercial navigators in the area. According to the final Port Access	
	Route Study: The Areas Offshore of Massachusetts and Rhode Island	
	released by the U.S. Coast Guard, the proposed grid layout provides ample	
	navigational space for vessels to travel through the proposed project area. In	
	fact, the Alternative D2 layout 1x1 nm turbine spacing in the MA/RI wind	
	lease area is the largest spacing of any wind farm area in the world.	
12258-004	By contrast, alternative layouts including, dedicated transit lanes, as	Section 2.5 of the FEIS has been added which includes the agency-preferred
	described in "Alternative F," are not necessary for safe navigation. The US	alternative.
	Coast Guard has determined that the Alternative F with the 4 nm wide transit	
	lanes is more hazardous to navigation than the 1x1 nm spacing agreed upon	
	by the developers. In addition to dedicated transit lanes being unnecessary to	
	ensure smooth navigation, there are potential downsides to implementing	
	transit lanes. The introduction of transit lanes may create points of congestion	
	inside the project area. With vessels constantly entering and exiting the	
	transit lanes to navigate through Vineyard Wind 1, there may be a constant,	
	high volume of traffic in a small corridor. This could, in fact, lead to a higher	
	risk of accident. Higher traffic volume in one place will create more space-	
	use conflicts and increase overall time taken to navigate through the project	
	area. Without transit lanes and with a north-south and east-west turbine	
	orientation, Coast Guard Search and Rescue missions will "ensure two lines	
	of orientation for USCG helicopters to conduct search and rescue	
	operations."	

Index	Comment Text	Response
Number		
12269-001	This project needs to happen. American workers need jobs and a future in this industry. Please move forward with this project.	Thank you for your comment.
12273-001	A project such as this, which would require project labor agreements and/or prevailing wages, means good paying jobs for our members who are local residents. As a Union member, Long Island resident and tax payer I support offshore wind.	Although the Project Labor Agreement is not addressed in the FEIS, Section 3.6.2 provides projections of estimated direct job creation by the Vineyard Wind 1 Project in Massachusetts, and primarily in southeastern Massachusetts.
12274-001	this effort toward Wind Energy is so important to getting our land in healthy balance. Thank you for expediting this matter.	Thank you for your comment.
12277-001	As a company with a financial interest in the growth of the US offshore wind industry, the SEIS is an important milestone for the entire industry and the many businesses that support it. I urge you to move the Vineyard Wind 1 project forward without delay.	Thank you for your comment.
12277-002	Our commitment will always be to draw on local expertise and ensure that a greater proportion of the work is executed within the region, developing local capacity and national capabilities, with active participation of all relevant sectors of the economy. In order to maximize local economic development opportunities, the sector needs confidence that the US offshore market is real and ready for development. This confidence will spur local infrastructure development and provide companies like ours the flexibility to respond to local opportunities and enhance our position as an effective development partner.	Section 3.6 of the FEIS includes proposed mitigation, such as a local hiring plan, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures. Additional mitigation with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
12277-003	The Department of Interior's decision to delay Vineyard Wind's final permits last year reverberated through the entire industry and had a chilling effect on the industry's investment capabilities. The SEIS does not factor this into its cumulative analysis. The analysis assumes that even without a green light for Vineyard Wind, industry investment will move forward as planned. This assumption is greatly flawed as companies need regulatory and market certainty in order to justify investment in new markets and the US would be sending a signal that it is not yet ready to get serious about offshore wind.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-impact scenario in terms of potential impacts.
12277-004	In addition, by requiring additional transit lanes through projects and reducing capacity to develop lease areas to their full extent, BOEM is effectively reducing the industry's opportunities for investment, which will translate to lost economic benefits and jobs for the US overall. As a company with an interest in investing in the US market, we strongly urge BOEM to reject this Alternative F.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
12277-005	while there is agreement that offshore wind needs to be developed	I hank you for your comment.
	responsibly, the United States is two decades behind other regions in offshore	
12277.006	wind development.	
12277-006	According to the American wind Energy Association, states have set	I nank you for your comment.
	US and a second se	
	US economy by 2030. If the Department of Interior gets benind this industry	
	now, the potential for additional jobs and economic investment multiplies	
	exponentially, with the potential for tens of thousands of jobs throughout the	
	nation. Seaway / is committed to this potential growth and is engaging with	
	Key local stakenoiders including the New Bedford Port Authority (NBPA),	
	MassCEC, New England Clean Energy Council, Business Network for	
	Olishore wind and local community leads to ensure MA supply chain	
12270.001	capabilities are fully evaluated for the vineyard wind project	
122/9-001	I am in support of the New England off shore wind farm. First and foremost I	I hank you for your comment.
	think it is imperative that we develop our energy not from fossil fuels but	
	from sustainable sources that don't harm our planet. It would be of National	
	Security to develop renewable energy that would keep us independent from	
	any world crisis we would be in a better position to deal with any situation.	
	The other important issue with equal importance is the carbon footprint of	
	this country. We need to worry about this planet for our children and their	
	children. We saw throughout the global shutdown caused by the pandemic	
	the effect of considerable reduction in pollution. Lastly the economic boost to	
	our economy. The jobs it would create from building of the wind farm,	
	maintaining, and all the ripple effect from the manufacturing and support	
12201 001		
12281-001	VSEC urges BOEM to approve the Supplemental Environmental Impact	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Study (specifically Alternative D2, approved by the US Coast Guard, without	alternative.
	incorporating the transit lanes of Alternative F). Doing so will enable the	
	emerging offshore wind industry to move fonitrard while safeguarding the	
	natural environment of our Aflantic coast, combatting climate change, and	
12201 002	protecting the interests of maritime stakeholders.	
12281-002	VSEC serves the six towns of Martha's Vineyard in developing responsible	I hank you for your comment.
	plans for transforming our energy ecosystem. Climate change is no longer	
	speculative and will have a serious and permanent impact on our coastal	
	communities. Our community is at the end of the energy supply chain, and	
	we intend to lower our dependence on fossil fuels and increase significantly	
	our on-island energy generation in order to achieve a markedly reduced	
	greenhouse gas tootprint and, importantly, increased resilience in the face of	
	the climate challenge.	

Index	Comment Text	Response
12281-003	In doing so, we are acutely aware that we must protect our fishing industry, which is threatened by degradation of the marine environment, overfishing, and climate change driving fish stocks northward. The SEIS draft being reviewed and finalized addresses environmental protection, and balances the needs of our blue-water economy with those of the nascent US offshore wind industry.	Thank you for your comment.
12281-004	The 2015 Community Benefit Agreement between our local power cooperative (Vineyard Power) and Vineyard Wnd has allowed community concerns to be addressed and provides significant economic benefits including grants for local renewable energy projects and, crucially, locates a key operations and maintenance facility on Martha's Vineyard that will provide a significant number of high-quality jobs for the next generation of Vineyarders. Together they have established a course of instruction for islanders who wish to be trained as offshore wind technicians.	Section 3.6.2 of the FEIS lists the grants and community programs that the Vineyard Wind 1 Project is committed to, including job training for offshore wind. This information was also provided in the DEIS. The FEIS has been updated to include the cooperative agreement between Vineyard Wind and Vineyard Power.
12281-005	Extensive offshore wind experience over the past two decades in Europe has shown that offshore wind and other marine activities, such as fishing, can coexist in a mutually beneficial fashion. Surely we in the US can accomplish this as well.	Section 3.10 of the FEIS has been updated with a U.K. study (by Roach et al.) that shows catch rates remain the same at sites adjacent to offshore wind facilities and within offshore wind facilities.
12282-001	The United States needs green energy.	Thank you for your comment.
12283-001	Anything we can do to reduce our carbon footprint and make the earth cleaner should be done.	Thank you for your comment.
12284-001	Clarksons stands with The Business Network for Offshore Wind and also strongly encourages the Bureau of Ocean Energy Management to reject Alternative F and adopt Alternative D2.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12284-002	By approving the full configuration of the Vineyard Wind project in adherence to the One Federal Decision Permitting Timeline, the Department of the Interior will send a clear message to the OSW market and investors that the U.S. is open for business and intends to be a central player in a global energy industry that will expand to \$1 trillion by 2040.	Thank you for your comment.
12285-001	Two of the ones with the loudest voices appear to want:- 1- Vastly expanded shipping lanes. As a former seafarer, I can attest that offshore wind development in North America has been planned with existing shipping in mind, and poses no restriction or threat to the commercial shipping industry. Existing shipping channels, as well as those planned on being lengthened/deepened are accounted for during the planning and design phase. All offshore wind developments will be well charted, and submarine cables buried to prevent problems arising from anchor deployment, for example. The US East Coast is well-served with shipping lanes that enable safe and efficient traffic that professional seafarers are accustomed to	The FEIS addresses this comment in Sections 3.11.2 and 3.11.5. The major ports in the vicinity of the proposed WDA include ProvPort, Fall River, New Bedford, and Davisville. These ports serve the commercial fishing industry, passenger cruise lines, cargo, and other maritime activities. The primary vessel traffic and commercial shipping lanes serving these ports are outside of the WDA (COP Volume III, Section 5.5.1, Appendix III-I; Epsilon 2020a). Other vessel traffic in the region (e.g., from commercial fishing, for-hire and individual recreational use, shipping activities, military uses) would overlap with offshore wind-related vessel activity in the open ocean and near ports supporting the offshore wind projects. The Final MARIPARS study (USCG

Index	Comment Text	Response
Number		
	transiting. Offshore wind farms will be wellcharted and are clear on radar systems, so pose no threat to shipping, as has been proven in Europe and elsewhere.	2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
12285-002	There is apparently a fishing industry group that wants a 5 year moratorium on offshore wind development. The offshore wind industry has proven to be a great neighbor to the fishing industry worldwide. Up front planning and analysis of marine species, along with accompanying fishery studies are undertaken to ensure minimal impacts. It is well known that offshore structures act as artificial reefs and are a haven for marine life. Utmost care is taken to minimize and mitigate adverse affects to both the marine environment, as well as the industries that rely upon it. Whilst careful study is of course essential, a 5 year moratorium would have far too great an impact and not economically sustainable.	Thank you for your comment.
12285-003	The advantages of the offshore wind (and offshore renewable energy industry in general) far outweigh the few negative impacts: A distributed and diverse source of energy, leading to grid and energy stability; - Clean, carbon free source of power; - A homegrown power source, great opportunity to develop a supply chain; - Job creation, both during construction as well as the operational and maintenance phase	Thank you for your comment.
12287-001	We know that the offshore wind resource along the U.S. Eastern Seaboard is one of the most powerful in the world, and is within reach of the densely populated areas where energy demands are high and new resource options are few. The offshore wind industry could create 83,000 jobs by 2030 and deliver \$25 billion in annual economic input by that same year. Most importantly it is a vast resource of clean, renewable energy to power our future. As strong proponents of a rapid reduction in the use of fossil fuels, we see offshore wind energy as critical for meeting clean energy goals in New England, and the emission reductions necessary to stop the most catastrophic impacts of climate change. The 800 megawatt Vineyard Wind project, selected by Massachusetts, will be the first major step toward fulfilling this promise.	Thank you for your comment.
12287-002	The Supplemental EIS reinforces our belief that offshore wind energy can be developed in a manner that protects wildlife and habitat and we therefore hope that the Vineyard Wind project will go forward as quickly as possible.	Thank you for your comment.

Index Number	Comment Text	Response
12288-001	the construction of offshore wind turbines will degrade the coverage and quality of the ocean measurements made by the [Rutgers University] HF radar network	Section 3.12 of the FEIS has been revised to include a discussion of impacts on HF radar.
12288-002	If the rotation rate and orientation of the blades are known, the interference can be traced through the HF radar processing and removed before the surface currents are estimated. This may allow the radar operators to filter the contamination of the rotating blades in the software to maintain the data coverage within the offshore wind farms. Given this, we request that the offshore wind operators share these data in real-time to the HF radar operators to incorporate into the processing so that these data supporting USCG operations in the region will continue to be reliably delivered.	Section 3.12 of the FEIS has been revised to include a discussion of impacts on HF radar.
12291-001	Offshore wind has the potential to drive our economic recovery and will create tens of thousands of local jobs in a burgeoning industry over the next ten years.	Thank you for your comment.
12292-001	Suffolk County, NY is following these proceedings closely and we write to urge BOEM to stick to its published schedule, issue a Final Environmental Impact Statement in November and a record of decision approving the project, as proposed and modified by the applicant in December.	Thank you for your comment.
12292-002	Suffolk County views this work as critical to the future of our national security, environment, and economic recovery. As the first commercial-scale offshore wind project in the US, Vineyard Wind 1 will play a critical role in establishing a domestic offshore wind industry and realizing the tremendous potential economic benefits of this rapidly emerging industry.	Thank you for your comment.
12292-003	Regionally, Vineyard Wind 1 is expected to create 3,600 jobs - many of them unionized - as the offshore wind industry is built out over the next few years. As the local government to 1.5 Million residents of New York State, we look forward to additional offshore wind projects that will bring similar economic and environmental benefits to Long Island.	Thank you for your comment.
12292-004	Taken together, the U.S. now represents a nearly 30 GW market through 2035 based strictly on the procurement commitments that are established in state law. As a result of these state targets, offshore wind offers the chance to create a brand-new U.Sbased heavy industry.	Section 3.6.1.1 of the FEIS has been updated to provide additional information on employment and economic investment projected to result from east coast offshore wind development. The AWEA study cited in this section includes projections for up to 30 GW of offshore wind development; however, the FEIS conclusions and impact levels rely upon the lower or base level projections, because these levels are based upon offshore wind development closer to the 22 GW that BOEM has determined is "reasonably foreseeable" for purposes of the FEIS. Appendix A, Section A-4 of the SEIS explained BOEM's rationale in classifying 22 GW of potential future offshore wind construction within the Atlantic OCS as reasonably foreseeable. The 22 GW of constructed capacity would include a

Index	Comment Text	Response
Number		
		combination of development within the 17 active wind energy lease areas (16 commercial and 1 research) (Figure A.1-1), which include named projects and assumed future development within the remainder of lease areas outside of named project boundaries.
12292-005	Offshore wind has the potential to drive economic recovery and stimulate	Section 3.6 of the FEIS addresses impacts to employment and economics
	coastal economies up and down the east coast. As we begin recovering from the unprecedented social and economic impact of the Covid-19 pandemic, the approval of this project and subsequent projects will directly lead to the creation of much needed infrastructure investments, workforce training investments and thousands of jobs that come with good pay and benefits. Specifically, a study by the Workforce Development Institute found that 74 different occupations, including electricians, ironworkers, and welders are needed during the various stages of planning, development and operations of	from the proposed Project.
	offshore wind farms.	
12292-006	As part of Orsted's U.S. offshore wind build-out, they have already pledged nearly \$500M towards port facilities including one at Port Jefferson, NY which is located in Suffolk County. These ports will serve the diverse needs of the industry for component manufacturing, staging and O&M. In Port Jefferson, 100 permanent, full-time jobs will be deployed to support Orsted's 250-foot Service Operation Vessel, with a warehouse and office facility in Suffolk County.	Thank you for your comment.
12292-007	Large scale utility development like offshore wind not only will help reduce	Section 3.6 of the FEIS addresses impacts to employment and economics
	our carbon footprint but will also mean a tremendous amount of economic opportunity in the form of jobs and community benefits.	from the proposed Project.
12293-001	More importantly however is our potential to limit increasing carbon dioxide in the atmosphere with its concomitant effects of climate change.	Thank you for your comment.
12294-001	I found substantial flaws in the calculations and methodology employed by the USCG, all of which appear to bias the MARIPARS findings toward narrower navigation safety margins.	Section 3.11.2 of the FEIS has been updated to discuss the Final MARIPARS study (USCG 2020). That report states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study, which was subject to its own public review. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.

Index	Comment Text	Response
Number		
12294-002	My findings can be summarized as follows. The navigation safety recommendations of a 1x1 nm uniform grid in the MARIPARS study exactly match the proposal of the leaseholders, despite the fact that these recommendations are inconsistent with the USCG's own guidance on vessel safety. The MARIPARS contains both calculation errors and internally inconsistent statements, without which they would not be able to support the leaseholders' proposal. Furthermore, in my opinion, the MARIPARS analysis appears "cherry-picked" to support the leaseholders' proposal: the MARIPARS authors selected only the narrowest safety recommendation from European guidance, they offered no justification for this choice, and the recommendation selected was only available in a guidance document that had been previously reviewed and discarded by the USCG.	The Final MARIPARS study (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study (USCG 2020). The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
12294-003	In my letter to the USCG, I performed corrected calculations using their own published guidance. If there are to be no wider transit lanes through the uniform grid, then I estimate the minimum safe uniform grid spacing to be 1.87 nm. There are also reasonable arguments for transit lanes in excess of 6 nm wide for the longest passages through the MA/RI WEA. This means that RODA's proposal of a 1 nm uniform grid with 4 nm transit lanes already represents a substantial compromise relative to existing navigation safety standards. For the developers to argue that no wider transit lanes are needed with a 1 nm grid is simply absurd, and for the USCG to rubber stamp this claim is a betrayal of the public trust.	Section 3.11.5 discusses the potential impacts of wider transit lanes, Alternative F, on navigation and vessel traffic. The Final MARIPARS study (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study (USCG 2020). The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
12294-004	I urge BOEM not to rely on the MARIPARS as an authoritative study of navigation safety in the MA/RI WEA. The layout of turbines and the presence of transit lanes is a critical navigation safety issue, and more information is needed before the Vineyard Wind SEIS can be finalized.	The Final MARIPARS study (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study (USCG 2020). The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
12294-005	With respect to the alternatives contemplated in the SEIS, it appears that the safest approach would be combining a 4 nm transit lane under Alternative F with sub-alternatives D1 and D2, resulting in a uniform grid matching RODA's proposal. That said, the most prudent approach is to develop new	The FEIS addresses this comment in Sections 3.11.4 and 3.11.5. The USCG's Final MARIPARS report evaluated vessel traffic through the lease areas and recommended all surface structures be aligned in a 1 x 1 nautical mile grid, such that vessels anywhere in the RI and MA Lease Areas would have

Index Number	Comment Text	Response
	alternatives, because none of the existing alternatives go far enough to ensure vessel safety.	approximately 1 nautical mile wide lanes available when traveling north- south or east-west, and 0.6 to 0.8 nautical mile wide lanes when traveling northwest-southeast or northeast-southwest (USCG 2020). In response to concerns of increased navigational safety risks due to all transiting traffic being funneled into a navigational safety corridor, the USCG stated that "the standard and uniform [1-nautical-mile] grid pattern should alleviate concerns [with compression and funneling traffic through relatively narrow lanes] by providing vessels with sufficient spacing and multiple options to transit safely through the array. If the entire MA/RI WEA is developed consistent with such a grid pattern, mariners could choose among the many resulting navigation safety corridors to safely navigate through the entire MA/RI WEA" (USCG 2020)
12294-006	My findings (attached to this letter) were submitted as public comment to the USCG but were apparently ignored when the Final MARIPARS was issued, so I am resubmitting them here. I believe my comments are materially important to the turbine layouts contemplated in the Vineyard Wind SEIS.	Thank you for your comment.
12305-001	The economic and environmental costs of climate inaction outweigh the impacts of offshore wind development. The Intergovernmental Panel on Climate Change, the international authority on climate change, says we must decarbonize our economy by 2050 if we wish to reach levels of warming that our economies and societies can bounce back from. Failure to do so will result in irreparable harm to our communities and environment. Experts agree that whilst the impacts of climate change are severe and threaten to become irreparable, carbon emissions reductions can ameliorate its worst effects. This decarbonization process requires a swift transition to clean energy.	Thank you for your comment.
12305-002	In Massachusetts, offshore wind generation could prove to be not only the most abundant renewable energy resource, but also the most cost effective way to produce low-carbon electricity.	Thank you for your comment.
12305-003	The Nature Climate Change Analysis, conducted by top EPA officials, concluded that climate change could cost the U.S alone \$224 billion more per year by the year 2090.9 Whilst there are modest impacts associated with offshore wind development, these costs are incommensurate in magnitude to that of the cost of unfettered emissions and the subsequent exacerbation of global warming.	Thank you for your comment.
12305-004	Vineyard Wind's proposed turbine layout is more than sufficient to accommodate transit lanes used by the fishing and tourism industriesThe proposal has the support of every wind developer who's been granted leases in the New England Wind Energy Areas (WEAs) as well as from the United	The FEIS addresses this comment in Sections 3.11.2, 3.11.4, and 3.11.5. The Final MARIPARS study (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing

Index	Comment Text	Response
Number		
	States Coast Guard (USCG). The Massachusetts Rhode Island Port 11 Access Route Study (MARIPARS study) concludes the uniform grid patterns and consistent spacing of the turbines in Vineyard Wind's proposal create predictability and ample room to maneuver, both of which ensure safe navigability. This is in part because boats exceeding 400' in length have historically followed routes outside of the WEAs. Smaller vessels ought to have no issue safely operating within this system given the spacing and uniformity. The 1x1 NM layout seems excessive to begin with and is a large concession for offshore wind since it eliminates at least 30% of the area's potential energy production. The design does, however, address the primary feedback the commercial fishing industry provided regarding the need for transit lanes to ensure safe navigation.	Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study (USCG 2020).
12305-005	This is why the fishing industry's proposed expansion of transit lanes to be 4 NM apart is untenable. Approving such a plan would undermine the value that offshore wind promises to deliver and provides little benefit. Existing assessments and endorsements have already demonstrated the current proposal is more than adequate. In short, expanded transit lanes would essentially threaten the viability of the offshore wind industry in Massachusetts and set a high barrier to entry for offshore wind companies in states elsewhere. Specifically, the additional costs, reduced benefits, and the technical challenges and delays involved in compliance with expanded transit lanes could prove to be insurmountable impediments to offshore wind.	Section 3.10.1 and 3.11.2 of the FEIS addresses this comment. According to the AIS data, trawling vessels required 180-degree turning diameters between 0.16 nautical mile and 0.86 nautical mile in good weather and sea conditions (larger diameters would be required in poor weather and sea conditions, and to account for trawling equipment) (COP Volume III, Appendix III-I; Epsilon 2020b). These diameters were found to be possible within the Vineyard Wind turbine layout, where vessels could turn either within a row of WTGs or from one row to another (COP Volume III, Appendix III-I, Epsilon 2020a). In addition, a formula from offshore wind farm and maritime navigation guidance developed by the Permanent International Association of Navigation Congresses found that the minimum fishing vessel channel widths of 0.33 nautical mile and 0.32 nautical mile were calculated for transiting and trawling vessels, respectively (COP Volume III, Appendix III- I, Epsilon 2020a). Additional rationale is provided in the Final MARIPARS study (USCG 2020), which states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA.
12305-006	The proposal creates over 200 transit lanes throughout the entire wind project area, was proposed in response to public comments by the fishing industry, and provides an entire mile between turbines. Expanded spacing, additional transit lanes, and concerns over navigatibility are therefore ostensibly frivolous.	The FEIS addresses the USCG recommendations and findings in Sections 3.11.4 and 3.11.5.
12305-007	Specifically, the recreational fishing and tourism industries may have ulterior motives for pushing for additional transit lanes, deriving from misplaced fears that wind turbines will hamper their businesses. The logic driving this is that many people dislike the sight of wind turbines on the horizon. But not only is this a small price to pay for the benefit this infrastructure provides, but public perceptions will change over time. In any case, the wind turbines are placed fifteen miles off the nearest coastline,	The Final MARIPARS study (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final

Index Number	Comment Text	Response
Number	meaning they're practically invisible to the general public. Even for customers of the recreational fishing and other tourist industries operating in these passages, the turbines are spaced wide apart and will not dominate the views.	MARIPARS study (USCG 2020). The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
12305-008	Whilst the fishing industry has concerns over the wellbeing of its fisheries, we'd be wise to look towards pre-existing examples of offshore wind impacts on local ecology. The Danish Energy Agency arguably the offshore wind energy experts of the worldhas found that offshore wind has few effects on fish fauna and marine mammals and wind structures actually benefited habitat heterogeneity as well as benthic communities.	Thank you for your comment.
12305-009	A large part of the value proposition of wind energy is not just that it's cost effective, but that it can actually help the environment. By reducing emissions, wind energy can combat symptoms of climate change such as warmer waters and ocean acidification. This is why I find a terrible irony in the fishing industry opposing wind energy, especially when it has already been planning so considerately to minimize its impact on fisheries. Besides overfishing, ocean acidification and warmer waters are the biggest threats to our fisheries. This has already been demonstrated in the lobster fishing industry, particularly in Maine, which has seen lobsters populations transition north to cooler temperatures. The SEIS report also supports the finding that climate change will have detrimental and potentially irreversible impacts on fisheries and other aquatic life.	Thank you for your comment.
12305-010	Lastly, Vineyard has demonstrated its willingness to cooperate with important scientific research that will inform the fishing industry. It has agreed upon a collaboration with the University of Massachusetts Dartmouth School for Marine Science and Technology to monitor the WEA. This is another example which shows the offshore wind is willingness to develop facilities responsibly and make science based decisions.	Thank you for your comment.
12305-011	The offshore wind industry promises to deliver thousands of modern, well- paying and sustainable jobs to New Englanders. The American Wind Energy Association's (23 AWEA) research has found that the offshore wind industry will result in 83,000 jobs created over the next ten years, with economic output reaching upwards of \$25 billion each year by 2030. The Vineyard Wind project in particular is forecasted to create 3,600 jobs. To ensure high quality jobs are delivered upon, Vineyard Wind has been working with labor unions and committed to the nation's first offshore wind Project Labor Agreement (PLA). This charter promotes both fair compensation and the highest construction standards for the project.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Section 3.6.1.1 of the FEIS provides estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. Jobs and investment are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.

Index	Comment Text	Response
Number		
12312-001	Alternative F would dramatically and unnecessarily reduce the area available	Section 2.5 of the FEIS has been added which includes the agency-preferred
	for offshore wind turbines thus limiting the clean electricity we need and	alternative.
	setting an unfortunate precedent for future projects.	
12314-001	As I noted in my oral testimony, moving forward on this project is important	Thank you for your comment.
	not only for Massachusetts, but for states up and down the eastern seaboard	
	and the nation. It is critical on many levels: in the fight against climate	
	change, in the national effort to reduce criteria pollutants, to improve public	
	health, address longstanding environmental justice issues and to help restart	
	the economy in the wake of the COVID-19 pandemic.	
12314-002	Although the SEIS is, by design, focused on the cumulative impacts of the	Thank you for your comment.
	Vineyard Wind 1 project and other offshore wind projects that are	
	"reasonably foreseeable", the analysis assumes that if Vineyard Wind 1 does	
	not advance, other projects in various stages in the pipeline will. While this is	
	a practical approach to analyze cumulative impacts, it is simply not a realistic	
	assumption if Vineyard Wind 1 is not approved, or approved with	
	conditions that make it non-viable, it is likely that the 20 gigawatts ("GW")	
	of offshore wind projects that BOEM has concluded are "reasonably	
	foreseeable" will also not move forward	
12314-003	The Vineyard Wind team of Copenhagen Investment Partners and Avangrid	Thank you for your comment.
	Renewables, as the first commercial-scale offshore wind proposal to advance	
	since Cape Wind, have been careful to not just adhere to all applicable rules	
	and guidance; they have conducted extensive due diligence, worked closely	
	with the Bureau of Offshore Energy Management ("BOEM") and state and	
	local regulators, and collaborated with a wide variety of stakeholders,	
	including academic institutions, commercial fisherman and environmental	
	organizations. The federal planning process for offshore wind in this region	
	began almost 10 years ago (late 2010) with public comment periods and	
12314 004	Vineward Wind has modified the project in response to concerns and	Section 2.5 of the FEIS has been added which includes the agency preferred
12314-004	objections and they have collaborated with other Massachusetts and Phode	alternative
	Island lease holders. Collectively, the leaseholders have voluntarily agreed to	
	1 nautical mile by 1 nautical mile spacing to address concerns raised by both	
	commercial fishermen and the Coast Guard	
12314-005	Further Vineward Wind has voluntarily entered into a hinding agreement	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and
12514-005	with the National Wildlife Federation, the Natural Resources Defense	monitoring measures that would be implemented to avoid minimize and
	Council and the Conservation Law Foundation requiring a host of measures	mitigate adverse impacts to marine mammals specifically the NARW and
	that will help ensure protection of endangered right whales and other marine	include measures outlined in the referenced agreement. These measures
	mammals.	include, but are not limited to avoidance of peak NARW presence. use of

Index Number	Comment Text	Response
		sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures.
12314-006	The project has significant environmental benefits, it would: reduce carbon emissions by almost 1.7 million tons per year; cut NOx emissions by over 1,000 tons per year; and, reduce SO2 emissions by 860 tons per yearThe absence of, or even a significant delay in, the development of an offshore wind industry in the United States would have profound adverse impacts on the nation's ability to reduce greenhouse gases and slow the pace of climate change.	Thank you for your comment.
12314-007	The Vineyard Wind 1 project also has significant economic benefits: the project would generate \$2.8 billion in direct private investment and provide 3,600 family-sustaining jobs. It would have significant ratepayer benefits, generating \$1.4 billion in savings over the life of the project. Beyond the significant economic benefits that the Vineyard Wind 1 would provide, the economic benefits of the "reasonably foreseeable" offshore wind projects would be enormous. A recent study commissioned by the American Wind Energy Association ("AWEA") concluded the following: • The offshore wind industry will invest \$28 to \$57 billion in the U.S. economy between now and 2030, depending on installation levels and supply chain growth within the U.S.; • Offshore wind project development, construction, and operations will support 19,000 to 45,000 jobs by 2025 and 45,000 to 83,000 jobs by 2030; and • Investment in the U.S. offshore wind industry will deliver \$5.5 to \$14.2 billion per year by 2025, and \$12.5 to \$25.4 billion per year by 2030 in economic output. In addition to the AWEA study, the University of Delaware Special Initiative on Offshore Wind published a White Paper2 in 2019 that forecasted a nearly \$70 billion revenue opportunity for U.S. offshore wind component suppliers through the end of the coming decade. Despite the enormous economic potential for offshore wind in the U.S., the SEIS nonetheless concludes that the overall economic impact will be minor. It is hard to reconcile that conclusion with the considerable evidence that offshore wind development in the U.S. represents an enormous economic development, including massive investments in ports, marine vessels, foundations and related infrastructure. From 2010 through 2019, offshore wind investments in Europe totaled more than \$90 billion euros.3 Where wind investments in Europe totaled more than \$90 billion euros.3 Where	Section 3.6 of the FEIS has been updated to provide projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.

Index	Comment Text	Response
Number		
	entire offshore wind industry and will likely determine whether it will invest	
	billions in the U.S. and give birth to an entirely new domestic clean energy	
10014 000	industry.	
12314-008	Adoption of SGEIS Alternate F represents a perfect example of one such	Section 2.5 of the FEIS has been added which includes the agency-preferred
	onerous condition. This alternative, proposed by the Responsible Offshore	alternative.
	Wind Alliance, would impose a network of 4-nautical mile wide transit lanes.	
	Additional transit lanes would result in substantial technical challenges,	
	delays, cost increases to consumers, and more environmental impacts from	
	offshore wind development, with marginal gains and, as the USCG identifies,	
	potentially greater conflict among transiting and fishing vessels that are	
	"funneled into the corridors thereby increasing traffic density and risks for	
	vessel interaction." Further, imposition of Alternative F would reduce the	
	technical capacity of the Massachusetts and Rhode Island lease areas by	
	approximately 3,300 MW, which is 500 MW less than the current state	
	demand for offshore wind in the area."If after a decade of planning, siting	
	and stakeholder involvement, and a multi-year design and permitting process	
	by the developer, a fundamental and unnecessary restrictions such as	
	additional transit lanes is forced on this project, it would sow uncertainty in	
	this industry just as it is ready to get off the ground. The effect of a delay will	
	not be confined to a handful of offshore wind developers. It will include	
	parties that seek to finance projects, seek to establish and grow US-based	
	operations, those who plan to invest in infrastructure, vessels, shoreside and	
	other supports for offshore wind, as well as those aiming to build careers in	
	offshore wind and the organizations poised to develop curriculum and train	
	the offshore wind workforce. All these groups and more will face an	
	environment of uncertainty. In sum, the imposition of Alternative F would	
	drastically and unnecessarily reduce the wide-ranging and expansive benefits	
	from the Vineyard Wind 1 and future offshore wind projects in these lease	
	areas including emissions reductions, improved health, economic investment	
	and family-sustaining jobs. Finally, it would threaten the viability of all	
	offshore wind projects in the region from meeting their respective clean	
	energy goals.	
12314-009	As noted earlier, Vineyard Wind along with other developers of the New	Section 2.5 of the FEIS has been added which includes the agency-preferred
	England wind energy areas (WEAs) have agreed to advance all future	alternative.
	projects in their lease areas with a uniform 1 x 1 nautical mile (nm) layout.	
	The United States Coast Guard (USGS) has since determined that the	
	standard and uniform grid pattern "should provide[ing] vessels with	
	sufficient spacing and multiple options to transit safely through the array. If	
	the entire MA/RI WEA is developed consistent with such a grid pattern.	

Index	Comment Text	Response
Number	maning a sould shoose among the many manifies nervice tion affects comiders.	
	marmers could choose among the many resulting havigation safety corridors	
12314 10	As noted earlier. Vineward Wind along with other developers of the New	Section 2.5 of the FEIS has been added which includes the agency preferred
12314-10	England wind energy greas (WEAs) have agreed to advance all future	alternative
	projects in their lease areas with a uniform 1 x 1 nautical mile (nm) layout	
	The United States Coast Guard (USGS) has since determined that the	
	standard and uniform grid pattern "should provide [ing] vessels with	
	sufficient spacing and multiple options to transit safely through the array. If	
	the entire MA/RI WEA is developed consistent with such a grid pattern.	
	mariners could choose among the many resulting navigation safety corridors	
	to safely navigate through the entire MA/RI WEA."	
12318-001	I'm an electrician for 35 years, and this is a sound investment, for jobs, for	Thank you for your comment.
	our future, for our children, for our environment.	
12321-001	I write to strongly urge you to stay on schedule and move forward rapidly in	Thank you for your comment.
	the Vineyard Wind Energy project.	
12321-002	A day doesn't go by without further, mounting evidence of the urgency of	Thank you for your comment.
	wind and other renewable energy production. It is literally madness to slow	
	down and limit the scale of this and related projects. The convergence of	
	environmental and economic (investment/jobs) needs is strikingly clear.	
12326-001	Vineyard Wind 1 commercial scale offshore wind project will create 3,600	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
	jobs for people.	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
		3,600 FTE job years, including 1,100 to 1,550 job years during construction
		and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
1000 (000		during operation. These data were also provided in the DEIS.
12326-002	God created us with a responsibility to take care of his beautiful creation, not	Thank you for your comment.
12220 001	destroy it! Vineyard Wind labides by the Lords commands.	
12329-001	with the level of air pollution, we have to learn and work with our	I nank you for your comment.
	the trend and lower group house gasses for our groudshildren	
12320 002	This will also help our economic recovery from the devestation that we have	Section 3.6.2 of the FEIS provides estimated job growth from the Vineward
12329-002	suffered due to COVID19 Creating a new economical drive in a developing	Wind 1 Project within Massachusetts and specifically within southeastern
	industry. While also placing a need for more training and higher education	Massachusetts Additionally Section 3.6.1.1 of the FFIS has been undated
	Building and development of specialized equipment all driving up the Gross	with estimates from several sources of projected employment and investment
	National Product. While driving down the number of unemployed Every	resulting from growth of the wind energy industry along the Atlantic coast.
	dollar spent will be multiplied by the number of jobs, taxes paid and support	While the estimates are national, jobs are anticipated to be concentrated in
	industries to keep the project going.	and near the east coast states that would host offshore wind.
12332-001	Vineyard Wind's efforts are a no brainer with a projected 3,700 jobs created	Thank you for your comment.
	and 1.7 million tons of CO2 removed from the atmosphere annually it's a	
	win-win for our planet and humanity.	

Index	Comment Text	Response
Number		
12336-001	Please expedite the permitting process.	Thank you for your comment.
12348-001	Offshore wind farms are a necessary step towards sustainability and continued economic growth. These union jobs bring greater wealth to the communities they are in with good paying wages and excellent benefits. The wind farms themselves help to reduce our carbon footprint and ensure that future generations have the same opportunity we have to enjoy this planet.	Thank you for your comment.
12349-001	Offshore wind has the potential to drive our economic recovery and will create tens of thousands of local jobs in a burgeoning industry over the next 10 years.	Thank you for your comment.
12350-001	As a local 3 union member I am in full support of this project for several reasons. The work opportunities for myself and others just like me, the opportunity to be a part of furthering the use of renewable energy, and most of all gaining access to another area of work opportunities in the future.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12352-001	The wind farms will put me out of business and will destroy the many families I support We need a moratorium of 5 years to study the effects of wind farms on the environment.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
12352-002	You are replacing one energy source (food) for another energy source and that new energy source will be replaced by a more environmentally friendly energy source in 8 years by fusion power.	Thank you for your comment.
12356-001	I strongly oppose the extra transit lanes considered as Alternative F, as unnecessary and damaging for clean electricity generation in that area. Plenty of space is there with the 1 mile lanes.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12366-001	Clean energy and job creation!!	Thank you for your comment.
12367-001	Because of the increasing severity of the effects of climate change, now more than ever, we need to rely 100% on renewable energy and shift away from fossil fuels. Additionally, Vineyard Wind 1 will produce 800MW of clean energy which is a step in the right direction and will help Massachusetts reach its Clean Energy Standards.	Thank you for your comment.

Index	Comment Text	Response
12367-002	Particularly in the aftermath of COVID with the high level of unemployment, this wind farm is needed all the more. As Vineyard Wind will be able to create 3,600 jobs as the industry is built over the next few years. Furthermore, the offshore wind industry will create more than 80,000 jobs within the next decade.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Section 3.6.1.1 of the FEIS provides estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. Jobs and investment are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
12367-003	Permitting this wind farm to proceed without delay will allow these benefits to be realized sooner, and not additional years down the line.	Thank you for your comment.
12367-004	While the SDEIS makes clear there will be some impact associated with the project, they are overwhelmingly negligible to moderate.	Thank you for your comment.
12367-005	With regard to fishing specifically, the report says that any impact would be moderate. The report also says "the impacts are anticipated to be adverse in the near-term but may become neutral over time if fishing practices adapt to the presence of structures.	Thank you for your comment.
12367-006	Additionally, there will be actions taken during the construction of the wind farm to gradually increase the force at which the monopiles will be driven into the earth. Doing so, would be less threatening to marine animals.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including but are not limited to, soft start procedures.
12367-007	I hope BOEM permits this wind farm to move forward without any delay and to select Alternative D2.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12372-001	Why wouldn't we harvest clean electricity off the coasts of the United States of America??	Thank you for your comment.
12383-001	I believe its benefits will be many, among which are: -Mitigating the impact of fossil fuels in energy production and providing clean energy when the threat and effects of climate change are of the utmost importance.	Thank you for your comment.
12383-002	Producing Union jobs with good pay and benefits. - Making a strong positive economical impact for communities up and down the eastern seaboard, and setting a precedent for future clean energy development.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.

Index Number	Comment Text	Response
12390-001	It is time the United States joined the rest of the world in a transition from gas, oil and coal to clean energy, solar and wind. Our planet is demanding action, and we, the people are suffering as the effects of climate change begin to affect us all.	Thank you for your comment.
12391-001	As I understand it, the fishing industry is lobbying for transit lanes through already designated and awarded wind farm leases. BOEM should resist bowing to one special interest group at the expense of all others, particularly at this late stage.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12391-002	The Gulf of Maine and surrounds is ecologically damaged through decades of bottom trawling and overfishing (Steneck et al, 2011, Creation of a gilded trap by the high economic value of the maine lobster fishery). Today the catch of greatest economic value by far is a benthic scavenger (lobster). Even as lobster tonnage landed has exploded over the past two decades, the effort per unit catch has decreased. That is because the natural predators of lobsters (e.g., cod, flounder and other large demersal fish) have been all but removed from the ecosystem. Incredibly, the main food source for lobsters is the bait provided by fishermen. The bait comes from herring caught offshore, creating not only a new and artificial trophic chain but extending potential overfishing to the edge of the continental shelf. Today the ocean off southern New England is little more than a giant aquaculture farm.	Thank you for your comment.
12391-003	Currently the fishing industry is riding high on the lobster but it requires only a single unexpected event, such as disease or heat wave, to decimate the current monoculture and ruin the economy of many coastal areas. The solution is to diversify both the fishery and economy of coastal communities, and here is just such an opportunity.	Section 3.7.2 of the SEIS and FEIS discusses that offshore wind would diversity jobs and revenues in the geographic analysis area's "ocean economy" sector; therefore, no change to the FEIS is warranted.
12391-004	The ocean is largely unoccupied except for fishermen, so it is natural that they feel a sense of ownership, but the sea is a public resource and should be - and indeed is - managed for the public good. A balanced use of natural capital (more exploitation of offshore wind energy, less exploitation of stressed fish stocks) is in the public good.	Thank you for your comment.
12405-001	Please don't let this great opportunity for energy production slip through our fingers	Thank you for your comment.
12407-001	we need the 1x1 nautical mile layout NOT the alternative F. we need wind energy now for a cleaner earth.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12410-001	New York cannot meet its greenhouse gas reduction and renewable energy goals without offshore winds. The time to act is now; we should no longer sit in the shadows of Europe and Asia, who are far more environmentally advanced than us.	Thank you for your comment.

Index Number	Comment Text	Response
12422-001	I'd like to voice support for the project and to ask that we minimize corridor requirements that would set a precedent in this growing industry. We must not economically barr our ability as a country to enjoy reliable, secure, clean energy.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12423-001	After going through the process I hope that this project will be given the green light, if simple because we need to get away from fossil fuels. As a small island the cost of bringing energy to the island is increasing each year, I hope this project will bring cheaper energy to the island.	Thank you for your comment.
12426-001	As the founder of Earthlobbyist dot com I fully support the construction of Vineyard Wind LLC's Proposed Wind Energy Facility Offshore Massachusetts understanding there will be no long term damages to the ocean or creatures, understanding there will be some construction disturbances that I believe the creatures will avoid.	Thank you for your comment.
12428-001	But the wind farms are circumventing the Jones Act and the boats building the wind farms will be foreign flagged with foreign workers, working for foreign companies and the profits will leave the USA and go to Europe.	Section 3.6.1.1 of the FEIS references several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the anticipated growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions. Consideration of the nationality of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
12430-001	The wind farms will have a negative effect on the commercial fishing industry. City of New Bedford will be drastically hurt. The estimates of jobs created are inflated. The wind farms are not as productive as promised; they are barely 40% efficient. The ocean will be littered with derelict towers in a few short years when fusion power is a reality Please ask for a moratorium, the damage will be forever	Thank you for your comment.
12432-001	On behalf of www.BraytonPointCommerceCentercom, in Sonierset, MA, we write to strongly support Vineyard Wind's 800 MW wind farm to be built in federal waters off Cape Cod and just 29 miles south of Brayton Point, a key transfer site for electrical generation.	Thank you for your comment.

Number Isupport the Vineyard Wind project. The US is so far behind the rest of the world in renewable energies, this would definitely be a step in the right direction. Thank you for your comment. 12443-001 Minimal impact Maximum yield! There is nothing in the Modern World we could build with a smaller impact on the environment and resources, than what this wind project could do. The benefit can be obtained with the best of efficiency, providing good green renewable electricity for generations to come. Thank you for your comment. 12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. Thank you for your comment. 12450-001 I'm a local 3 member & Westchester resident I believe this project is a great thing for the environment & for job opportunity for local residents Thank you for your comment. 12451-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(cry energy is urgent. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including expertise of the commercial f	Index	Comment Text	Response
 12450-001 Fragment are relevable energies, this would definitely be a step in the right direction. 12446-001 Minimal impact Maximum yield! There is nothing in the Modern World we could build with a smaller impact on the environment and resources, than what this wind project could do. The benefit can be obtained with the best of efficiency, providing good green renewable electricity for generations to come. 12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. 12450-001 I'm a local 3 member & Westchester resident 1 believe this project is a great thing for the environment & for job opportunity for local residents 12451-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist two studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. 	Number 12/33-001	I support the Vineward Wind project. The US is so far behind the rest of the	Thank you for your comment
direction. 12446-001 Minimal impact Maximum yield! There is nothing in the Modern World we could build with a smaller impact on the environment and resources, than what this wind project could do. The benefit can be obtained with the best of efficiency, providing good green renewable electricity for generations to come. Thank you for your comment. 12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. Thank you for your comment. 12450-001 I'm a local 3 member & Westchester resident I believe this project is a great thing for the environment & for job opportunity for local residents Thank you for your comment. 12450-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy are in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. Section 1.1 of the DEIS contained, as well as the FEIS, information on the fishing industry and fisherice smanagers. This occurred as part of the o	12455-001	world in renewable energies, this would definitely be a step in the right	Thank you for your comment.
12446-001 Minimal impact Maximum yield! There is nothing in the Modern World we could build with a smaller impact on the environment and resources, than what this wind project could do. The benefit can be obtained with the best of efficiency, providing good green renewable electricity for generations to come. Thank you for your comment. 12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. Thank you for your comment. 12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economent & for job opportunity for local residents Thank you for your comment. 12451-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. Section 1.1 of the EIS has been updated with information on the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for		direction.	
could build with a smaller impact on the environment and resources, than what this wind project could do. The benefit can be obtained with the best of efficiency, providing good green renewable electricity for generations to come.Thank you for your comment.12447-001I strongly encourage BOEM to move the permitting process forward and 	12446-001	Minimal impact Maximum yield! There is nothing in the Modern World we	Thank you for your comment.
what this wind project could do. The benefit can be obtained with the best of efficiency, providing good green renewable electricity for generations to come. Istrongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. Thank you for your comment. 12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. Thank you for your comment. 12450-001 I'm a local 3 member & Westchester resident I believe this project is a great thing for the environment & for job opportunity for local residents Thank you for your comment. 12451-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. Section 1.1 of the DEIS contained, as well as the FEIS, information on the should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the com		could build with a smaller impact on the environment and resources, than	
efficiency, providing good green renewable electricity for generations to come. 12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. Thank you for your comment. 12450-001 I'm a local 3 member & Westchester resident I believe this project is a great thing for the environment & for job opportunity for local residents Thank you for your comment. 12451-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. Section 1.1 of the official public notice and comment period for the Request for		what this wind project could do. The benefit can be obtained with the best of	
come. 12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. Thank you for your comment. 12450-001 I'm a local 3 member & Westchester resident I believe this project is a great thing for the environment & for job opportunity for local residents Thank you for your comment. 12451-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. Section 1.1 of the Ne Nature Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for		efficiency, providing good green renewable electricity for generations to	
12447-001 I strongly encourage BOEM to move the permitting process forward and unlock the economic and jobs potential of the US offshore wind industry. I have you for your comment. 12450-001 I'm a local 3 member & Westchester resident I believe this project is a great thing for the environment & for job opportunity for local residents Thank you for your comment. 12451-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up	12447.001	come.	
Indices the economic and yos potential of the OS offshore wind mutaty.12450-001I'm a local 3 member & Westchester resident I believe this project is a great thing for the environment & for job opportunity for local residentsThank you for your comment.12451-001I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent.Thank you for your comment.12453-001I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way.Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for	12447-001	I strongly encourage BOEM to move the permitting process forward and unlock the aconomic and jobs notential of the US offehore wind industry	I nank you for your comment.
12450-001 I find for the environment & for job opportunity for local residents 12451-001 I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent. Thank you for your comment. 12453-001 I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for	12450-001	L'm a local 3 member & Westchester resident L believe this project is a great	Thank you for your comment
12451-001I think that it's time to move beyond assessing and on to actually building, creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent.Thank you for your comment.12453-001I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States 	12450-001	thing for the environment & for job opportunity for local residents	
creating jobs and clean energyAs a scientist who studies climate change, I assure you that the transition from dirty to clean(er) energy is urgent.12453-001I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way.Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for	12451-001	I think that it's time to move beyond assessing and on to actually building,	Thank you for your comment.
assure you that the transition from dirty to clean(er) energy is urgent.12453-001I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way.Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for		creating jobs and clean energyAs a scientist who studies climate change, I	
12453-001I still have many concerns regarding BOEM's consideration process for the approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way.		assure you that the transition from dirty to clean(er) energy is urgent.	
approval of the first large-scale offshore wind energy area in United States waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way.	12453-001	I still have many concerns regarding BOEM's consideration process for the	Section 1.1 of the DEIS contained, as well as the FEIS, information on the
waters. I work in the commercial fishing industry and know that historic fishing locations and practices will be directly and permanently impacted by any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for		approval of the first large-scale offshore wind energy area in United States	background of the process and proposed Project. Appendix C (formerly
any offshore development. Every effort should be made to preserve and protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way.		waters. I work in the commercial fishing industry and know that historic	Chapter 4) of the FEIS has been updated with information on the
protect these locations. Any planned project would benefit from including the expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way.		any offshore development. Every effort should be made to preserve and	wind energy area offshore Massachusetts was reduced by approximately 50%
expertise of the commercial fishing industry but, up to now, this has not occurred in any meaningful way. In the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for		protect these locations. Any planned project would be nefit from including the	through the removal of the Nantucket Lightshin Habitat Closure Area based
occurred in any meaningful way. as part of the official public notice and comment period for the Request for		expertise of the commercial fishing industry but, up to now, this has not	on comments from the fishing industry and fisheries managers. This occurred
		occurred in any meaningful way.	as part of the official public notice and comment period for the Request for
Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area			Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area
south of Cox Ledge was removed from leasing consideration by BOEM			south of Cox Ledge was removed from leasing consideration by BOEM
during the Area Identification process. Through this process, high value			during the Area Identification process. Through this process, high value
fishing areas were identified by the Rhode Island Fisheries Advisory Board			fishing areas were identified by the Rhode Island Fisheries Advisory Board
and removed prior to leasing. Additionally, the NEPA process has allowed			and removed prior to leasing. Additionally, the NEPA process has allowed
alternatives requested by the fishing industry			alternatives requested by the fishing industry
12453-002 More accurate and sufficient data regarding the impact of offshore wind Section 1.1 of the DEIS contained as well as the FEIS information on the	12453-002	More accurate and sufficient data regarding the impact of offshore wind	Section 1.1 of the DEIS contained as well as the FEIS information on the
farms on commercial fishing is needed when considering where to locate background of the process and proposed Project. Appendix C (formerly	12 133 002	farms on commercial fishing is needed when considering where to locate	background of the process and proposed Project. Appendix C (formerly
offshore development projects. In the process thus far, it appears evident that Chapter 4) of the FEIS has been updated with information on the		offshore development projects. In the process thus far, it appears evident that	Chapter 4) of the FEIS has been updated with information on the
inadequate and incomplete data have contributed to BOEM and offshore coordination and consultation process to date for the proposed Project. The		inadequate and incomplete data have contributed to BOEM and offshore	coordination and consultation process to date for the proposed Project. The
wind proponents "turning a blind eye" to the importance of these areas to wind energy area offshore Massachusetts was reduced by approximately 50%		wind proponents "turning a blind eye" to the importance of these areas to	wind energy area offshore Massachusetts was reduced by approximately 50%
commercial fishing and to the socio-economic impacts on fishing through the removal of the Nantucket Lightship Habitat Closure Area based		commercial fishing and to the socio-economic impacts on fishing	through the removal of the Nantucket Lightship Habitat Closure Area based
communities. on comments from the fishing industry and fisheries managers. This occurred		communities.	on comments from the fishing industry and fisheries managers. This occurred
as part of the official public notice and comment period for the Request for			as part of the official public notice and comment period for the Request for

Index	Comment Text	Response
Number		
12453-003	It is also very important to have an accurate picture of what happens to these wind projects after they have completed their life-cycle and are decommissioned. Will the companies that are building the wind farms be required by BOEM to be bonded by both contract bonds and fidelity bonds? The Block Island wind farm was sold as soon as it was completed and so who is responsible when it comes time to dismantle it or if something goes wrong. Basically BOEM says that they make the developer keep some money for decommissioning. What does that mean exactly if there is no comprehensive process for that decommissioning? How is it possible to know the costs? At the very least, the power purchase contractor should be required to assume a lien for decommissioning and that lien would follow any company purchasing that company in the future. There will be high and possibly unforeseen costs for decommissioning these projects, including	south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing. Additionally, the NEPA process has allowed for comments of commercial fishermen including the inclusion of three alternatives requested by the fishing industry. As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and other BOEM requirements, Vineyard Wind would be required to remove or decommission all installations and clear the seabed of all obstructions created by the proposed Project. Vineyard Wind would need to obtain separate and subsequent approval from BOEM to retire any portion of the Proposed Action in place. If the COP is approved or approved with modifications, Vineyard Wind would have to submit a bond that would be held by the U.S. government to cover the cost of decommissioning the entire facility. This explanation has been added to Section 2.1.1.3 of the FEIS.
	and these issues have not been adequately addressed by BOEM or the offshore wind proponents.	
12456-001	I encourage you to permit the construction of the off shore projects we need the work more than ever to stimulate the economy.	Thank you for your comment.
12473-001	In short, offshore wind has the potential toplay a significant role in reducing America's widening income gap and emerge as a new sector led by American innovation. Further, high capacity factor and affordable offshore wind can play a significant de-carbonization role to tackle ocean acidification.	Thank you for your comment.
12474-001	I'm writing about the importance of the Supplemental Environmental Impact Statement for Vineyard Wind. The report is a critical step for the industry and will have a major impact on future offshore wind projects - including projects off the coast of New JerseyOffshore wind energy will provide clean energy, create jobs, revitalize communities, generate a supply chain and inject billions of dollars into the local economy. It's a win-win for New Jersey's residents and businesses.	Thank you for your comment.

Index	Comment Text	Response
12477-001	This provides a clean and cost effective source of energy. This should be	Thank you for your comment.
	during this horrific pandemic.	
12486-001	I strongly support this project because it would provide good Union jobs and would be a positive	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern
	economic impact on the Eastern seaboard especially in this horrendous	Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated
	economic times of COVID-19 and help our climate change issues.	resulting from growth of the wind energy industry along the Atlantic coast.
		While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12497-001	The impacts won't be astronomical. The BOEM report shows that Point Judith BI would be the fishing port with the greatest potential impacts from	Thank you for your comment.
	offshore wind development, and yet these "impacts" only total 5% of Point	
	Judith's revenues. Furthermore, this 5% is merely exposed to wind	
	development up and down the coast, not replaced by it. And finally there will	
	be compensations put in place - it's not as if these concerns haven't been accounted for	
12497-002	The lanes have already been widened. This whole process has been and still	Section 2.5 of the FEIS has been added which includes the agency-preferred
	is a negotiation.	alternative.
12497-003	Commercial fishermen feel like they're being railroaded and have no choice.	Thank you for your comment.
	Proponents of offshore wind feel that they've been bending over backwards	
12407 004	trying to appease commercial fishermen.	Section 2.2 of the EEIS has been undeted to include European studies of
12497-004	although it's valid it's also overblown trying to collect years' worth of data	impacts from offshore wind facilities on finfish and Section 3.10 has been
	would unfortunately be time spent not making real strides toward emission	updated with a U.K. study (by Roach et al.) that shows catch rates remain the
	reductions. What we can do is look to the data from Europe and China and	same at sites adjacent to offshore wind facilities and within offshore wind
	use it to inform our research - of which there is a great deal	facilities.
12497-005	Lowering carbon emissions and making real strides to combat climate change	Thank you for your comment.
	MUST be our priority. It must be done in an equitable manner, but frankly it	
	IS being done in such a fashion. The complaints of commercial fishermen are	
	greater good	
12584-001	We need to stop relying on oil. The environment is also an issue as is the need	Thank you for your comment.
12001 001	to provide good paying union Job's	
12596-001	The Vineyard Wind project offers an incredible opportunity for clean energy	Thank you for your comment.
	at scale	
12596-002	a project of this scale will bring jobs and economic renewal at a time when it	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard
	is desperately	Wind 1 Project within Massachusetts and specifically within southeastern
	needed.	Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated

Index	Comment Text	Response
Number		
		with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12605-001	Wind turbines are an important source of renewable energy and would be beneficial for for the environment as we decrease our dependability of fossil fuels. Wind turbines, constructed by unionized electrical workers and ironworkers, are helping powera clean-energy future.	Thank you for your comment.
12606-001	At a time when covid has dashed so many citizens hopes, a job on this project is a life saver.	Thank you for your comment.
12608-001	This is an essential project for the advancement of New York and the United States.	Thank you for your comment.
12619-001	When it comes to projects like Vineyard Wind 1, I don't have time for anymore delays. I can't afford compromises that limit our ability to become independent of fossil fuels.	Thank you for your comment.
12634-001	This is exactly the type of project we as Americans and as the human race need to be embracing. This is the most responsible thing we can do as we face the challenge of climate change. Saving our planet, establishing good jobs, helping our economy!	Thank you for your comment.
12640-001	This wind farm will help us meet the energy needs that our other fuels are now providing, while preparing for the future.	Thank you for your comment.
12640-002	The building of these facilities will also provide employment to a workforce that is under siege from a virus that has swept the country. The building of them by a talented workforce will insure that these facilities are installed and maintained correctly. A union workforce that has the talent and training to accomplish this.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12661-001	Not only would this proposed project disrupt marine life, which is already struggling from overfishing as well as pollution and plastics in our oceans, it would also negatively effect migrating birds, bats, fisherman and local communities.	Thank you for your comment.
12661-002	I also urge you to consult the local Indigenous Peoples and Wampanoag to consider how this project would continue harming local communities.	The United Nations Declaration on the Rights of Indigenous Peoples is not a part of the regulatory framework that federal agencies such as BOEM follow during the NEPA process. BOEM engages with the public and other National Historic Preservation Act Section 106 consulting parties throughout the NEPA process to assess impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. Through the NHPA Section 106 review process,

Index	Comment Text	Response
Number		
		BOEM additionally works to resolve adverse effects to National Register- eligible historic properties through avoidance, minimization, and mitigation. No regulatory obligation exists that requires a particular outcome, decision, or compensation.
12661-003	Please do not put economic potential or political support over the opinions and perspectives of the local people.	Thank you for your comment.
12661-004	Consider the consequences of this project and you will see it does more harm than good and we need to find an alternative, ideally land-based, renewable energy option.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action.
12661-005	[the Project would be] harmful to ocean floor and pollutes waters	Section 3.3 of the SEIS discussed the impacts of the proposed Project on the seafloor and Section A.8.2 of the SEIS discussed the impacts on water quality and pollution. Therefore, no change to the FEIS is warranted.
12661-006	[the Project would generate] toxic chemicals and petro needed for operation (turbine lubricant provided by Chevron!)	Section A.8.2.2 of the SEIS addressed the potential for accidental releases and discharges associated with the proposed Project. Therefore, no change to the FEIS is warranted.
12661-007	[the Project would generate] electromagnetic field in water and air	Thank you for your comment.
12661-008	[the Project] destroys marine wildlife habitat	Sections 3.2, 3.3, 3.4, 3.5, and 3.6 of the SEIS discussed the potential impacts of the proposed Project on habitat for marine wildlife. Therefore, no change to the FEIS warranted.
12661-009	[the Project would be] deadly to migrating birds and bats	Thank you for your comment.
12661-010	[the Project would be] harmful to fish and other ocean creatures	Sections 3.3, 3.4, 3.5, 3.6 and Appendix A of the SEIS discussed the potential impacts of the proposed Project on marine animals. Therefore, no change to the FEIS is warranted.
12661-011	[the Project] disrupts fishing and navigation channels	Section 3.10.1 and 3.11.2 of the FEIS addresses this comment. According to the AIS data, trawling vessels required 180-degree turning diameters between 0.16 nautical mile and 0.86 nautical mile in good weather and sea conditions (larger diameters would be required in poor weather and sea conditions, and to account for trawling equipment) (COP Volume III, Appendix III-I; Epsilon 2020b). These diameters were found to be possible within the Vineyard Wind turbine layout, where vessels could turn either within a row of WTGs or from one row to another (COP Volume III, Appendix III-I, Epsilon 2020a). In addition, a formula from offshore wind farm and maritime navigation guidance developed by the Permanent International Association of Navigation Congresses found that the minimum fishing vessel channel widths of 0.33 nautical mile and 0.32 nautical mile were calculated for transiting and trawling vessels, respectively (COP Volume III, Appendix III-I, Epsilon 2020a). Additional rationale is provided in the Final MARIPARS

Index Number	Comment Text	Response
Number		study (USCG 2020), which states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA.
12661-012	[the Project would be an] eye soar on the now beautiful ocean horizon	The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the offshore wind development. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations provided by Vineyard Wind that provide views of the 14 MW wind turbines as well as simulations of Vineyard Wind 1 combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment.
12661-013	[the Project's] underwater noise disrupts wildlife	Sections 3.4, 3.5, and 3.6 of the SEIS discussed the potential impacts of WTG operational noise. Therefore, no change to the FEIS is warranted.
12661-014	construction and shipping of wind turbines pollutes	The emissions associated with these activities are considered and analyzed in the FEIS.
12661-015	maintaining and operating wind turbines also pollutes	The emissions associated with these activities are considered and analyzed in the FEIS.
12661-016	[the Project requires] burning fuel during times of too little or no wind	Please note that the capacity of an energy facility (MW) is not necessarily the same as the energy generated at any given time (MWh). A discussion of power plants, generation, and capacity can be found here: https://www.eia.gov/energyexplained/electricity/electricity-in-the-us-generation-capacity-and-sales.php
12661-017	While I understand we need to create renewable energy immediately, we cannot continue down the same path of destruction and devestation of our planet, its biodiversity and people. Wind turbines still burn fossil fuels, even if it is less and better than coal, also how we construct, operate and maintain these machines matters.	Thank you for your comment.
12661-018	There are better solutions to our climate crisis that do not involved the continued destruction of wildlife and their habitats, not to mention continuing our pollution and use of fossil fuels to operate these wind turbines.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action.
12699-001	Also, the invested time and proper planning to ensure this project remains committed to providing equity with other regional maritime job sectors has further positioned us to launch the project. Overall, a variety of stakeholders are prepared and ready to exemplify job growth and innovation - let's get to work!	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12711-001	we believe that the 1 X 1 Nautical Mile corridor standard for maritime and marine traffic is adequate in addressing the issue of safe passage for maritime traffic traveling in and thru the wind farm development areas.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index Number	Comment Text	Response
12725-001	As a union electrician I highly urge the BOEM to move forward with the offshore wind projects to help create thousands of jobs and also help to reduce our huge carbon footprint, the future is now and this will be all worth it for generations to come.	Thank you for your comment.
12727-001	CRCJ has previously supported the uniform 1x1 nautical mile grid layout for wind turbines throughout the New England Wind Energy Area that was endorsed by the US Coast Guard (USCG) in its MARIPARS (Massachusetts Rhode Island Port Access Route Study) that was released in May 2020We continue to support this 1 x 1 NM uniform grid pattern and urge BOEM not to select Alternative F in the SEIS, which would greatly reduce the benefits including emissions reduction, improved health, economic investment, and jobs that will come from this industry's growth.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12727-002	Vineyard Wind 1 is expected to create 3,600 jobs for local residents, while making a significant contribution to the efforts to tackle climate change. These benefits will be multiplied by each project—including those approved for Connecticut—built out over the next few years.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS.
12727-003	The 1 x 1 NM layout eliminates at least 30% of the area's potential energy production but addresses the main comments from the commercial fishing industry regarding the need for transit lanes to ensure safe navigation raised during the public consultation process for Vineyard Wind 1. The 1 x 1 NM uniform layout creates over 200 transit lanes throughout the entire wind project area. Adding transit lanes to a uniform 1 x 1 NM turbine spacing layout – spacing that is already greater than that of any existing offshore wind project in the world – would threaten the viability of all offshore wind projects in the region and their ability to meet the clean energy supply goals.	The FEIS addresses the USCG recommendations and findings in Sections 3.11.4 and 3.11.5.
12727-004	Offshore wind energy development represents a generational opportunity for the hardworking men and women in the building trades, and will result in thousands of new, local well-paid jobs with good benefits. It also represents an exciting opportunity to create expanded access to apprenticeships and careers in the construction trades for low-income and workers of color in the communities where the on-shore operations of these projects will be based.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12727-005	Vineyard Wind's commitment to local workforce development sets a precedent for the industry that offshore wind projects will be constructed by the building trades unions, ensuring fair wages and consistent work for local tradesmen and women as the industry is built out. As the first commercialscale offshore wind project in the US, the Vineyard Wind 1 will play a critical role in establishing a domestic offshore wind industry and	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.

Index	Comment Text	Response
Number	realizing the tremendous potential economic benefits of this rapidly emerging industry.	
12727-006	Moving toward a 100% US workforce that captures the full economic benefits of this industry will require consistent, predictable projects entering construction to allow for workers to gain experience and qualifications necessary to replace the European workers.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12731-001	1) Geophysical Surveys: There have been multiple years of seismic surveys taking place across the MA/RI wind energy area. These surveys are not very well understood but there are scientific papers that point to some troubling effects. Anecdotal observations from the fishing fleet are also cause for concern. The survey vessels impact the ability for fishermen to catch some commercial important species. BOEM also seems to have neglected to take these surveys into account while fisheries monitoring surveys are ongoing. So called baseline study's which are intended to understand potential impacts from wind energy projects have been compromised. For Example. The recent BOEM funded Atlantic Cod study in the South Fork Project area did not let the scientist conducting the project know Geophysical surveys were being conducted at the same time the Atlantic Cod project was taking place. There are scientific papers devoted to the effects said surveys have shown to have on Atlantic COD. There have also been multiple interactions with fixed gear fishermen who have lost gear and catch with no fair mechanism for fishermen to be made whole.	The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). This is a Project-specific EIS, not a Programmatic EIS or assessment.
12731-002	2) MARIPARS : The Peer Review conducted by Dr Sproul clearly proves the report is compromised and therefore should be rejected.	The Final MARIPARS study (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study (USCG 2020). The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
12731-003	3) North Atlantic Right Whales: Its troubling that BOEM may allow these projects to move forward without consideration of this endangered species. The MA/RI WEA (WIND ENERGY AREA) is a known winter feeding	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. A detailed analysis of impacts to ESA listed species is provided in

Index	Comment Text	Response
Number		
	grounds for these whales. There is little science available to inform what the outcome of these projects will have on the whales or their primary food source calanoid copepod. Both Electromagnetic Fields and the disturbance and noise from the turbines and the blades themselves may have negative effects on these animals. A race for tax incentives should not be allowed to override quality science in order to go forth responsibly.	the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional discussion of potential impacts to marine mammals, including the NARW is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Also discussed in the Biological Opinion are the potential effects to copepods and other prey items of marine mammals. Sections 3.3.7.3 of the DEIS and Sections 3.5.1 and 3.5.2 of the SEIS discussed the potential impacts of EMF on marine mammals and the potential consequences to marine mammal migration. As discussed, modeled and measured magnetic fields from AC cables buried to a depth of 3 feet would emit detectable fields up to 82 feet above the cable and 79 feet along the sea floor. Vineyard Wind proposes to bury Project cables to a depth of 5-8 feet, providing greater shielding and reducing field detection distances. Additional discussion of the uncertainty regarding the individual and/or population level impacts of EMF on marine mammals was provided in Appendix H of the SEIS. Given the extremely localized nature of the potential EMF related impacts, marine mammal exposure is expected to be low. Section 3.3.7.3, of the DEIS and Section 3.5.1 of the SEIS discussed the antione associated with operational WTGS would reach ambient levels. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at 164 feet (50 meters; Miller and Potty 2017).
12733-001	In order to deliver these economic benefits, I believe Alternative D2 is the only alternative which meets the needs of all maritime users. A one nautical mile by one nautical mile grid provides ample room for safe navigation. Any mariner having difficulty navigating a vessel in this much space would do well to seek another profession or hobby. Alternative F poses serious safety issues in that it will funnel traffic into condensed areas. As a mariner who navigates the Vineyard Wind area, I ask BOEM to consider all mariners needs by adopting Alternative D2 and rejecting Alternative F.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12748-001	The United States is finally pursuing the efficient and renewable energy sources that European countries have successfully taken advantage of for years now. As I understand it, all appropriate reviews have been completed at the federal.	Thank you for your comment.
Index	Comment Text	Response
-----------	--	---
Number	state, and local levels with BOEM permitting being the final stage of	
	approval. The future belongs to non-fossil fuel energy resources. In the	
	opinion of the vast majority of experts in all fields, renewable forms of	
	energy production are required in order to reduce our planet's carbon	
	emissions and diminish the already harmful effects of global climate change.	
	Based on the science, this is no longer up for debate. We must act as a nation	
	to embrace off-shore wind, and we must act now. Delay is not an option. We	
	have to think of the generations who follow us.	
12749-001	I am writing in support of the Vineyard Wind 1 project This proposed project	Thank you for your comment.
	has been reviewed extensively by federal, state, and local regulators and	
	experts. Thousands of jobs will be created by offshore wind including a	
	diverse local supply chain. The wind turbines will be laid out at one square	
	mile intervals. This leaves plenty of room for safe navigation and fishing in	
	the wind farm area. This project will also supply 800 MW of electricity	
	which will be part of the state of Massachusetts overall plan to go green by	
	the year 2050. It will also help the island of Martha's Vineyard to reach its	
	goal of 100% sustainable green energy by the year 2040. Action must be	
	taken now to have any hope of curtailing our current climate crisis. The	
	Vineyard wind one project is headed by two companies with extensive	
	experience in offshore wind development. They are European companies that	
	have been implementing wind power for over 30 years. The technology is	
12754 001	sale and effective.	
12/54-001	Where is the science? Migration patterns for some species are going to be	Sections 3.3 and 3.4 of the SEIS addressed potential consequences regarding
	changed or wiped out, invasive species are going to move into new areas, and	migration, invasive species, noise, and EMF. Therefore, no change to the
	some species that can't adjust to the noise, vibrations, and electric current will	FEIS IS Warranied.
12754 002	Cease to exist.	DOEM is avaluating Vineward Wind's COD which is for the development of
12/34-002	Europe didn't do any studies, one would think we would learn from their	an 800 MW offshore wind form and the notential impacts associated with
	inistakes. We need a moratorium to establish a baseline.	their action Section 2.5 of the EEIS has been added which includes the
		agency-preferred alternative
12755-001	PLEASE DO NOT allow Offshore Wind to Circumvent the Iones Act	Section 3.6.1.1 of the FFIS references several studies that provide projections
12755 001	Similar to What The Cruise Shin Industry has Done I call attention to the	of economic investment from offshore wind. The numbers of estimated jobs
	Iones Act "Cabotage Regulation"	shown in the FEIS are only domestic jobs, and for the Vinevard Wind 1
	volues net cusounge regulation,	Project are specifically jobs in Massachusetts Referenced studies incorporate
		varying projections of foreign versus domestic economic activity, depending
		upon the anticipated growth of the domestic offshore wind supply chain, and
		the FEIS consistently uses the base or lower projections of domestic
		economic activity in arriving at conclusions. Consideration of the nationality

Index	Comment Text	Response
Number		of the applicants is not required under NEDA and is not necessary to support
		the findings in Section 3.6.1.1
12755-002	PLEASE INCLUDE LANGUAGE prior to the issuance of any development permit that would require vessels working on the project before, during and after construction to follow the Cabotage Regulation to the letter of the law, regardless of the distance from shore. This is America and The Jobs Belong to Americans Both On and Offshore.	Section 3.6.1.1 of the FEIS references several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the anticipated growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions. Consideration of the nationality
		of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
12755-003	Furthermore, I request language requiring Onboard Fisheries Liaisons to be	Vineyard Win has proposed a fisheries communication plan that details how
	onboard all vessels. To be fair, if a Protected Species Observer is required,	fishermen can be notified directly of all vessel movements in addition to the
	then an Onboard Fisheries Liaison should be required as well. Currently,	Local Notice to Mariners that is broadcast on marine radio (Appendix D).
	turtles have more representation than the very people who work their fingers	Additionally, BOEM publishes the name and phone number of the fisheries
	to the bone and risk their lives on a daily basis to feed America and the rest	representative and fisheries liaison on it's website for every active project.
	of the world.	
12759-001	Offshore wind provides clean, renewable energy. I am a strong supporter of	Thank you for your comment.
	the need for the rapid reduction in the use of fossil fuels which produce	
	carbon that is warming the planet. Offshore wind energy is critical for	
	meeting clean (non-fossil fuel) energy goals in New England and the	
	emission reductions necessary to stop the disastrous impacts of climate	
	towards that objective. The Supplemental EIS demonstrates that offshore	
	wind energy can be developed in a manner that protects wildlife and habitat	
12784-001	It is important that Vineward Wind and subsequent offshore wind initiatives	Thank you for your comment
12704 001	receive public support. The development has potential to drive a larger shift	Thank you for your comment.
	towards renewable energy, as well as create a significant number of jobs in	
	Massachusetts. I am in support of this project in hopes that the project brings	
	environmental and economic benefits to us all.	
12793-001	I'm a Massachusetts resident who would be very happy to get electricity that	Section 2.5 of the FEIS has been added which includes the agency-preferred
	is generated by Vineyard Wind. I am generally in favor of any of the	alternative.
	alternatives in the SEIS except for Alternative G (no action). I especially	
	think either option for Alternative D would be preferable.	
12795-001	We applaud BOEM raising the impacts on fisheries of this development from	Thank you for your comment.
	moderate to major and National Marine Fisheries Service(NMFS)efforts to	
	highlight these impacts but we feel the SEIS still does not go far enough.	

Index	Comment Text	Response
Number	Throughout this mapping we have evenessed maior concerns shout the	Section 2.10 and Annandiz D of the EEIS discuss the details of the velocitory
12795-002	Throughout this process we have expressed major concerns about the Vineyard Wind mitigation proposals. Major economic costs continue to be overlooked, including biological risks to the fisheries A clear mitigation plan that is transparent, inclusive of all federal fishing communities and is based on a full economic valuation of its impacts before they happen should be mandatory.	Section 3.10 and Appendix D of the FEIS discuss the details of the voluntary revenue compensation funds and explains the methods used to estimate fishing revenue exposure and the methods used to set the value of the voluntary compensation funds. Table 3.10-11 shows a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Section 3.3 of the FEIS discusses impacts to finfish. BOEM is open to working with state partners and the commercial and recreational fishing industries to investigate
12705 002		alternative strategies to negotiate compensatory mitigation agreements.
12795-003	Secondly, as there are no peer reviewed scientific studies of offshore wind development on fisheries and fish stocks and with NMFS not going to be able to do traditional stock assements surveys to much uncertainty exists. This puts years of sacrifice that both recreational and commercial fishermen have made to rebuild stocks under the law of the Sustainable Fisheries Act.	Scientific Research and Surveys), and Section 3.14 (Other Oses, Scientific Research and Surveys), and Section 3.14.2.5 addresses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07). Therefore, no change to the FEIS is warranted. BOEM is evaluating Vineyard Wind's COP which is for the development of
	Alliance(RODA)petitionfor a 5 year moratorium on offshore wind until these issues are resolved.	an 800-MW offshore wind farm and the potential impacts associated with their action. Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12812-001	Im am in favor of proceeding to issue Vineyard Wind a favorable finding so further permits may be issued and construction may begin as soon as possible. Vineyard Wind has conducted an incredible amount of science and dedicated many resources to find a solution. The project is sound and having recently worked on Americas first offshore wind development in federal waters, I can say that the processes are extremely sound, much safer and environmentally sound than anything found in offshore oil and gas (of which I have also worked). America needs offshore wind development more now than ever. Its just a really good way to diversify our energy portfolio.	Thank you for your comment.
12820-001	I oppose the additional transit lanes that have been suggested ("Alternaitive F") because the are not needed and would only serve to limit the scope and	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number	affectiveness of the installation of wind nower array with the much wider (1	
	mile) transit lanes	
12820-002	Lurge you to please move forward with the Vineward Wind permitting	Thank you for your comment
12820-002	process without further delay. Wind power is good for the economy in	Thank you for your comment.
	delivering jobs in the manufacture and building of the generators and system	
	and in the maintenance of it. It is is good for the environment, proving a	
	major new clean reliable and sustainable power source for the region And	
	it is good in terms of helping solve a climate justice gap as low income	
	ne is good in terms of helping solve a enniate justice gap as low meeting people and people of color in the various communities burning fossil fuels	
	for power generation overwhelmingly tend to be situated adjacent to or	
	downwind of those power plants leading to health and early learning and	
	arowth issues in those communities	
12833-001	The 3 600 jobs that Vineward Wind will create will help spur an expanding	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
12055 001	II S industry and create more regional employment. In these uncertain	Vinevard Wind in Massachusetts alone would be approximately 3 100 to
	economic times the well-naving jobs created by a growing offshore wind	3 600 FTF job years including 1 100 to 1 550 job years during construction
	energy industry will greatly help our region. In Rhode Island we have already	and about 80 jobs lasting at least 25 years (resulting in 2 000 FTF job years)
	seen job creation with the locating of the offices of the wind energy	during operation. These data were also provided in the DEIS. Section 3.6.1.1
	developer rsted in Providence GEV the wind power maintenance company	of the FFIS provides estimates from several sources of projected employment
	has recently located in RI and plans to add more jobs as the offshore wind	and investment in offshore wind resulting from growth of a wind energy
	power industry grows. The Deepwater Wind project located off B ock Island	industry along the Atlantic coast
	RI has successfully proven on a small scale that offshore wind can co-exist	
	with the fishing industry, sea life and recreational boating while providing	
	renewable energy.	
12833-002	Additionally, I believe based on the data I read in the SEIS and the oral	Section 2.5 of the FEIS has been added which includes the agency-preferred
	testimony of industry spokespersons that the uniform 1 X 1 NM layout will	alternative.
	safely provide transit lanes that will accommodate commercial shipping,	
	recreational boating and the fishing industry while maintaining more energy	
	production than a 2-4 NM transit lane layout. I oppose the adoption of	
	alternative F. The timely approval of the SEIS by December so that the	
	Vineyard One project can proceed will set our region and the nation on a path	
	toward economic growth, increased job creation, affordable electricity and	
	cleaner air.	
12836-001	While this may be a relatively new industry for the United States, offshore	Section 3.6 of the FEIS addresses impacts to employment and economics
	wind has a successful history across the Atlantic. With thousands of offshore	from the proposed Project.
	turbines installed across Europe, this industry has created thousands of jobs,	
	revitalized port communities, invigorated energy generation, and invested	
	billions of dollars into local economies. The U.S. East Coast offers some of	
	the most promising conditions in the world for offshore wind. As such, there	
	is no doubt that we can replicate the industry's success right here at home	

Index	Comment Text	Response
Number		
	and develop a high capacity, domestic renewable energy resource that will	
	improve energy security and reliability.	
12836-002	A study by the Special Initiative for Offshore Wind estimates that the nearly	Section 3.6.1.1 of the FEIS has been updated with recent projections of
	20 GW of offshore wind procurements expected through 2030 will require	national job creation and investment, including the study from the University
	close to \$70 billion in capital investment. Jobs and economic opportunities	of Delaware's Special Initiative for Offshore Wind.
	have already begun to trickle in – with port investments, vessel construction	
	and factory announcements – even as this industry remains in its infancy. We	
	are already seeing the growth of a domestic supply chain as developers and	
	suppliers look to minimize their own costs and logistical risks. Such a chain	
	provides an influx of new jobs with the creation of an entirely new industry,	
	including those in project study, development, installation, maintenance,	
	manufacturing, and finance, furthering benefits already appearing with	
	investments in coastal communities and opportunities stemming from a	
	brand-new economy. The economic potential seems particularly timely and	
	important with high unemployment and an economy that needs rebuilding.	
12836-003	BOEM should adopt Alternative D2, comprised of a uniform 1 nm x 1 nm	Section 2.5 of the FEIS has been added which includes the agency-preferred
	grid layout of turbines across contiguous lease areas, as the preferred	alternative.
	alternative. After extensive study and public input, the United States Coast	
	Guard (USCG) recently endorsed this layout as superior from a navigational	
	safety perspective. In the context of its recently released final report "The	
	Areas Offshore of Massachusetts and Rhode Island Port Access Route	
	Study" (MARIPARS), the USCG determined that the grid layout pattern	
	"will result in the functional equivalent of numerous navigation corridors that	
	can safely accommodate both transits through and fishing within the Wind	
	Energy Area."	
12836-004	Alternative D2 strikes an appropriate balance by ensuring the cost-effective	Section 2.5 of the FEIS has been added which includes the agency-preferred
	development of federal wind energy areas without compromising the safety	alternative.
	of the recreational and commercial fishing and maritime communities. This	
	alternative provides a best pathway for balancing natural resource	
	conservation and fishing concerns, economies of scale, and our clean energy	
	needs.	
12836-005	By contrast, Alternative F would impose a significant burden on offshore	Section 2.5 of the FEIS has been added which includes the agency-preferred
	wind development with no countervailing benefit from a navigational safety	alternative. Section 3.11 of the FEIS includes a discussion on the potential
	perspective.	impacts on navigation and vessel traffic from Alternative F.
12836-006	BOEM should reject Alternative F, comprised of a 4-mile wide dedicated	Section 2.5 of the FEIS has been added which includes the agency-preferred
	transit corridor, either alone or in combination with D2. The uniform 1 x 1	alternative.
	nm layout, without any additional transit lanes, has been assessed by the	
	USCG compared to proposals with transit lanes in its Massachusetts Rhode	

Index Number	Comment Text	Response
Tumber	Island Port Access Route Study. The USCG declined to recommend further	
	formal or informal vessel routing measures such as Alternative F.	
12836-007	Alternative F is lacking in scientific merits as well as in factual basis. We	Section 2.5 of the FEIS has been added which includes the agency-preferred
	urge BOEM to defer to the federal agency charged with ensuring safe	alternative. Section 3.11 of the FEIS includes a discussion on the potential
	navigation within federal waters. Alterations to the project, as the	impacts on navigation and vessel traffic from Alternative F. The SEIS and
	incorporation of wide vessel transit lanes as per Alternative F, would	Section 2.1.5 of the FEIS address some of the technical and practical
	adversely impact the viability and the economics of the project, constrain	challenges of implementing Alternative F.
	clean energy production, and not meaningfully improve navigation or safety.	
	Large transit lanes are unnecessary, and as the SDEIS itself suggests, will in	
	fact pose greater risk to navigation than the uniform grid layout as proposed	
	in Alternative D2, as more traffic is likely to be funneled into the lanes. The	
	additional spreading out of wind generation would also add substantially to	
	technical challenges, delays, cost increases to consumers and developers	
	alike, as well as more environmental impacts.	
12836-008	In sum, offshore wind has the potential to drive economic recovery and	Section 3.6 of the FEIS addresses impacts to employment and economics
	stimulate coastal economies up and down the eastern coast of the United	from the proposed Project.
	States.	
12841-001	The balance between keeping things as they are or developing wind projects	Thank you for your comment.
	off shore appears to me as one of moral and ethical choice. As part of a	
	community of beings, whose behavior and consumption of natural resources	
	has led to the decline of and significant degradation of biomes and even mass	
	extinctions, increased storm impacts and disease ranges it is our	
	responsibility to make the difference by reducing consumption and	
120.41.002	developing alternative energy production methods.	
12841-002	Despite this fact, some in the fishing industry have proposed additional	Section 2.5 of the FEIS has been added which includes the agency-preferred
	transit lanes of at least 4 NMs (reflected in Alternative F of the SDEIS), a	alternative.
	move that would severely constrain clean energy production. It may not	
	meaningfully improve havigation or safety. Alternative F would mean many	
	more miles of cable and less production capacity. I question the intention of 4	
12846 001	We need to start maying in a positive direction renewable energy is our	Theals you for your comment
12840-001	future and our kid's future. Will also hel with job creations with many	Thank you for your comment.
	Americans out of work due to CoVid	
12880-001	The entire WFA development has been driven by a process oriented	Resource sections of the FEIS include proposed mitigation, where applicable
12000 001	approach. We need a results oriented approach. Fishermen's lives will be	and Appendix D of the FFIS which is a summary of all proposed mitigation
	ruined men and women will be out of work environments will be altered	considered has also been undated to include modifications and/or additional
	forever, endangered right whales will be impacted and the oceans will be	mitigation and monitoring measures. Additional mitigation and monitoring
	controlled by foreign interests. BOEM has heard all the fishermen's concern	measures may arise from consultations and coordination with Federal and
	over and over - Enough is Enough!	State resource agencies. These additional mitigation measures will be

Index Number	Comment Text	Response
Tumber		considered by decision makers and could be adopted in the Record of
		has been updated to reflect this information.
12882-001	This project will help meet the renewable energy demand in New England	Thank you for your comment.
	and create thousands of jobs. As a company with many years of experience in	
	the offshore survey industry, we are excited to see Vineyard Wind lead the	
	way in building the United States first commercial scale offshore wind	
	energy project and proud to be part of it.	
12883-001	According to a recent report from the American Wind Energy Association,	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
	the offshore wind industry could create more than 80,000 jobs and over \$25	several sources of projected employment and investment resulting from
	billion in annual economic output. We simply must tap into this opportunity,	growth of the wind energy industry along the Atlantic coast. While the
	not only for our state, but for cities like Bridgeport that could be transformed	estimates are national, jobs are anticipated to be concentrated in and near the
	by such an investment.	east coast states that would host offshore wind.
12885-001	According to the American Wind Energy Association (AWEA), this industry	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
	will create 83,000 jobs and 25 billion dollars of annual economic output by	several sources of projected employment and investment resulting from
	2030. Not only will this project create high paying careers and reduce carbon	growth of the wind energy industry along the Atlantic coast. While the
	emissions, it will also save ratepayers money on their electric bill. This is an	estimates are national, jobs are anticipated to be concentrated in and near the
	impressive feat for the first commercial scale project in the United States and	east coast states that would host offshore wind.
10005.000	indicates how cost effective this industry will become in the future.	
12885-002	I am sympathetic to concerns from the fishing industry, and I am glad the	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Vineyard Wind team changed their layout to a 1x1 nautical mile grid,	alternative.
	matching other developers in the MA/RI Wind Energy Area. This is by no	
	means a small compromise. The Coast Guard is in agreement that this grid	
	will provide adequate spacing for vessel transit, commercial fishing, as well	
	as search and rescue within the wind farms. Having additional transit fanes	
	proposed by the Responsible Offshole Development Annance (RODA) would not only dractically degrades anarray output, but it may also increase traffic	
	density and risks for vessel interaction	
12887-001	Offshore wind has a unique opportunity at this moment in time to benefit the	Thank you for your comment
12007 001	US economy and environment. The pipeline of offshore wind projects is	Thank you for your comment.
	estimated to deliver approximately \$100 billion in economic investment.	
	more than 80.000 jobs, and provide enough electricity to power millions of	
	homes. New England stands at the forefront of this new American energy	
	industry with multiple large projects in development that will deliver	
	thousands of megawatts of clean energy to the grid. These projects will	
	deliver competitively priced energy to the Massachusetts and Connecticut	
	ratepayers and also bring thousands of high-paying jobs, considerable	
	economic investment, and demand for a deep, regional supply chain.	

Index	Comment Text	Response
Number		
12887-002	It is also critical that BOEM approve the developer agreement for a 1x1 nautical mile layout throughout lease areas without the proposed Alternative F transit lanes. Developers have already conceded about 30% or 13,000 MW of clean energy capacity by accommodating fishing industry demands for a uniform layout, and further reduction through requiring transit lanes would translate to less clean energy for our region, fewer jobs created and significantly less economic benefits to our coastal communities. We encourage BOEM to move forward in accepting the compromise of the 1x1 layout without transit lanes as the best path toward encouraging coexistence of these two important industries.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12887-003	Vineyard Wind 1 represents the first major offshore wind development in the United States and following final permit approval will provide the needed certainty for future developments and capital investment along the East Coast. Along with the 3,600 jobs anticipated for the project, Vineyard Wind will also provide New England the opportunity to develop the deep supply chain needed to service the full offshore wind industry along the Eastern seaboard. It also likely serves as our region's strongest opportunity for large scale new energy to meet our growing population and demand for energy. However, in order to capture the maximum benefits of the supply chain opportunity, it is imperative that BOEM send the right signals to the market that the US is serious about moving forward with offshore wind and project permitting will be conducted fairly and within a reasonable timeframe. Without this certainty and predictability, it will be difficult to encourage the business community to invest in offshore wind to its full potential.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
12890-001	At a moment when we must make large-scale investments to restart our economy, we should take action on clean energy at the level we know we need to in order to take on climate change. We have a once-in-a-generation opportunity to put ourselves on the path to a low-carbon future while creating new, quality careers, with family-sustaining wages and benefits for communities across the nation.	Thank you for your comment.
12890-002	It will also provide thousands of good union jobs and attract global supply chain manufacturers to the NortheastThis project will set the stage for offshore wind developers to work in conjunction with organized labor, enlisting labor's world-class training programs to build the offshore wind workforce of the very near future, and ensuring that the jobs created are good, community- supporting jobs.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12890-003	The Vineyard Wind 1 developers have listened, engaged, and altered construction plans based on community feedback. This is something we need	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
	to replicate in other projects. CJNY supports the 1X1 nautical mile layout	
	compromise that responds to commercial fisheries' concerns. Not only does	
	the Coast Guard approve of this mitigation effort; adding additional mileage	
	to the layout would only take away from the efficiency and carbon reduction	
	potential the project is meant to address (MARIPARS, 32). We ask BOEM to	
	reject alternative F, which	
	threatens the overall success and viability of not only this project but future	
	offshore wind projects.	
12890-004	To maximize the economic development and job opportunities in offshore	Thank you for your comment.
	wind, the industry	
	and its potential workforce needs confidence that demand in the U.S.	
	offshore wind market is	
	real. This means we need to move forward promptly in the permitting process	
	to set the stage	
	for this nascent industry. By launching this industry now, the potential for	
	additional jobs	
	multiplies exponentially, with the potential for hundreds of thousands of	
	good-paying jobs	
10000 001	across the United States.	
12892-001	It is my opinion that BOEM should adopt alternative D2, comprised of a	Section 2.5 of the FEIS has been added which includes the agency-preferred
	uniform 1 nm x 1 nm grid layout of turbines across contiguous lease areas, as	alternative.
	the Preferred Alternative. After extensive study and public input, the USCG	
	recently endorsed this layout as superior from a navigational safety	
	perspective. In the context of its recently released final report "The Areas	
	(MADIDADS) d. LISCO 1 d. 111 d. 111 d. 111 million for Access Route Study	
	(MARIPARS), the USCG determined that the grid layout pattern "will result	
	in the functional equivalent of	
	through and fishing within the [Wind Energy Area]	
	are unpersonal and the SDEIS itself suggests, will in fast page greater	
	risk to novigation than the uniform grid layout as proposed in Alternative D2	
	This to havigation than the uniform grid layout as proposed in Alternative D_2 ,	
	as more trainers likely to be fullified into the lates. Alternative D2 strikes	
	wind energy greas, without compromising the safety of regreational and	
	commercial fishers or other mariners. By contrast. Alternative E would	
	impose a significant burden on offshore wind development with no	
	countervailing benefit from a pavigational safety perspective	
12892-002	BOEM should reject alternative E comprised of a 4-mile wide dedicated	Section 2.5 of the FFIS has been added which includes the agency preferred
12072-002	transit corridor, either alone or in combination with D? The Coast Guard	alternative

Index Comment Text Respon	se
Number	
declined to recommend further formal or informal vessel routing measures	
such as Alternative F.	
12895-001 we'd like to take this opportunity to address some of the assumptions and Thank you for your comment.	
concerns BOEM has raised about transmission [Section 1.2.1.1]Anbaric	
believes that connecting to shore and the existing onshore electric grid will	
become one of the most contentious and challenging aspects of offshore wind	
development. Already offshore wind projects are facing community	
opposition and uncertain costs in connecting to the onshore gridBOEM's	
assumption that these challenges will be overcome does not recognize these	
complicating factors will be exacerbated as more projects try to connect to	
the few coastal communities with a robust electric grid. We believe this	
assumption endangers the 22 GW of potential offshore wind, and that these	
challenges will only be overcome through the careful planning and	
coordination of a planned transmission system that minimizes environmental	
and social impacts, while fully utilizing scarce corridors to robust points on	
the onshore grid.	
12900-001 Spatial requirements and dedicated shipping and travel corridors have been Section 2.5 of the FEIS has been added where the section 2.5 of the FEIS has been added where the section 2.5 of the FEIS has been added where the section 2.5 of the FEIS has been added where the section 2.5 of the FEIS has been added where the section 2.5 of the sectio	hich includes the agency-preferred
expanded beyond initial Construction and Operations Plans to ensure limited alternative.	
impact on migratory routes and commercial traffic.	
12900-002 The economic impact of this project to the Southeastern Massachusetts Thank you for your comment.	
region will provide opportunities in a new industry which has received great	
support from the State of Massachusetts. The educational and occupational	
opportunities that Vineyard Wind has committed to provide, through	
partnerships with local educational institutions and Labor organizations, are	
going to be necessary to the economic stability in Massachusetts in a rapidly	
changing economic climate.	
[12901-001] [Wind Turbine Layout. BOEM should adopt a one-mile turbine spacing layout Section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the FEIS has been added whether the section 2.5 of the feis has been added whether the section 2.5 of the fei	nich includes the agency-preferred
(Alternative D2), without the additional requirement for transit lanes, alternative.	
Consistent with the conclusions of the United States Coast Guard's (USCG)	
MARIPARS studyIn light of these findings and facts and the broad	
regional support for Alternative D2, Eversource investment urges BOEM to	
adopt the conclusions of the MARIPARS study which balances and	
i pumizes the interests of all marine uses.	
12901-002 Commercial & Recreational Fisheries, while the SEIS assigns a major I hank you for your comment.	
cumulative impact to commercial fisheries and for-nire recreational fishing	
under an anematives, the SEIS property acknowledges (and should lurther	
emphasize) that other factors substantivery contribute to that assessment and	

Index	Comment Text	Response
Number		_
Number 12901-003	Military, National Security and Safety. Lanes oriented north to south and east to west 1 mile wide will accommodate the USCG's search and rescue operations will further reinforce the compatibility of the development of offshore wind projects with military operations, national security and safetyWithout question, military operations, national security and search and rescue operations are critically important and should not be compromised. However, there is no support in the record for the SEIS conclusion that there will be major cumulative impacts to these essential functions. In fact, neither the Department of Defense (DoD) nor the USCG, as consulting agencies to BOEM, found the Proposed Action to pose a problem. The DoD specifically concluded that the Proposed Action would have minor, but acceptable impacts on their operationsAs a result of the evaluation of these important uses by BOEM, DoD and USCG, it is clear that military operations, national security and safety are compatible with the development of the offshore wind industry	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. Following the layout recommendations in the Final MARIPARS would improve safety, but it would not remove the risk of allisions or collisions with WTGs during SAR operations particularly in challenging weather or visibility conditions (USCG 2020).
12901-004	using the one-mile north to south and east to west turbine spacing approach. Temporary Impacts and Mitigation. Most potential unavoidable adverse impacts will be temporary (during construction) and reduced through mitigation measures employed by project developersThus, while there are certain major impacts identified as a result of the NEPA process, that is typical and not a basis for denying an application, particularly where a maximum design scenario is used and projectspecific mitigation measures are adopted to offset those impacts.	Thank you for your comment.
12901-005	Cumulative Impacts Analysis. Future projects should be evaluated based on their own merit, including mitigation resulting from the continued collaboration of offshore wind project developers and stakeholdersThe expansive consideration of cumulative impacts in the SEIS goes above and beyond what is required under the Council of Environmental Quality's (CEQ's) recently revised NEPA regulations. The amendments remove the regulation that previously required consideration of cumulative impacts, noting that "cumulative impacts" is not a term included in NEPA. CEQ indicated that only effects that are "reasonably foreseeable and have a reasonably close causal connection to the proposed action" should be evaluated under NEPA. CEO emphasized that, under this standard, effects that are	The methodology for assessing reasonably foreseeable actions or projects that was presented in the SEIS was carried forward in the FEIS.

Index	Comment Text	Response
Number		
	remote in time or	
	geographically remote will generally not require analysis in connection with	
	a proposed	
	action. 65 Fed. Reg. 43303, 43331, 43443-44 (July 16, 2020) (The effective	
	date of the	
	revised regulations is September 14, 2020.) The cumulative impacts analysis	
	performed here suffers from precisely those problems: the scope of the	
	offshore wind development considered in the SEIS is uncertain, and much of	
1.0.0.1.0.0.6	It far in the future, geographically remote or both.	
12901-006	Environmental Justice Communities. U.S. offshore wind development off the	Section 3.6.2 of the FEIS has been revised to conclude that offshore wind
	Atlantic coast will provide substantial benefit to environmental justice	development within the RI and MA Lease Areas is anticipated to have a
	communities, including jobs and associated economic activity arising from	moderate beneficial impact on employment and economics in the geographic
	port development and operationsPort use and expansion necessary to	analysis area. In addition, Section 3.7.1 of the FEIS has been revised to
	support the offshore wind industry will provide substantial economic benefits	discuss the health impacts of fossil fuel consumption and resulting degraded
	to these communities, including new jobs and associated economic activity.	air quality on different racial groups, as well as different income groups, as
	while these benefits will be greatest during the construction period, they will	well as benefits from reduction of lossifilitie power generation displaced by
	continue at an economically meaningful level throughout the operational file	Section 2.7.1 after EEIS also notes the network of home string of the section of
	of the offshore wind projects when these environmental justice communities	Section 5.7.1 of the FEIS also notes the potential benefits of offshore wind-
	also would share the clear environmental benefits associated with clean,	related power generation to environmental justice communities.
	organization ROEM (and the Final SEIS) should not understate the	
	importance of the benefits of the offshore wind industry for these	
	communities	
12901-007	The SEIS for the first time introduces Alternative F which was not suggested	Thank you for your comment
12901 007	until very late in the NEPA process and the merit of which is not apparent	Thank you for your comment.
12906-001	This project is essential to the future of MA and New England. The jobs it	Thank you for your comment
12900 001	will create alone should be enough to demonstrate its worth. It is also	Thunk you for your common.
	essential in MA's transition to clean energy and to a future that can sustain a	
	growing population, economy, and energy needs without heating the earth	
	and risking our future. As a young person this is of utmost concern to me.	
	MA must embrace clean energy and be the leader it can be. Concerns related	
	to this project are trivial compared the the threat of continued carbon	
	emissions. I strongly back this project.	
12909-001	There are almost no peer-reviewed scientific studies here or in Europe on the	BOEM is evaluating Vineyard Wind's COP which is for the development of
	impacts of offshore wind energy facilities to fisheries and fish stocks. Now is	an 800-MW offshore wind farm and the potential impacts associated with
	the time to do a study, establish a baseline. We need a moratorium to do it	their action. Section 2.5 of the FEIS has been added which includes the
	rght. Learn from Eurpoe's mistakes, don't copy them.	agency-preferred alternative.

Index	Comment Text	Response
Number		
12915-001	Vineyard Wind has completed an exhaustive analysis of environmental	Thank you for your comment.
	impacts, concluding the project can be completed with the least	
	environmental impact.	
12915-002	Vineyard Wind 1 entered a first of its kind agreement with the National	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and
	Wildlife Federation, the Natural Resources Defense Council and the	monitoring measures that would be implemented to avoid, minimize, and
	Conservation Law Foundation to protect whales.	mitigate adverse impacts to marine mammals, specifically the NARW, and
		include measures outlined in the referenced agreement. These measures
		include, but are not limited to avoidance of peak NARW presence, use of
		sound attenuation technologies, use of PSOs, PAM, soft start procedures,
		shut down procedures, and other measures.
12915-003	Vineyard Wind 1 will utilize 1 mile by 1 mile spacing in-between all offshore	Section 2.5 of the FEIS has been added which includes the agency-preferred
	turbines to allow for commercial fishing and navigation. Vineyard Wind 1	alternative.
	has worked with the Coast Guard and fisherman to design spacing between	
	the turbines that will allow for navigation and commercial fishing uses. This	
	spacing agreement will set a national precedent for future projects. It is a	
	reasonable and acceptable spacing standard that allows navigation,	
	commercial fishing and wind power to coexist and share ocean resources.	
12915-004	BOEM needs to reject Alternative F in the SEIS. Alternative F suggests	Section 2.5 of the FEIS has been added which includes the agency-preferred
	additional unneeded navigation lanes, above and beyond the 1 mile by 1 mile	alternative.
	spacing. Vineyard Wind has agreed to build their turbines for this project in a	
	1 x 1 nautical mile grid after input from the US Coast Guard. The US Coast	
	Guard has determined that this type of grid would allow for safe navigation,	
	and all the other developers of the New England wind energy areas have	
	agreed to this layout. Alternative F would encumber this project and juture	
10015 005	offshore wind projects without providing any benefit to navigation.	
12915-005	BOEM needs to weigh potential impacts of offshore wind on marine wildlife	Thank you for your comment.
	within the context of climate change and other human activities. While all	
	large-scale energy infrastructure has some impact to our environment, the	
	greatest threat to fish, bird, and marine species, as well as our coastal	
	communities and public health, is climate change. Ocean acidification, rising	
	sea levels, increasing water temperatures, and altered ecosystems, caused and	
	exacerbated by our continued reliance on fossil fuels, puts the health of our	
	Tisheries and marine mammals in jeopardy. Offshore wind farms, starting	
	with vineyard wind I, are necessary to transition away from fossil fuels and	
	protect marine file and lisherles. Hindering offshore wind power in order to	
	have an infaction. Dejecting the antidate to the illness only males the illness	
	have an infection. Rejecting the antidote to the fillness only makes the fillness	
	worse. Rejecting offshore wind will severely ninder our transition dway from	
	Jossu jueis ineredy increase ocean acidification and warming ocean waters	

Index	Comment Text	Response
Number	which will result in diminishing fish and shall fish stock. Offshore wind farms	
	which will result in diminishing jish and shell jish slock. Ojjshore wind jarms will greathy assist the sustainability of fisheries	
12915-006	I arge-scale offshore wind is needed to meet renewable energy targets. New	Thank you for your comment
12715-000	York Connecticut and other east coast states are working to achieve strong	Thank you for your comment.
	meaningful renewable energy targets but we may not be able to meet them	
	without the success of Vinevard Wind 1. This SEIS is focused on Vinevard	
	Wind 1, vet, in many ways the nearterm future of offshore wind in the US	
	rests on this project.	
12915-007	Offshore wind will help boost our economy post COVID. Over the next 10	Section 3.6.2 of the FEIS has been updated to note the importance of the
	years, offshore wind is poised to create over 80,000 jobs and contribute \$12-	Vineyard Wind 1 Project as the east coast's first large-scale offshore wind
	\$25 billion per year to the nation's economy. As the first large-scale offshore	energy project. Approval could encourage and support continued investment
	wind project in the US, Vineyard Wind 1 has the opportunity to kick off a	in other offshore wind projects and the creation of a domestic supply chain
	pipeline of projects and jumpstart the offshore wind industry. The US is	for the offshore wind industry in the eastern United States. Section 3.6.1.1 of
	already decades behind Europe and Asia in the advancement of offshore	the FEIS has been updated to provide estimates from several sources of
	wind technology, which creates billions of dollars for local economies while	projected employment and investment resulting from growth of the wind
	providing significant public health benefits. The time to move forward is	energy industry along the Atlantic coast. While the estimates are national,
	now.	jobs are anticipated to be concentrated in and near the east coast states that
1.0.01.0.000		would host offshore wind.
12915-008	Vineyard Wind I will provide significant benefits to Massachusetts	Section 3.6.2 of the FEIS provides estimated job growth and economic
	communities while helping to reduce the carbon footprint. Vineyard Wind I	benefits from the Vineyard Wind I Project within Massachusetts and
	has become the standardbearer for environmentally responsible and well-	specifically within southeastern Massachusetts. Appendix A, Section A.8.1 of
	sited offshore which in the US. We must not continue to debate or delay this	of fossil fuel electricity generation by offehere wind
12016-001	Our President says to hire American, huy American, Please do not let them	Section 3.6.1.1 of the EEIS references several studies that provide projections
12910-001	circumvent the lones Act and hire foreign workers on foreign boats working	of economic investment from offshore wind. The numbers of estimated jobs
	for foreign companies to build these wind farms. The environmental damage	shown in the FFIS are only domestic jobs, and for the Vineyard Wind 1
	they will do to our oceans will not be able to be reversed. Our trade	Project are specifically jobs in Massachusetts Referenced studies incornorate
	imbalance in regards to seafood will increase. The jobs they forecast are	varying projections of foreign versus domestic economic activity depending
	inflated.	upon the anticipated growth of the domestic offshore wind supply chain, and
		the FEIS consistently uses the base or lower projections of domestic
		economic activity in arriving at conclusions. Consideration of the nationality
		of the applicants is not required under NEPA and is not necessary to support
		the findings in Section 3.6.1.1.
12917-001	I urge you in the strongest terms to expedite the permitting of offshorewind	Thank you for your comment.
	power generation projects. The siting of these structures can be arranged to	
	still co-exist with commercial fishing operations, but the country needs	
	renewable energy now.	
12919-001	WindServe Marine supports Alternative D2, which is the proposal for 1x1	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Inautical mile spacing in a uniform east-west grid layout. This reflects the	alternative.

Index	Comment Text	Response
Number	joint proposal of all wind farm developers holding a lease in the area south of	
	Martha's Vineyard, and it is the proposal that the Coast Guard determined	
	report.	
12919-002	Conversely, Alternative F, which would impose 4-mile wide vessel transit	Section 2.5 of the FEIS has been added which includes the agency-preferred
	lanes within wind farms, is not supported by the industry nor the U.S. Coast Guard, which determined such lanes could actually reduce navigation safety.	alternative.
	and increase danger and risk to mariners.	
12925-001	Offshore wind is the single biggest lever we can pull to reduce New	Thank you for your comment.
	grow our economy simultaneously. Harnessing its economic potential could	
	help drive economic recovery by creating thousands of jobs, establishing our	
	region as a hub for clean-tech development and deployment, expanding the	
	market for local renewables, and saving ratepayers billions of dollars. Many	
	of New England's old nuclear, oil, and coal-fired power plants are likely	
	retiring over the next decade. At the same time, the demand on our grid will continue to grow as we move to electrify transportation and heating. We must	
	urgently address the growing gap between future electricity supply and	
	demand by replacing these older fossil fuel power plants with clean, local,	
	renewable energy. Doing so will reduce pollution, protect the health of	
	vulnerable communities, and enable our businesses and institutions to set and	
12020.001	achieve ambitious corporate sustainability goals.	
12930-001	There is no plan for compensating fisherman for the loss of the fisheries off the Northeast east from such a satisfication big system and massive ail spill	Section A.8.2.2 of the SEIS addressed the potential for accidental releases
	the Northeast coast from such a catastrophic event and massive on spin.	and discharges associated with the proposed Project. The SEIS stated
		scenario, release of 128,000 gallons (484,533 liters) of oil mixture has a
		"Very Low" probability of occurring, meaning it could occur one time in
		1,000 or more years. The modeling effort also revealed the most likely type
		of spill (i.e., non-routine event) to occur is from the WTGs at a volume of 90
		to 440 gallons (341 to 1,666 liters), at a rate of one time in 1 to 5 years, or a
		diesel fuel spill of up to 2,000 gallons (7,571 liters) at a rate of one time in 20
12930-002	the Draft SEIS fails use basic market and economic principles in analyzing	BOFM determined that it is reasonable to assume that if the proposed Project
12950 002	the No-Action alternative. The Project might be able to be analyzed solely as	is not built, another project or projects would be constructed to meet
	an additive project as far as economic and climate change impacts if it	mandates/demand. This assumption was used to frame the No Action
	existed in a vacuum, but it does not. Electricity from the Vineyard Wind	Alternative and also allowed BOEM to assess the maximum-case scenario in
	Project and the balance of the 2,021 WTGs would displace renewable energy	terms of potential impacts. In addition, BOEM's obligation is to review the
	projects that would otherwise be built onshore in the New England states and	proposed Project as outlined in the COP as well as alternatives that meet the
12930-002	the Draft SEIS fails use basic market and economic principles in analyzing the No-Action alternative. The Project might be able to be analyzed solely as an additive project as far as economic and climate change impacts if it existed in a vacuum, but it does not. Electricity from the Vineyard Wind Project and the balance of the 2,021 WTGs would displace renewable energy projects that would otherwise be built onshore in the New England states and on the ISO New England electricity grid. But for the Project and ones like it.	to 440 gallons (341 to 1,666 liters), at a rate of one time in 1 to 5 years, or a diesel fuel spill of up to 2,000 gallons (7,571 liters) at a rate of one time in 20 years. Therefore, no change to the FEIS is warranted. BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts. In addition, BOEM's obligation is to review the proposed Project as outlined in the COP as well as alternatives that meet the purpose and need that was developed with cooperating agency input.

Index Number	Comment Text	Response
	Massachusetts, Rhode Island and Connecticut would turn to onshore solar electricity projects, which create more of a positive economic impact, none of the adverse moderate and major consequences of the Project and have a tiny fraction of the climatic impacts that the Project has.	
12930-003	The Endangered Species Act prohibits the proposed action.	Sections 3.4, 3.5, and 3.6 of the SEIS discussed the coordination of the review of the Proposed Action under this NEPA process and under the Endangered Species Act with the US Fish and Wildlife Service and with the National Marine Fisheries Service. Therefore, no change to the FEIS is warranted.
12930-004	Similarly, the analysis of the No-Action Alternative regarding Air Quality is incorrect. The Vineyard Wind would be replaced with renewable energy projects located closer to the actual electrical load. Those projects would have the higher air quality benefits, and GHG and climate benefits compared to the Vineyard Wind because they would be more efficient, and not create the warming created by the Project. See, Harvard Wind Study.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS. Additionally, BOEM's role is to evaluate the potential effects of the proposed Project as outlined in the COP as well as the impacts of a range of reasonable alternatives as required by NEPA. BOEM does not have control over any state or grid operator structure and whether or not the proposed Project would compete with other renewable projects outside of BOEM's purview
12930-005	Neither the SEIS or the EIS accounts for the additional stress on endangered species caused by the increase in temperatures caused by the Project and the balance of the 2,021 WTGs themselves. See, Harvard Wind StudyIf the right whales' food supply in the Wind Energy Area is diminished, it would adversely affect the right whales' ability to continue their journey to the Gulf of Maine.	The analysis in the FEIS represents the best available science. The commenter is misrepresenting the information from the referenced study (Miller and Keith 2018). While there is some warming associated with wind power due to the atmospheric mixing, these impacts are generally localized to the immediate area around the turbines. Additionally, the study addressed surface temperature at land based WTGs. The same level of heating would not be expected to occur on the OCS given the thermal buffering characteristic of the ocean. As described in the Biological Opinion issued by NOAA, while it may lead to higher surface water temperature, "these effects will not extend more than a few hundred meters from each foundation." (NMFS 2020).
12930-006	The failure of the EIS or the SEIS to take a hard look at the likelihood of a category 3 or greater hurricane and the likelihood that such an event would result in an oil spill the size of the Exxon Valdez in the WEA renders the EIS	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years.

Index	Comment Text	Response
Number	and the SEIS fatally flawed The failure of the EIS or the SEIS to take a hard look at the likelihood of a category 3 or greater hurricane and the likelihood that such an event would destroy the WTGs resulting in the elimination of generating capacity in the ISO-New England grid for years, which in turn would result in devastating economic, safety and health consequences for New England, is clear error.	Section 2.3 of the FEIS also discusses potential effects of the proposed Project being hit by a hurricane. More precise forecasts of hurricane frequency in future climate scenarios are not likely to be significantly different from currently available data. Therefore, further updates to the FEIS are not warranted.
12930-007	The SEIS fails to take the required hard look at the direct, indirect, and cumulative greenhouse gas ("GHG") emissions and the impacts of those emissions on climate change. The SEIS fails to sufficiently quantify and account for direct GHG emissions, and fails to analyze the effect of those emissions on other resource values.	Sections 3.11.1 and A.8.1 of the SEIS considered the influence of offshore wind energy development on climate change and state that offshore wind projects will likely result in a net decrease in GHGs. Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS.
12930-008	Yet the SEIS fails to take the required hard look at the direct, indirect, and cumulative climate impacts of those reasonably foreseeable challenges and the required interconnection points and transmission infrastructure build-outs that the SEIS admits are certain. The SEIS improperly ignores the required construction of transmission and interconnection upgrades that would be required to accommodate the assumed 22 GW of Atlantic offshore wind energy.	Please note that BOEM specifies in the SEIS and FEIS that reasonably foreseeable does not mean certain or approved. BOEM's NEPA process considers the contribution of the proposed Project and reasonable alternatives to the impacts of future reasonably foreseeable development. Potential transmission infrastructure and buildouts were estimated based on best available information.
12930-009	On A-42, the assumption regarding the No Action Alternative [which states that the NAA without implementation of other future offshore wind projects would likely result in increased air quality impacts regionally due to the need to construct and operate new energy generation facilities to meet future power demands] is flawed.	Thank you for your comment.
12930-010	The SEIS fails to take the required hard look at the direct, indirect, and cumulative climate impacts of the Project on climate change. The SEIS fails to sufficiently quantify and account for the warming that is generated by the Project and all 2,021 WTGsIn any case, the EIS must make an informed decision, and it cannot simply ignore the adverse climatic impacts of the Project and the projected 2,021 WTGs over the next ten or longer years.	Sections 3.11.1 and A.8.1 of the SEIS considered the influence of offshore wind energy development on climate change and state that offshore wind projects will likely result in a net decrease in GHGs. Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis

Index	Comment Text	Response
Number		
		throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS.
12930-011	If offshore wind is not built, then state demand for renewable energy can be filled entirely by solar. The SEIS's failure to examine a true no-actiopn alternative that would result in offshore wind being replaced entirely by solar is fatal.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action. Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12930-012	In addition, the SEIS's assumption that state demand for renewable energy that has a preference for off-shore wind would then be morphed into a demand for fossil fuel energy if the proposed Project (and others like it are rejected) is also illogical.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts. In addition, BOEM's obligation is to review the proposed Project as outlined in the COP as well as alternatives that meet the purpose and need that was developed with cooperating agency input.
12930-013	The SEIS remedied only the failure to look at reasonably foreseeable additional off-shore wind projects, but did not remedy all the other failures of the EIS. Moreover, the SEIS added to the EIS' deficiencies by illogically assuming in the analysis of the No Action Alternative that all other off-shore wind projects would be approved if the proposed Project was not.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts. In addition, BOEM's obligation is to review the proposed Project as outlined in the COP as well as alternatives that meet the purpose and need that was developed with cooperating agency input.
12930-014	Similarly, the SEIS's conclusion in 3.4.1.2. (and similar ones like it, e.g., 3.5.1, 3.6.1, 3.7.1, 3.8.1, 3.9.1, 3.10.1, 3.11.1) wholly ignore onshore solar as a replacement for the proposed action. That results in flawed conclusions such as in 3.4.1.2 that ongoing activities and future offshore activities will have a comparable adverse impact on finfish, invertebrates, and EFH. That conclusion makes little sense and is based upon the premise that if the proposed Project does not create the adverse impact, then someone else will, so the proposed Project is not really causing much of an impact. Such circular reasoning effectively negates the purpose of NEPA.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts. In addition, BOEM's obligation is to review the proposed Project as outlined in the COP as well as alternatives that meet the purpose and need that was developed with cooperating agency input.
12930-015	The SEIS fails to take a hard look at alternatives thus failing to comply with EPA's 404(b)(1) guidelines. The SEIS violates the Clean Water Act's ("CWA's") requirements by not taking a hard look—indeed not taking any look—at the proposed purpose of the Project and the balance of the 2,021 WTGs being able to be accommodated by onshore renewable energy.	Chapter 2 of the FEIS has an updated discussion of Alternatives Considered but not Analyzed in Detail for the proposed Project. Table 1.3-1 in Appendix B of the FEIS has updated the status of permits and consultations required for the proposed Project. USACE is the agency that would be responsible for regulating activities under Section 404 of the Clean Water Act. In addition, Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the

Index Number	Comment Text	Response
Tumber		proposed Project, and as noted in the Appendix C, USACE is a cooperating agency in the preparation of the EIS.
12930-016	The SEIS fails to take a hard look at the Army Corps of Engineers (the "Corps") public interest testThe Draft SEIS simply fails to offer any explanation as to why Project and the balance of the 2,021 WTGs meet the public interest test, and do not contain sufficient information to form the basis of a conclusion that the Project meets the test.	Under NEPA and Outer Continental Shelf Lands Act (OCSLA), BOEM's evaluation of the Project does not require a public interest determination. Further revisions to the FEIS were not warranted.
12930-017	The likelihood and impact of hurricane activity in the Project area and area of the balance of the 2,021 WTGs are inaccurate, flawed and inadequately analyzed.	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years. Section 2.3 of the FEIS also discusses potential effects of the proposed Project being hit by a hurricane. More precise forecasts of hurricane frequency in future climate scenarios are not likely to be significantly different from currently available data. Therefore, further updates to the FEIS are not warranted.
12930-018	The likelihood of a category 3 or greater hurricane and the likelihood that such an event would destroy the WTGs resulting in the elimination of generating capacity in the ISO-New England grid for years, which in turn would result in devastating economic, safety and health consequences for New England, shows that the proposed Project and the balance of the 2,021 WTGs is not in the public interest.	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years. Section 2.3 of the FEIS also discusses potential effects of the proposed Project being hit by a hurricane. More precise forecasts of hurricane frequency in future climate scenarios are not likely to be significantly different from currently available data. Therefore, further updates to the FEIS are not warranted.
12930-019	Combined, it is reasonably foreseeable that the proposed Project, together with the balance of the 2,021 WTGs could result in the inability to reduce global warming in the next 9 years as U.N. scientists have said must be done, further endangering the Earth's climate, as it nears the tipping point.	Thank you for your comment.
12930-020	The SEIS assumes, without analysis, that the offshore wind generation from the Project and the balance of the 2,021 WTGs do not displace other forms of renewable energy generation that would come online but for the Project and the balance of the 2,021 WTGs.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.
12930-021	The SEIS assumes, without analysis, that the offshore wind generation from the Project and the balance of the 2,021 WTGs would displace a future electric generating plant that would use natural gas as fuel. Such an assumption does not pass the muster of informed decision making. The SEIS and BOEM and the cooperating agencies also failed to consider the potential for other adverse climate effects of the Project and the balance of the 2,021 WTGs.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.

Index	Comment Text	Response
Number		
12930-022	BOEM and the cooperating agencies have failed to take a hard look at the direct, indirect, and cumulative impacts to the climate from GHG emissions and warming caused not by GHG emissions from the Project and the balance of the 2,021 WTGs by their alteration of wind flow, and failed to discuss the severity of these impacts.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS. In addition, wind condition information was included in the SEIS and Section E.2.2 of the FEIS. Information on wind wakes and alternation of flow is included in Section E.2.6 of the FEIS.
12930-023	BOEM and the cooperating agencies have failed to take a hard look at the direct, indirect, and cumulative impacts to all resource values of the massive undertaking of construction the high-voltage transmission and interconnection substations that would need to be built for 21.8 GW of offshore wind. The SEIS "assumes" without analysis, that the massive required build-out will have no impact at all on any resource value The SEIS fails to take the required hard look at the direct, indirect, and cumulative climate impacts of those reasonably foreseeable challenges and the required interconnection points and transmission infrastructure build-outs that the SEIS admits are certain. The SEIS improperly ignores the required construction of transmission and interconnection upgrades that would be required to accommodate the assumed 22 GW of Atlantic offshore wind energy. The SEIS must make an informed decision, and it cannot ignore the required construction of transmission and interconnection upgrades that would be required to accommodate the assumed 22 GW of Atlantic offshore wind energy.	The SEIS and Section 1.7.1 of the FEIS specifies that infrastructure does not currently exist to handle interconnection points and transmission for 22 GW of Atlantic offshore wind energy. BOEM assumes these challenges will be solved and that 22 GW of Atlantic offshore wind can be built. This analysis does not address potential solutions, but independent transmission proposals dedicated to offshore wind energy could assist. BOEM assumes for assessment purposes that each project would have its own submarine transmission line and that regional transmission right-of-way projects are not currently foreseeable. However, if shared submarine cable were developed in the future, environmental impacts would be reduced for most resources.
12930-024	The SEIS's assumption that, compared to No Action, approving the proposed Project would have a positive impact on total greenhouse gas emissions is wrong and departs from basic economic principles and vastly overstates the	Climate change was addressed in the DEIS and SEIS and is included in Section A.8.1 of the FEIS. The effects of climate change were also an impact-producing factor that was assessed in the appropriate resource
12930-025	The SEIS's assumption that state demand would be met though other projects built in the RI and MA Lease Areas is illogical and unsupportable.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.

Index Number	Comment Text	Response
12930-026	The EIS's and BOEM's assumption that the No-Action will have no net effect on onshore renewable energy generation, economic benefits or climate benefits contradicts fundamental economic principles. Significant changes in renewable energy supply will affect renewable energy's price and, therefore, consumption and emission levels.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.
12930-027	It is a serious error to assume that under the No-Action Alternative, all 1 million GWhs would not be completely be replaced by renewable energy generation from other sources, with no effect on overall consumption or emissions.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.
12930-028	The EIS and BOEM fail to analyze how electricity from the Project directly competes with other renewable energy resources in electricity generation, such that increasing the supply of offshore wind results in less American renewable energy generation on-shore in ISONew England, particularly solar electric generation.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS. Additionally, BOEM's role is to evaluate the potential effects of the proposed Project as outlined in the COP as well as the impacts of a range of reasonable alternatives as required by NEPA. BOEM does not have control over any state or grid operator structure and whether or not the proposed Project would compete with other renewable projects outside of BOEM's purview.
12930-029	The EIS and BOEM also ignore how overall greenhouse gas emissions and climate impacts will vary among substitute sources of renewable energy generation. The EIS and BOEM should have—and easily could have— evaluated the No-Action Alternative's climate effects.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS.
12930-030	Approving the proposed Project increases the supply of offshore wind generated electricity, lowering demand for U.Sbased onshore renewable energy generation. Alternatively, in the No-Action Alternative, the demand	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action.

Index	Comment Text	Response
Number		
	for U.Sbased onshore renewable energy generation would be higher; and	
	unlike the proposed Project's effects in the first ten or longer years, U.S-	
	based onshore solar electric generation would reduce greenhouse gas	
	emissions and overall climate effects. Similarly, in the No-Action	
	Alternative, the higher demand for U.Sbased onshore renewable energy	
	generation would result in increased economic benefits for the United States,	
	as compared to the proposed Project's economic benefits.	
12930-031	The failure of the SEIS to analyze the potentially devastating impacts on	BOEM is evaluating Vineyard Wind's COP which is for the development of
	United States onshore renewable energy producers is clear error.	an 800-MW offshore wind farm and the potential impacts associated with
		their action.
12930-032	Changes in the relative amounts of coal, natural gas, renewable sources, and	BOEM is evaluating Vineyard Wind's COP which is for the development of
	nuclear energy used to generate electricity—as well as changes in total	an 800-MW offshore wind farm and the potential impacts associated with
	energy demand—would, in turn, change total greenhouse gases emissions. In	their action.
	short, the SEIS' unexamined and unsupported assumption that the No-Action	
	Alternative would have no effect on onshore solar energy is contradicted by	
	fundamental economics and market analyses. The SEIS fails to meet NEPA's	
	requirements, and should be revised.	
12930-033	Considering the size and nature of the Project and the balance of the 2,021	Thank you for your comment.
	WTGs, it is a fallacy to assume that under the No-Action Alternative there	
	would be no substitution with no effect on price, consumption, or emissions.	
12930-034	it is clear error to not analyze the substitutions that would occur if the	BOEM determined that it is reasonable to assume that if the proposed Project
	Project and the balance of the 2,021 WTGs were not built The Project and	is not built, another project or projects would be constructed to meet
	the balance of the 2,021 WTGs and the certain transmission build-out	mandates/demand. This assumption was used to frame the No Action
	represents an enormous amount of renewable energy that has a major effect	Alternative and also allowed BOEM to assess the maximum-case scenario in
	on resources. If the Project and the balance of the 2,021 WTGs are not	terms of potential impacts.
	approved, utilities in ISONew England will acquire other renewable energy	
	production to satisfy their respective renewable energy goals and standards,	
	and therefore, lower greenhouse gas emissions. In the No-Action Alternative,	
	any renewable energy substituting for the Project and the balance of the	
	2,021 WTGs may provide a more positive impact on emissions and climate	
	change. Yet, the SEIS does not analyze this environmental impact in its	
	alternatives analysis. In short, the SEIS' flawed economic assumptions render	
	its alternatives analysis ineffective and misleading, and the EIS must be	
	revised.	
12930-035	The DOE's mistaken assumption that taking no action on the Project and the	BOEM determined that it is reasonable to assume that if the proposed Project
	balance of the 2,021 WTGs and the massive certain transmission build-out	is not built, another project or projects would be constructed to meet
	would have, compared to approving it, no net effects on greenhouse gas	mandates/demand. This assumption was used to frame the No Action
	emissions, fisheries, endangered species, marine mammals and other resource	Alternative and also allowed BOEM to assess the maximum-case scenario in
	values represents a substantial break with a 35-year history of proper analysis	terms of potential impacts.

Index	Comment Text	Response
Number		
	by Interior and its sister agencies, and is inconsistent with the Interior's	
10000.000	actions in other reviews.	
12930-036	The Draft EIS and SEIS for the Project wholly ignore alternative generation	BOEM determined that it is reasonable to assume that if the proposed Project
	resources that would fill the void [under the NAA]. The Draft EIS and SEIS	is not built, another project or projects would be constructed to meet
	assumes that the Project and the balance of the 2,021 WTGs would prevent	mandates/demand. This assumption was used to frame the No Action
	future natural gas electric generating plants. Such an assumption does not	Alternative and also allowed BOEM to assess the maximum-case scenario in
	pass the muster of informed decision making [and] is absurd and defeats the	terms of potential impacts.
	entire purpose of analyzing viable replacements when the No-Action	
	alternative is selected. It is also a rationale that has been rejected by the	
	courts.	
12930-037	The Draft EIS' and SEIS' analysis is also inconsistent with BOEM and	Thank you for your comment.
	Interior's use of market modeling in other environmental impact statements.	
	Such inconsistent action is itself arbitrary and capricious agency action.	
12930-038	Local taxing jurisdictions would realize increases in tax revenues as a result	In light of the number of potential future offshore wind energy developments
	of the onshore renewable generators that would be built instead of the	listed in Appendix A and the Commonwealth of Massachusetts's mandate
	proposed Project and the balance of the 2,021 WTGs. The offshore	that distribution companies jointly and competitively solicit proposals for
	components of the Project and the balance of the 2,021 WTGs which is	offshore wind energy generation (220 Code of Massachusetts Regulation
	substantially all the Project's and the balance of the 2,021 WTGs assets are	[CMR] 23.04[5]), there is no evidence that any proposed alternative,
	outside state taxing jurisdiction. As such it is not subject to state and local	including the "No-Action" alternative, would have a significant effect on the
	property, sales or income taxation.	economics of renewable energy in the region. Therefore, further revision of
10000 000		the FEIS was not warranted.
12930-039	Similarly, direct or indirect economic impacts for those alternative renewable	As described in Appendix A and Section 3.6 of FEIS, the geographic analysis
	onshore United States-based generators would occur within the region under	area for economic impacts is limited to the counties where proposed onshore
	the No-Action Alternative, and indeed would far exceed those from the	infrastructure and potential port cities are located, as well as the counties in
	Project and the balance of the 2,021 w IGs. There would also be a reduction	closest proximity to the WDA. Economic impacts evaluated in Section 3.6 of
	in the wholesale price of electricity for those alternative United States-based	the FEIS reflect up to //5 WIGs in the RI and MA Lease Areas. In light of
	generators, and a far greater decrease in CO ₂ emissions.	the number of potential future offshore wind energy developments listed in
		Appendix A and the Commonwealth of Massachusetts's mandate that
		distribution companies jointly and competitively solicit proposals for
		offshore wind energy generation (220 Code of Massachusetts Regulation
		[CMR] 23.04[5]), there is no evidence that any proposed alternative,
		including the "No-Action" alternative, would have a significant effect on the
		economics of renewable energy in the region; therefore, further revision of
12020.040		the FEIS was not warranted.
12930-040	Under NEPA regulations, agencies must consider all reasonable alternatives,	As described in the DEIS, SEIS, and in Section U.S in Appendix C of the
	including those not specifically under their authority to implement I hus, the	FEIS, DOEW considered additional alternatives but did not analyze them in $1 \le t \le 1$ if there did not analyze them in
	resources because they would not require a nervice within DODM2 of	detail if they did not meet the purpose and need or the established screening
	resources because they would not require a permit within BOEM's of the	criteria. Since onshore renewable generation does not meet the purpose and
1	cooperating agencies jurisdiction is clear error.	need, it was not evaluated through the NEPA process.

Index	Comment Text	Response
12930-041	Therefore, the "Socioeconomic" impacts of the No-Action alternative are manifestly wrong. The No-Action alternative would result in different renewable energy projects filling its place. And because those alternative projects would be located entirely onshore in the United States and fully within state and local taxing jurisdictions, they would far surpass the Project and the balance of the 2,021 WTGs in economic benefits to the United States.	Thank you for your comment.
12930-042	Similarly, the analysis of the No-Action alternative for Air Quality is incorrect. The Project and the balance of the 2,021 WTGs would be replaced with renewable energy projects located closer to the actual electrical load. Those projects would have the higher air quality benefits, and GHG benefits compared to the Project and the balance of the 2,021 WTGs because they would be more efficient, and would not require the adverse climatic impacts caused by WTGs.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS. Additionally, BOEM's role is to evaluate the potential effects of the proposed Project as outlined in the COP as well as the impacts of a range of reasonable alternatives as required by NEPA. BOEM does not have control over any state or grid operator structure and whether or not the proposed Project would compete with other renewable projects outside of BOEM's purview.
12930-043	The Project and the balance of the 2,021 WTGs will displace American jobs related to construction and operation of onshore renewable energy projects in the United States that would fill any void if the Project and the balance of the 2,021 WTGs were not built. The SEIS has not analyzed those economic impacts and the loss of American jobs and tax revenues if the Project and the balance of the 2,021 WTGs were built.	As described in Appendix A and Section 3.6 of the FEIS, the geographic analysis area for economic impacts is limited to the counties where proposed onshore infrastructure and potential port cities are located, as well as the counties in closest proximity to the WDA. Economic impacts evaluated in Section 3.6 of the FEIS reflect up to 775 WTGs in the RI and MA Lease Areas. In light of the number of potential future offshore wind energy developments listed in Appendix A and the Commonwealth of Massachusetts's mandate that distribution companies jointly and competitively solicit proposals for offshore wind energy generation (220 Code of Massachusetts Regulation [CMR] 23.04[5]), there is no evidence that any proposed alternative, including the "No-Action" alternative, would have a significant effect on the economics of renewable energy in the region; therefore, further revision of the FEIS was not warranted.
12930-044	The SEIS' description of the effects of the No-Action Alternative is manifestly erroneous. The SEIS does not properly and adequately analyze the "No-Action" Alternative. The Project and the balance of the 2,021 WTGs will result in the loss of thousands of American jobs by displacing other renewable energy projects in New England.	Thank you for your comment.

Index Number	Comment Text	Response
12930-045	The SEIS violates the CWA's requirements by not taking a hard look— indeed not taking any look—at the proposed purpose of the Project and the balance of the 2,021 WTGs being able to be accommodated by onshore renewable energy. The Draft SEIS is utterly devoid of sufficient information that would support a decision of compliance with the Guidelines.	Section C.5 in Appendix C of the FEIS has an updated discussion of Alternatives Considered but not Analyzed in Detail for the proposed Project. Table 1.3-1 in Appendix B of the FEIS has updated the status of permits and consultations required for the proposed Project. USACE is the agency that would be responsible for regulating activities under Section 404 of the Clean Water Act. In addition, Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project, and as noted in the Appendix C, USACE is a cooperating agency in the preparation of the EIS.
12930-046	The Draft SEIS simply fails to offer any explanation as to why Project meets the public interest test. In order to have taken a hard look at whether the proposed Project meets the public interest test, BOEM would need at the very least to conduct a thorough review of the ISO-NE electricity supply and alternatives to meet renewable energy demand Moreover, in order to determine that the proposed Project meets the public interest test, a thorough review of its potential competitive effects on United States onshore based generators must be conducted. The SEIS made no such effort(s).	Under NEPA and Outer Continental Shelf Lands Act (OCSLA), BOEM's evaluation of the Project does not require a public interest determination. Further revisions to the FEIS were not warranted.
12930-047	The proposed Project would raise global warming in the early years of the Project, and overall as compared to renewable energy substitutes such as solarwill raise temperatures at and near its location adding additional stress on marine life that is already under stress [and] would create vulnerabilities to the New England electric grid by concentrating so much electricity from one source. No analysis has been conducted to compare the Project to distributed generation sources near load that could form the basis for local microgrids and reduce the grid's risk to severe weather events as well as criminal acts. The adverse impacts of the Project and the balance of the 2,021 WTGs could be avoided, and all the purported benefits of the Project and the balance of the 2,021 WTGs achieved, under the No-Action Alternative with deployment on onshore solar energy. The SEIS' failure to evaluate whether the proposed Project satisfies the public interest test requires that the SEIS be revised.	Under NEPA and Outer Continental Shelf Lands Act (OCSLA), BOEM's evaluation of the Project does not require a public interest determination. Further revisions to the FEIS were not warranted.
12930-048	The SEIS calculates the "economic benefits," impacts on other resource values and climate impacts of Project and the balance of the 2,021 WTGs by assuming that and the balance of the 2,021 WTGs would be built anyway, and that no onshore renewable energy facilities would be built to take their place if they were not built. As explained above, that is simply not true. Because onshore sources of renewable energy generation would substitute for the Project and the balance of the 2,021 WTGs, the SEIS must subtract from its calculation of the Project's economic, energy supply and climate benefits.	Under NEPA and Outer Continental Shelf Lands Act (OCSLA), BOEM's evaluation of the Project does not require a public interest determination. Further revisions to the FEIS were not warranted.

Index	Comment Text	Response
Number		
ine lost benefits	that would no longer he built	
12020 040 If the Project and	the belance of the 2 021 WTCs were not selected by	DOEM is avaluating Vineward Wind's COD which is for the development of
12930-049 II the Floject and Massachusetts ar	d/or Connecticut for a DDA then other renewable energy	an 800 MW offshore wind form and the potential impacts associated with
projects would be	we been selected with onshore solar having greater positive	their action
impacts and non	a of the negative impacts of offshore wind	
12020 050 The jobs conclus	ion fails to account for the jobs that are lost related to	As described in Annendix A and Section 2. 6 of the FEIS the geographic
onshore substitut	es particularly solar. The jobs that are lost felated to	analysis area for economic impacts is limited to the counties where proposed
negative impact	on fishing and environmental justice ommunities. Thus the	analysis area for economic impacts is infinited to the counties where proposed
"Socioeconomic"	' impacts of the No-Action Alternative are wrong. The No-	counties in closest proximity to the WDA Economic impacts evaluated in
Action Alternativ	we would result in onshore renewable energy projects filling	Section 3. 6 of the FFIS reflect up to 775 WTGs in the RI and MA Lease
its place	e would result in onshore renewable energy projects mining	Areas In light of the number of potential future offshore wind energy
ns piùce.		developments listed in Appendix A and the Commonwealth of
		Massachusetts's mandate that distribution companies jointly and
		competitively solicit proposals for offshore wind energy generation (220
		Code of Massachusetts Regulation [CMR] 23.04[5]), there is no evidence
		that any proposed alternative, including the "No-Action" alternative, would
		have a significant effect on the economics of renewable energy in the region;
		therefore, further revision of the FEIS was not warranted.
12930-051 The EIS and SEI	S must subtract from its calculation of the Project's	As described in Appendix A and Section 3. 6 of the FEIS, the geographic
economic, energy	v supply and climate benefits, the lost benefits from all those	analysis area for economic impacts is limited to the counties where proposed
onshore sources	of renewable energy generation that would no longer be	onshore infrastructure and potential port cities are located, as well as the
built. Once that i	s done, Project and the balance of the 2,021 WTGs may (and	counties in closest proximity to the WDA. Economic impacts evaluated in
likely would) hav	ve a net negative impact on economics, climate benefits,	Section 3. 6 of the FEIS reflect up to 775 WTGs in the RI and MA Lease
fisheries, marine	mammals, endangered species, commercial fishing, and all	Areas. In light of the number of potential future offshore wind energy
other resource va	lues compared to its substitutes. The SEIS does not comply	developments listed in Appendix A and the Commonwealth of
with NEPA beca	use it fails to analyze those effects.	Massachusetts's mandate that distribution companies jointly and
		competitively solicit proposals for offshore wind energy generation (220
		Code of Massachusetts Regulation [CMR] 23.04[5]), there is no evidence
		that any proposed alternative, including the "No-Action" alternative, would
		have a significant effect on the economics of renewable energy in the region;
		therefore, further revision of the FEIS was not warranted.
12930-052 Neither the SEIS	or the EIS accounts for the additional stress on endangered	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A
species caused by	the devastation from a category 4 or category 5 hurricane	Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval
hitting the WEA	(which is virtually certain) and destroying the WTGs,	for Category 3 hurricanes in the WDA is approximately every 50 years.
resulting in a cata	astrophic release of oil and contaminants into the marine	Section 2.3 of the FEIS also discusses potential effects of the proposed
environment.		

Index	Comment Text	Response
Number		different from currently available data. Therefore, further updates to the FEIS are not warranted.
12930-053	The SEIS and EIS also wholly ignore the devastation from a category 4 or category 5 hurricane hitting the WEA and destroying the WTGs, resulting in a catastrophic release of oil and contaminants into the marine environment and causing the take, and possibly the extinction, of endangered species, such as the Right Whales, sea turtles, and the piping plover, which nests on beaches that would be contaminated by an oil spill that could be as large as that of the Exxon Valdez's.	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years. Section 2.3 of the FEIS also discusses potential effects of the proposed Project being hit by a hurricane. More precise forecasts of hurricane frequency in future climate scenarios are not likely to be significantly different from currently available data. Therefore, further updates to the FEIS are not warranted.
12930-054	The SEIS fails to properly analyze the effect on marine life and fisheries. The SEIS does not account for the additional stress on the marine population caused by the increase in temperatures caused by the Project itself and the balance of the 2,021 WTGs Such incomplete analysis does not comply with NEPA, and does not provide information sufficient for either BOEM or the Corps to make the required determinations.	Section 3.2 of the FEIS has been revised to discuss the potential impact of heat from operating cables.
12930-055	[The marine life and fisheries] analysis does not account for the additional stress on the marine population caused by the increase in temperatures caused by the Project and the balance of the 2,021 WTGs themselves. See, Harvard Wind Study. That analysis does not account for the additional stress on the marine population caused by the devastation caused by a category 4 or category 5 hurricane hitting the WEA and destroying the WTGs, resulting in a catastrophic release of oil and contaminants into the marine environmentSuch incomplete analysis does not comply with NEPA, and does not provide information sufficient for either BOEM or the Corps to make the required determinations.	Section 3.3 and Appendix E Section E.4.4 of the FEIS have been revised to discuss the effect of the proposed Project on local ocean temperatures. Appendix E Section E.2.4 of the DEIS discussed the risk of hurricanes, and Appendix A Section A.8.2 of the SEIS discussed a catastrophic release of all oil and contaminants from the proposed Project. Therefore, no further revision to the FEIS is warranted.
12930-056	The Project does not meet the criteria for an incidental take authorization under the Marine Mammal Protection Act ("MMPA"). The MMPA prohibits the proposed action.	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. The NMFS Biological Opinion and Incidental Take Statement (including all Terms and Conditions and Reasonable and Prudent Measures are discussed Section 3.4.2 and Appendix D of the FEIS. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS.

Index	Comment Text	Response
Number		
12930-057	An IHA is inappropriate for multiple reasons. First, the proposed action will certainly require more than 1 year for construction. Second, the warming caused by the Project itself will constitute ongoing take for the life of the Project and the life of the balance of the 2,021 WTGs. Third, the occurrence of a category 3 or greater hurricane that is virtually certain to occur during the 30-year assumed operating period exceeds the WTGs survival speed. Prior reported incidences of cyclones exceeding a WTGs survival speed have resulted in a "twisted wreckage."Take that occurs from such an event that is virtually certain to occur is intentional and not accidental. Furthermore, the twisted wreckage of the WTGs from such an event have the likely potential to result in an oil spill the size of Exxon Valdez's causing serious injury or mortality to marine mammals. Fourth, the impact from both Project-caused warming and the eventual hurricane that exceeds the WTGs survival speed results in the inability to find that the take would (i) be of small numbers, (ii) have no more than a "negligible impact" on those marine mammal species or stocks, and (iii) not have an "unmitigable adverse impact" on the availability of the species or stock for subsistence uses.	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. The NMFS Biological Opinion and Incidental Take Statement (including all Terms and Conditions and Reasonable and Prudent Measures are discussed Section 3.4.2 and Appendix D of the FEIS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine
12930-058	Together with the Harvard study, the Record Paper establishes that the warming caused by the Project and the balance of the 2,021 WTGs pose a significant risk to the food supply of the right whales, which in turn threatens the survival of the right whales. The SEIS and the EIS simply fail to analyze those risks. The risk of diminished or elimination of the food supply for the Right Whales is a risk that cannot be ignored under NEPA and the ESA.	The analysis in the FEIS represents the best available science. The commenter is misrepresenting the information from the referenced study (Miller and Keith 2018). While there is some warming associated with wind power due to the atmospheric mixing, these impacts are generally localized to the immediate area around the turbines. Additionally, the study addressed surface temperature at land based WTGs. The same level of heating would not be expected to occur on the OCS given the thermal buffering characteristic of the ocean. As described in the Biological Opinion issued by NOAA, while it could lead to higher surface water temperature, "these effects will not extend more than a few hundred meters from each foundation." (NMFS 2020). Section 3.3.7.1 of the DEIS and Section 3.5.1 discuss zooplankton abundance and distribution in the region and the importance of these species for many fish species and NARW. Further, a detailed analysis of impacts to ESA listed marine mammal species, including a discussion of zooplankton abundance and distribution is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding Project impacts on zooplankton as a result of the Vineyard Wind 1 Project and the consequences to marine mammals is

Index	Comment Text	Response
Number		
		provided in the Biological Opinion issued by NMFS on September 11, 2020.
		Therefore, no change to the FEIS is warranted.
12930-059	BOEM and the cooperating agencies failed to take the required hard look at	Climate change was addressed in the DEIS and SEIS and is included in
	the direct, indirect, and cumulative GHG emissions and the impacts of those	Section A.8.1 of the FEIS. The effects of climate change were also an
	emissions on climate change. BOEM and the cooperating agencies failed to	impact-producing factor that was assessed in the appropriate resource
	sufficiently quantify and account for direct [greenhouse gas] GHG	sections in Chapter 3 and Appendix A of the SEIS. Lacking specific
	emissions, and failed to analyze the effect of those emissions on other	examples or feedback related to the comment presented, no specific updates
	resource values.	to the FEIS are warranted.
12930-060	BOEM and the cooperating agencies failed to address the foreseeable indirect	Climate change was addressed in the DEIS and SEIS and is included in
	impacts from downstream displacement of United States based renewable	Section A.8.1 of the FEIS. The effects of climate change were also an
	energy resources[and] failed to discuss the cumulative effects of these	impact-producing factor that was assessed in the appropriate resource
	emissions[and] failed to analyze the cumulative environmental effects of	sections in Chapter 3 and Appendix A of the SEIS. Lacking specific
	the proposed Project and reasonably foreseeable projects.	examples or feedback related to the comment presented, no specific updates
		to the FEIS are warranted.
12930-061	BOEM and the cooperating agencies have never taken a comprehensive hard	Climate change was addressed in the DEIS and SEIS and is included in
	look at the climate impacts of the proposed Project, which NEPA requires it	Section A.8.1 of the FEIS. The effects of climate change were also an
	to do.	impact-producing factor that was assessed in the appropriate resource
		sections in Chapter 3 and Appendix A of the SEIS.
12930-062	The SEIS fails to analyze the cumulative and life cycle GHG impacts of	Climate change was addressed in the DEIS and SEIS and is included in
	offshore wind. The SEIS assumes without analysis that the ability of utilities	Section A.8.1 of the FEIS. The effects of climate change were also an
	within ISO-NE to purchase electricity from an offshore wind facility is	impact-producing factor that was assessed in the appropriate resource
	desirable and is a solution to the strawman used by the SEIS. The SEIS	sections in Chapter 3 and Appendix A of the SEIS. The FEIS, as did the
	assumes, without analysis, that the offshore wind generation from the Project	DEIS and SEIS, quantifies the amount of greenhouse gas emissions
	is renewable, sustainable, and does not emit atmospheric pollutants, and does	associated with the proposed Project.
	not itself add to global warming over the next decade. Such an assumption	
	does not pass the muster of informed decision making.	
12930-063	BOEM and the cooperating agencies have failed to take a hard look at the	Section A.8.1 of the FEIS has been updated to include additional information.
	direct, indirect, and cumulative impacts to the climate from warming caused	BOEM has updated Section A.8.1 of the FEIS to include an analysis using
	by the Project and the balance of the 2,021 WTGs from their alteration of	EPA's AVERT and COBRA tools to assess air quality and health benefits.
	wind flow, and failed to discuss the severity of these impacts. The SEIS	AVERT uses information about the historical patterns of power generation
	assumes, without analysis, that the Project will not have any such impacts	throughout the year to evaluate the potential for emissions avoided on an
	The SEIS fails to sufficiently quantify and account for the warming that is	hourly basis throughout the year in a specific region, for a given category and
	generated by the Project and the balance of the 2,021 WTGsThe SEIS fails	size of renewable energy or energy efficiency project. The avoided emissions
	to explain how the adverse effects of the Project and the balance of the 2,021	output can then be analyzed with COBRA. The annual potential avoided
	WTGs would be offset over the next century. The SEIS must make an	emissions calculated by AVERT for an 800 MW offshore wind facility in the
	informed decision, and it cannot ignore the adverse climatic impacts of the	New England AVERT region are included in Table A.8.1-3 of the
	Project and the balance of the 2,021 WTGs over the next ten or longer years.	FEIS. Additionally, BOEM's role is to evaluate the potential effects of the
		proposed Project as outlined in the COP as well as the impacts of a range of
		reasonable alternatives as required by NEPA. BOEM does not have control

Index	Comment Text	Response
number		over any state or grid operator structure and whether or not the proposed Project would compete with other renewable projects outside of BOEM's purview.
12930-064	The Project is one of many projects in process of approval through which offshore wind energy producers intend to decimate U.S. onshore renewable energy producers and other generators in the United States, including Allco. The EIS and BOEM fail to analyze the Project's and the balance of the 2,021 WTGs cumulative effects with other projects that have been approved by federal agencies such as the various hydro-electric projects from Canada, which further decimate U.S. onshore renewable energy producers.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS. Additionally, BOEM's role is to evaluate the potential effects of the proposed Project as outlined in the COP as well as the impacts of a range of reasonable alternatives as required by NEPA. BOEM does not have control over any state or grid operator structure and whether or not the proposed Project would compete with other renewable projects outside of BOEM's purview.
12930-065	The SEIS fails to analyze the projected massive increase in Canadian imports of hydroelectricity [and] the impacts on other renewable energy forms of generation. The failure to analyze impacts of wind and solar, with or without storage, and other forms of onshore renewable generation as a reasonably foreseeable alternative is clear error.	In the DEIS, SEIS, and FEIS, BOEM considered a range of alternatives that would meet the proposed Project's purpose and need and the screening criteria outlined in Section C.5 in Appendix C of the FEIS. Assessing the impacts of wind and solar projects and onshore renewable generation where such effects would not overlap in time or space with the proposed Project are outside of the scope of BOEM's NEPA analysis.
12930-066	The SEIS and EIS fail to properly analyze the effects of climate change on hurricane activity in the Northeast and the Project area and the balance of the 2,021 WTGs over the next 30 years, which could cause catastrophic failure of the turbines, and leave turbine parts and oil and chemical spills in the Atlantic and reaching Martha's Vineyard, Nantucket, Cape Cod and Rhode Island.	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years. Section 2.3 of the FEIS also discusses potential effects of the proposed Project being hit by a hurricane. More precise forecasts of hurricane frequency in future climate scenarios are not likely to be significantly different from currently available data. Therefore, further updates to the FEIS are not warranted.
12930-067	The proposed Project and the balance of the 2,021 WTGs are not permitted by the ESA because they will, to a virtual certainty, result in take of multiple listed species.	Other reasonably foreseeable offshore wind projects will be individually evaluated separately by BOEM.
12930-069	In addition, the SEIS fails to discuss the potential impact on fisherman and navigation from the microclimate and potential fog creating ability of the Project and the balance of the 2,021 WTGs as is illustrated below by a photo	The FEIS discusses weather in Sections 3.11.2 and 3.11.5, and has been revised to state that, under certain atmospheric conditions, offshore wind

Index	Comment Text	Response
Number	of the Horns Rev wind farm. [photo provided in text shows turbines apparently generating fog - page 48 of doc]	farms could contribute to fog formation. This reflects a published case study of The Horns wind farm (Hasager et. al. 2017, as cited in the FEIS).
12930-070	The Supplemental Draft Environmental Impact Statement ("SEIS") for the Vineyard Wind Project (the "Project"), like the EIS, does not conform to the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§4321-4370h, 36 C.F.R. Part 251, 43 U.S.C. §1761, 43 U.S.C. §15926.	Section 3.11.2 of the FEIS includes a discussion of potential radar interference. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines, and the use of AIS enable safe navigation with minimal loss of radar detection.
12930-071	The failure to examine the authorized [lease] term is clear error and does not comply with NEPA.	Chapter 2 of the DEIS, SEIS, and FEIS outline the time periods for construction, operation, and decommissioning, and the effects of these activities are assessed in the resource sections in Chapter 3 and Appendix A of the FEIS.
12930-072	The Army Corps of Engineers does not have the authority to issue a permit for the proposed action. The 404(b)(1) Guidelines prohibit the Corps from granting a Section 404 permit "if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). Delivering renewable energy to the New England and Mid-Atlantic area is not water-dependent. Solar and onshore wind could deliver all requirements. If the Corps finds that a proposed project by its general nature is not water dependent, which it must here, then the Corps must presume that practicable alternatives to the project are available in less sensitive areas. See 40 C.F.R. § 230.10(a)(3). Likewise, the Corps must presume that such practicable alternatives have less adverse impact on the aquatic ecosystem.	BOEM's action is to assess the potential impacts of the proposed Project as defined in Vineyard Wind's COP. Onshore renewable alternatives would not meet the purpose and need and are outside of BOEM's purview.
12930-073	BOEM and the cooperating agencies' failures are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," in violation of NEPA, 42 U.S.C.§ 4332(C)(ii), its implementing regulations at 40 C.F.R. §§ 1508.7, 1508.8, 1508.25, 1508.27, and the APA at 5 U.S.C. § 706(2)(A).	Thank you for your comment.
12930-074	The SEIS's assumptions for the No Action Alternative are especially flawed by assuming that if the proposed action does not occur then other offshore wind would take its place. That analysis makes zero sense. First, it is illogical to assume that if the proposed project is rejected (presumably for substantive reasons such as destroying fisheries) that a substantially identical project would be approved. Second, the result of the SEIS's approach is comparing building 21GW of offshore wind versus 21.8GW. If that were the proper comparison then it would be logical to believe that there would never be	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.

Index Number	Comment Text	Response
Number	much marginal effect caused by the proposed Project. But that is not the right analysis.	
12930-075	The SEIS concludes that it is only reasonably foreseeable that 21.8GW of off-shore wind would exist. There is no basis to exclude the additional 3.2GW for which there are existing Atlantic leases. Nor is there a reasonable basis to exclude the additional 7.5GW of "State Capacity Planned Commitment—Pledged" simply because there does not exist an existing Atlantic Lease for all of it. On July 21, 2020, New York announced an additional procurement of up to 2.5GW for offshore wind energy.	Chapter 1 of the SEIS and the FEIS outline the assumptions that were used to assess the effects of reasonably foreseeable projects.
12930-076	On SEIS page 3-1, the no action alternative assumptions are flawedThat assumption is irrational. If the proposed Project does not occur, it is foreseeable that the state demand for renewable energy would be met with onshore wind and solar, and that future off-shore wind facilities would not be approved.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.
12930-077	The SEIS's No Action Alternative assumption that is a constant thread throughout is that if the proposed action is not undertaken then other offshore wind project would nevertheless still be approved, which is illogical and flawed.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.
12930-078	The SEIS fails to examine the 25-year term of the authorization. While it is acceptable for the draft SEIS to analyze a 30-year term, the SEIS must also analyze the only term that is authorized, which is 25 years from COP approval. The Harvard Wind Study concludes that a facility such as the Project has negative climate effects for the first 10 years, and offsetting those negative impacts will take a century. By extending the SEIS study period to longer than the authorized term, the amount of positive climate effects would be overstated.	The referenced study referenced localized heating effects caused by land- based windfarms, mostly at night. These are caused by mixing the boundary layer, not adding heat to the Earth's atmosphere. As such, there is no contribution to global climate change and the comparison of localized transient heating to global warming is incorrect. The following is a summary of that information and incorporates new information specific to the Proposed Action. The temperature of the Earth's atmosphere is regulated by a balance between the radiation received from the sun, the amount reflected by the earth's surface and clouds, the amount of radiation absorbed by the earth, and the amount re-emitted to space as long-wave radiation. Greenhouse gases (GHGs) keep the Earth's surface warmer than it would otherwise be because they absorb infrared radiation from the earth and, in turn, radiate this energy back down to the surface. Although these gases occur naturally in the atmosphere, there has been a rapid increase in concentrations of GHGs in the Earth's atmosphere from human sources since the start of industrialization, which has caused concerns over potential changes in the global climate. The primary GHGs produced by human activities are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and halocarbons (MMS 2007). The surveying, construction, and decommissioning activities associated with the Proposed Action would produce GHG emissions. As GHGs are relatively

Index	Comment Text	Response
Number		
		stable in the atmosphere and are essentially uniformly mixed throughout the troposphere and stratosphere, the climatic impact of GHG emissions does not depend upon the source location. Therefore, regional climate impacts are likely a function of global emissions. The causes and effects of climate change can be summarized as follows. First, GHGs are emitted into the atmosphere, causing global warming (i.e., an aggregate average increase in the temperature of the Earth's atmosphere). Second, global warming induces the climate to change in disparate ways at various places around the globe, altering global precipitation regimes, decreasing the salinity of the oceans, and altering the seasons. Finally, climate change leads to direct impacts on the environment, such as changes in the structure of an ecosystem, changes in air quality, a reduced supply and increased cost of food, warming polar regions, higher precipitation totals, sea level rise, extreme temperatures, and severe weather events. Additionally, uptake of CO2 in marine waters decreases the pH buffering capacity of the ocean. BOEM does not agree with the assumption that offshore renewable energy projects result in more adverse impacts on climate change than fossil-burning projects, as proposed by the commenter. While there would be some GHG emissions associated with the project during its operation (e.g., vessels conducting routine and emergency maintenance), such emissions would have negligible impacts on air quality and climate change if the project operates for 5 additional years. In fact, the project is expected to have a beneficial effect on climate change when compared to other energy projects that use fossil fuels for energy generation purposes. The additional GHG emissions anticipated from the Proposed Action, over the 5-year period, would have a negligible incremental contribution to existing GHG emissions and, therefore, would have a negligible effect on climate change. Compared to a similarly sized fossil fuelpowered generating station or to the
12020 070	יין ארי ארי אין אין אין אין אין א	FEIS were warranted.
12930-079	The SEIS bases its entire analysis on conjecture. The SEIS assumes without adequate support that offshore electricity generation is needed, a need that was never analyzed. There surely cannot be informed decision making when the threshold question—need for the proposed Project and the balance of the 2,021 WTGs —is based merely upon conjecture.	The purpose and need for the proposed Project was developed based on Vineyard Wind's COP and was concurred upon with the cooperating agencies involved in the proposed Project.
12930-080	The SEIS fails to take a hard look at the No Action Alternative on those five ESA listed [sea turtle] species and other listed species and instead takes the approach that if the proposed Project is not approved, then other offshore	A detailed analysis of impacts of the Vineyard Wind 1 Project to ESA listed species is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/, as well as the Biological Opinion issued by NMFS

Index	Comment Text	Response
Number		
	wind projects would have the adverse effects on the ESA listed species in any case, so there is no real impact from the proposed project.	on September 11, 2020. Section 3.3.8.3 of the DEIS and Section 3.6.2 of the SEIS discussed potential impacts to sea turtles as a result of construction, operation, maintenance, and eventual decommissioning of the proposed Vineyard Wind 1 Project. Additionally, Section 3.0 of the SEIS outlined the approach and assumptions used to analyze the No Action alternative. Therefore, no change to the FEIS is warranted.
12930-081	The SEIS' analysis of oil and other contaminant spills [in 3-43] is also flawedThe SEIS appears to be saying that the oil spills from the WTGs do not matter because there will be other spills anyway. The SEIS conflicts with the oil spill analysis performed in 2006 for the Cape Wind project which concluded that 7% of all spills could be attributed to the 400 MW Cape Wind project. Now the size analyzed is exponentially larger, 22GWs or more than 50 times larger, which likely increases the spill probability by more than 50 times or 5000%.	Section A.8.2.2 of the SEIS addressed the potential for accidental releases and discharges associated with the proposed Project. Therefore, no change to the FEIS is warranted. The SEIS stated the most likely size spill to occur is small; therefore, within the geographic analysis area the impacts would be negligible based on size and likelihood of occurrence. Therefore, no change to the FEIS is warranted.
12930-082	The SEIS fails to mention, much less take a hard look at, whether the Project and the balance of the 2,021 WTGs affect a special aquatic site.	The analysis for the SEIS for each resource was based on a specific geographic analysis area. As stated in Table A-1, the geographic analysis area for water resources included a 10-mile (16.1-kilometer) radius around the WDA, the OECC, and vessel approach routes to port facilities that would be used by the proposed Project. Section A.8.2.2 of the FEIS has been revised to include "other special aquatic sites" when referencing wetlands. Sections 3.2 of the SEIS included a discussion of coastal habitats within the analysis area for coastal habitats. Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative. Please note that the NEPA process for the proposed Project is not intended to be a programmatic EIS evaluation. Instead, the impact analysis focused on Vineyard Wind's potential contribution to impacts on the various resources assessed. Furthermore, the USACE is a cooperating agency to the proposed Project. Therefore, no change to the FEIS is warranted.
12930-083	The Draft SEIS makes no mention of "special aquatic sites" as defined in 40 C.F.R. §§ 230.40-230.45, particularly 40 C.F.R. §§ 230.43 (vegetated shallows) and 40 C.F.R. §§ 230.44 (coral reefs). The failure of the SEIS to specifically review whether the Project and the balance of the 2,021 WTGs have any effect on "special aquatic sites" and the specific review related thereto is clear error.	Section 3.2.1 of the SEIS included vegetated shallows and coral as "special, sensitive, and unique habitats." Therefore, no change to the FEIS is warranted.
12930-084	BOEM and the cooperating agencies have failed to take a hard look at the direct, indirect, and cumulative impacts to commercial fisheries and for-hire recreational fishing climate from warming caused by the Project and the	Appendix E of the FEIS discusses hurricane data, and COP Volume II-A Section 2.2.1 (Epsilon 2018d) indicates that the average recurrence interval for Category 3 hurricanes in the WDA is approximately every 50 years.

Index	Comment Text	Response
Number		
	balance of the 2,021 WTGs from their alteration of wind flow, from the	Section 2.3 of the FEIS also discusses potential effects of the proposed
	virtual certainty that a hurricane of category 4 or 5 strength will directly hit	Project being hit by a hurricane. More precise forecasts of hurricane
	and 5 hyprisons and foiled to discuss the severity of these imports. It connects	different from summertly queilable date. Therefore, further undetes to the EEIS
	ignore the devestation and destruction of not only the WTGs that would	amerent from currently available data. Therefore, further updates to the FEIS
	again but the devastation on the marine environment	
12031-001	the Vineward Wind Project will generate clean renewable energy while	Annandix A Section A & L of the FEIS has been undeted to address air
12931-001	reducing significantly carbon emissions. The SDEIS documents significant	auality henefits of the displacement of fossil fuel electricity generation by
	notential for adverse consequence that If the Vineward Wind Project is not	offshore wind
	approved	offshore white.
12933-001	Offshore wind makes GREAT economic sense!	Thank you for your comment.
12935-001	As a resident of Oak Bluffs, I write to express my support for the offshore	Thank you for your comment.
	wind projects on the eastern seaboard. These projects are critically important	
	to our efforts to create a sustainable source of renewable energy for our	
	nation. We must authorize and fully utilize these wind farms to give	
	ourselves a chance of preserving our earth as we know it. The review process	
	and environmental impact statement have carefully acknowledged and	
	addressed safety and industry concerns. Well done. The benefits of these	
	projects are so wide-ranging and vital, from helping us achieve our net-zero	
	objectives to creating jobs and meaningful economic benefits. The delays in	
	this process are very unfortunate due to the urgency of addressing adverse	
1000 (001	environmental impacts.	
12936-001	I submit general supportAlternatives D2 and request rejection of	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative E through GProposed Alternative D2 is the result of	alternative.
	significant work of stakeholders and offers the best balance of interests	
	between the offshore wind industry and the benefits it may bring, and private	
12026 002	The LLS offeners wind industry has the netantial to provide a substantial	These transformation and the second
12930-002	head to the U.S. onishore wind industry has the potential to provide a substantial	i nank you for your comment.
	reduce greenhouse gases and provide a significant boost in the combat of	
	climate change U.S. East Coast states and Federal Agencies have acted and	
	invested significant nublic funds to the furtherance of the offshore wind	
	industry in America. These funds must be returned to U.S. citizens via good	
	naving family sustaining American jobs	
12936-003	By AWFA's estimates utilization of a U.S. workforce throughout the supply	Section 3.6.1.1 of the FEIS has been undated to provide estimates from
12,50 005	chain will increase the economic impact of the Industry by \$11.2B Economic	several sources of projected employment and investment resulting from
	Output, \$5.SB Value Add, and 37.000 jobs over the next 10 years yet	growth of the wind energy industry along the Atlantic coast. While the
	produce zero negative impacts. The United States, East Coast States and their	estimates are national, jobs are anticipated to be concentrated in and near the
	communities, including those assessed in section 3.7 and others that will be	east coast states that would host offshore wind. This information was also

Index	Comment Text	Response
Number		
	impacted by the larger Foreseeable Scenario, the IBEW and other trade	included in the SEIS (Section 3.7.2.1), and the FEIS provides additional
	unions, need those jobs.	detail and analysis.
12937-001	As you know this project is important to setting the stage for consideration of	Thank you for your comment.
	broader commitments to sustainable development of the offshore wind	
	energy in the Mid-Atlantic, which is necessary to meeting energy needs,	
	creating new jobs, reducing emissions and	
	meeting New Jersey and other state renewable energy goals.	
12938-001	Vineyard Wind 1 has undergone ten years of rigorous environmental review	Thank you for your comment.
	to ensure that it has the least possible impact on fisheries, shipping, and	
	communities, and is now almost at the finish line. The success of this project	
	will kickstart a pipeline of offshore wind projects in New York, Connecticut,	
	and the US: We cannot afford to see it delayed or stopped.	
12940-001	Some of the alternative proposals seeks to expand the turbine area footprint	Chapter 2 of the DEIS, SEIS, and FEIS address the assumptions that were
	so the turbines would be placed further apart on the shelf. Upon examining	used in the alternatives analysis.
	these alternative proposals, we question how economically feasible it is for	
	the company, and, ultimately the consumer, to have to pay for the expanded	
	construction costs associated with placing the turbines further apart if they	
	will generate the same amount of energy closer together? But, more	
	importantly, we wonder how it can benefit, the marine life and oceanic eco-	
	system to potentially disturb four times more area of their natural habitat?	
	therefore, we are respectfully asking that you approve Vineyard Wind's	
	proposal as submitted.	
12941-001	Thank you to the entire team at the Bureau of Ocean Energy Management for	Thank you for your comment.
	the timely	
	release of the Supplement to the Draft Environmental Impact Statement	
	(SEIS) for Vineyard Wind I. As a company with a financial interest in the	
	growth of the US offshore wind industry, the SEIS is an important milestone	
	for the entire industry and the many businesses that support it. I urge you to	
	move the Vineyard Wind I project forward without delay There are many	
	offshore wind projects in the skyline and the global resources are limited so	
	we consider that further delays in the approval process may create	
	uncertainty in the local industry and inhibits industrial growth and services	
12041-002	development in the area.	
12941-002	The Department of Interior's decision to delay Vineyard Wind's final permits	The methodology for assessing reasonably foreseeable actions or projects
	last year reverberated through the entire industry and had a chilling effect on	that was presented in the SEIS was carried forward in the FEIS.
	the industry's investment capabilities. The SEIS does not factor this into its	
	cumulative analysis. The analysis assumes that even without a green light for	
	vineyard wind, industry investment will move forward as planned. This	
1	assumption is greatly flawed as companies need regulatory and market	
Index	Comment Text	Response
------------	--	---
Number		
	certainty in order to justify investment in new markets and the US would be	
120.41.002	sending a signal that it is not yet ready to get serious about offshore wind.	
12941-003	In addition, by requiring additional transit lanes through projects and	Section 2.5 of the FEIS has been added which includes the agency-preferred
	reducing capacity to develop lease areas to their full extent, BOEM is	alternative.
	effectively reducing the industry's opportunities for investment, which will	
	translate to lost economic benefits and jobs for the US overall. As a company	
	with an interest in investing in the US market, we strongly urge BOEM to	
12041 004	reject this Alternative F.	
12941-004	According to the American Wind Energy Association, states have set	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
		several sources of projected employment and investment resulting from
	procurement goals that will invest roughly \$57 billion in the US economy by	growth of the wind energy industry along the Atlantic coast. While the
	2030. If the	estimates are national, jobs are anticipated to be concentrated in and near the
	Department of Interior gets bening this industry now, the potential for	included in the SEIS (Section 2.7.2.1) and the EEIS presides additional
	additional jobs and	detail and analysis
	the user of iches throughout the nation from chinhuilders to turbing and	uetan and analysis.
	ashla manufacturing to comparing like ming in the Offichers Foundations	
	cable manufacturing to companies like mine in the Offshore Foundations	
12042 001	The Vineward wind form project will not only help to reduce earbon	Thealt you for your comment
12942-001	amissions but also create jobs in the surrounding area. Projects like this are	i nank you for your comment.
	essential to making the economy thrive in a changing world	
120/3-001	The US has massive offshore wind notential and yet that notential it is	Thank you for your comment
12945-001	almost completely untapped. We must not wait to bring jobs and clean	Thank you for your comment.
	energy to our communities. After many years of study and nublic input. I am	
	confident that this responsibly-sited project will not only bring clean	
	emission-free renewable energy to Massachusetts it will also respect the	
	fragile ocean ecosystem.	
12943-002	The COVID-19 pandemic has decimated both public health and our	Thank you for your comment.
	economy. Vinevard Wind 1 will create pollution free energy, providing	
	cleaner air and benefiting public health when it is needed most. Furthermore,	
	the project will create 3,600 jobs for residents and save ratepayers more than	
	\$1.4 billion. This is the exact type of project that our nation needs for a	
	sustainable economic recovery.	
12948-001	While the SEIS may have implications for all projects on the Outer	Thank you for your comment.
	Continental Shelf, DMME	
	recommends that BOEM recognizes that each project depending on location	
	will dictate different environmental reviews and circumstances. This is the	
	basis for these comments. The Bureau's analysis in the SEIS illustrates	
	clearly that turbine layout and vessel transit considerations are highly	

Index	Comment Text	Response
Number	dependent on local practices, resources, conditions and users of easen	
	recourses	
12948-002	The 1nm x 1nm layout assumptions may be appropriate for the Northeast	BOFM is responsible for assessing proposed projects based on the
12740-002	wind energy areas specifically the Massachusetts and Rhode Island wind	information presented in an applicant's COP During the NEPA review
	energy areas. However, these assumptions should not be imposed on projects.	process BOEM will consider alternatives and alternatives for future projects
	outside of the Northeast absent the presence of similar local resources and	could include alternate WTG layout options much like the proposed Project's
	conditionsSite-specific considerations should be the primary criteria for	NEPA process did.
	determining the layout of projects in areas outside of the Massachusetts and	1
	Rhode Island lease areas. We believe it is important that BOEM clearly	
	articulate that any analysis done does not set the standard for use of 1nm x	
	1nm spacing	
	for projects outside of the Northeast.	
12948-003	Likewise, the vessel transit lane alternative (F) providing a four nautical mile	Section 2.5 of the FEIS has been added which includes the agency-preferred
	wide lane through the Vineyard Wind development area for vessels transiting	alternative.
	from southern New England to Georges Bank fishing grounds would make	
	little sense in Virginia or other Mid-Atlantic states.	
12951-001	While the SEIS may have implications for all projects on the Outer	Each applicant is required to submit a COP with their proposed action for
	Continental Shelf, DMME recommends that BOEM recognizes that each	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	project depending on location will dictate different environmental reviews	require an analysis of impacts and the selection of the preferred alternative.
	and circumstancesDMME encourages BOEM to make the significance	
	of these kinds of project-specific distinctions clear and explicit in the SEIS,	
	so that impact mitigations for the Vineyard Wind I development area are not	
12051 002	The law v law lower ecount in a maximum be appropriate for the Northeast	As noted in Annowdiy A of the SEIS DOEM assumed that all offshame wind
12931-002	wind energy grass, specifically the Massachusetts and Phode Island wind	As noted in Appendix A of the SEIS, BOEM assumed that an offshore wind developments offshore Massachusetts and Phode Island would have 1 x 1
	energy areas. However, these assumptions should not be imposed on projects	neutrical mile spacing. This assumption was made based on the development'
	outside of the Northeast absent the presence of similar local resources and	agreement made among the developers and does not preclude the selection of
	conditions Site-specific considerations should be the primary criteria for	another alternative by the decision maker. BOFM further assumed that wind
	determining the layout of projects in areas outside of the Massachusetts and	development offshore other states, with the exception Virginia, is assumed to
	Rhode Island lease areas. We believe it is important that BOEM clearly	occur at the same density as 1×1 nautical mile spacing, but no particular
	articulate that any analysis done does not set the standard for use of 1nm x	layout orientation or foundation spacing is assumed as ocean users offshore
	1nm spacing for projects outside of the Northeast.	different states may have different patterns of movement or considerations
		than projects in leases offshore Massachusetts and Rhode Island. Therefore,
		no changes to the FEIS are warranted.
12951-003	Likewise, the vessel transit lane alternative (F) providing a four nautical mile	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	wide lane through the Vineyard Wind development area for vessels transiting	that could occur in Alternative F were implemented. Therefore, no changes to
	from southern New England to Georges Bank fishing grounds would make	the FEIS are warranted. Spacing and orientation layouts and transit lanes for
	little sense in Virginia or other Mid-Atlantic states.	other regions will be determined through future analysis and coordination
		with USCG.

Index	Comment Text	Response
12953_001	The MVC urges BOEM to approve the SEIS as drafted, as it further ensures	Thank you for your comment
12755-001	the co-existence of the emerging offshore wind industry maritime	Thank you for your comment.
	stakeholders and the natural environment on which we depend	
12953-002	In response to the growing impacts of climate change, the MVC in 2019	Climate change is addressed in Section A.8.1 of the FEIS as it related to air
12,00 002	adopted a Climate Crisis Resolution that formalizes our support for	quality.
	eliminating fossil fuel use on the Vinevard by 2040, along with developing	1
	policies that further incorporate the effects of climate change into our	
	planning and regulatory activities, and drafting master plans for mitigating	
	and adapting to the effects climate change in the coming years. Without the	
	rapid development of offshore wind in Massachusetts, the Commission's	
	energy-reduction goals will remain well out of reach, and climate change will	
	continue to disrupt our economy, culture, and environment at an increasing	
	rate.	
12953-003	The Commission is aware of the 2015 Community Benefit Agreement	Section 3.6.2 of the FEIS has been updated to include information on the
	between Vineyard Wind and the Island's non-profit Vineyard Power	Community Benefit Agreement between Vineyard Wind and the Vineyard
	Cooperative pursuant to which the parties regularly consult, with input from	Power Cooperative as contributing to the economic benefits that would result
	members of the Island community, to identify opportunities to benefit Island	from the Vineyard Wind 1 Project.
	residents. We understand such benefits to include Aircraft Detection Lighting	
	Systems (reducing the amount of light visible on our shores); sighting an	
	operations and maintenance facility, which includes investment in the	
	Tisbury Working Waterfront and the creation of up to 40 year round well	
	paid jobs; providing funding for job training; and direct funding from the	
	vineyard wind Affordability and Resiliency Program, which will enable the	
	development of local renewable energy projects to improve energy security,	
	Island residents. The Commission breadly supports these initiatives	
12058 001	This yenture by Vineyard Wind will provide according strength and technical	Thenk you for your comment
12938-001	expertise to ensure not only that the project is delivered on time and on	
	budget but that it will produce significant numbers of new high-quality	
	union jobs and investment. It also represents an exciting opportunity to create	
	expanded access to apprenticeships and careers in the construction trades for	
	low-income and workers of color in the communities where the onshore	
	operations of these projects will be based.	
12958-002	Vineyard Wind 1 alone will create 3,600 jobs for local residents, while	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
	making a significant contribution to the efforts to tackle climate change by	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
	avoiding the emission of almost 1.7 million tons of carbon dioxide per year,	3,600 FTE job years, including 1,100 to 1,550 job years during construction
	the equivalent of removing 325,000 cars of the road. These benefits will be	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
	multiplied by each project that is built out over the next few years.	during operation. These data were also provided in the DEIS. Appendix A.

Index	Comment Text	Response
Number		
		Section A.8.1 of the FEIS has been updated to address air quality benefits of the displacement of fossil fuel electricity generation by offshore wind.
12958-003	Vineyard Wind has indicated a strong commitment to workforce development initiatives aimed at educating, training, and certifying local residents and students with diverse socioeconomic and professional backgrounds for careers in the offshore wind sector. Vineyard Wind has made outreach to organized labor a priority and pledged to sign the nation's first offshore wind Project Labor Agreement (PLA) for Vineyard Wind 1 to ensure both fair compensation and the highest construction standards for the project. Doing so sets precedent for the industry that offshore wind projects will be constructed by the building trades unions, ensuring fair wages and consistent work for local tradesmen and women as the industry is built outOffshore wind power development represents a generational opportunity for the hardworking men and women in the building trades, and will result in thousands of new, local good-paying jobs with good benefits.	Section 3.6.2 of the FEIS lists the grants and community programs that the Vineyard Wind 1 Project would provide, including job training for offshore wind-related trades. This information was also provided in the DEIS. The Project Labor Agreement is not included in the FEIS.
12959-001	I strongly recommend that BOEM in the final EIS: (1) Adopt Alternative D2 as the Preferred Alternative for addressing vessel navigation safety issues because, among other benefits, it has a lower impact on national security than Alternative F. (2) Reduce the overall cumulative impact rating for military and national security issues to minor or, at least, moderate.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12959-002	Based on my experience in the Navy, I have no doubt that offshore wind can be deployed in a way that is consistent with safe vessel navigation. And, in light of my engagement with the Department of Defense's (DoD) Military Aviation and Installation Assurance Siting Clearinghouse's ("Siting Clearinghouse") review process for proposed energy projects during my time as Assistant Secretary of the Navy, I am confident that offshore wind developers, DoD and BOEM can design projects ways that are fully compatible with military testing, training and operational activities and ensure that any potential impacts will be mitigated or minor.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The FEIS has also been modified to specify that other project developers would be required to coordinate with military and national security entities to identify and mitigate potential conflicts. The impact ratings for military and national security uses and SAR activities were updated due to additional analysis and comments provided by the USCG and other entities in the course of the SEIS development. BOEM and Vineyard Wind have conducted extensive coordination with the DoD and the USCG, including coordination through the DoD Clearinghouse, which is described in Section 3.12 of the FEIS
12959-003	The U.S. Coast Guard (USCG), as the ultimate arbiter of what measures are needed to maintain safe navigation for ocean users, should be given deference in making safety recommendations. With respect to offshore wind	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index Number	Comment Text	Response
Number	development off the coasts of Massachusetts and Rhode Island, the USCG has been clear. In the final Massachusetts and Rhode Island Port Access Route Study (MARIPARS) published in May 2020, the USCG concluded that 1x1 nautical mile (nm) spacing between turbines in a uniform grid layout across the multiple adjacent leases areas will "maximize safe navigation within the MA/RI WEA" and that "formal or informal vessel routing measures would not be required as such a grid pattern will result in the functional equivalent of numerous navigation corridors that can safety accommodate both transits through and fishing within the wind energy area." The 1x1 nm spacing and uniform layout the USCG found is the best alternative to help ensure vessel navigation safety, and it is reflected in Alternative D2 in the SDEIS.	
12959-004	By contrast, the USCG found that imposing 2 nm to 4 nm mile transit lanes, as proposed in Alternative F, through the lease areas would make "navigation more challenging	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12959-005	I would also strongly urge BOEM to adjust the major rating for cumulative impacts to military and national security in the final EIS to minor, or at most, moderate. As BOEM recognizes in the SDEIS, there is already a robust DoD review process managed by the Military Aviation and Installation Assurance Siting Clearinghouse. Under that process, offshore wind energy project developers are already required under federal law, BOEM regulations, FAA regulations, and DoD regulations (which includes an instruction memorandum process that defines engagement on offshore wind) to engage with DoD and resolve concerns. And if DoD so choses, it can object to a proposed energy project.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The FEIS has also been modified to specify that other project developers would be required to coordinate with military and national security entities to identify and mitigate potential conflicts, and clarify the requirement to coordinate with the DoD through the FAA review process for WTGs located in U.S. Territorial Waters. BOEM and Vineyard Wind have conducted extensive coordination with the DoD and the USCG, including coordination through the DoD Clearinghouse, which is described in Section 3.12 of the FEIS.
12959-006	As someone who participated in the DoD review process from the inside when I was Assistant Secretary of the Navy, I can validate the process is thorough and is solely focused on what is needed to protect the military mission. In my experience, neither DoD nor the individual military services will sign-off on a proposed project that may pose a major impact to military testing, training, or operations. Further, under federal law, the potential for any "adverse impact" on military operations and readiness triggers discussions with project proponents about potential ways to resolve DoD concerns. If those concerns can be resolved, the solution is typically memorialized in a signed memorandum of agreement and, in the case of an	The FEIS has also been modified to specify that other project developers would be required to coordinate with military and national security entities to identify and mitigate potential conflicts, and clarify the requirement to coordinate with the DoD through the FAA review process for WTGs located in U.S. Territorial Waters. BOEM and Vineyard Wind have conducted extensive coordination with the DoD and the USCG, including coordination through the DoD Clearinghouse, which is described in Section 3.12 of the FEIS.

Index	Comment Text	Response
Number	offshore wind project, could be memorialized in conditions imposed by	
	BOEM through the issuance of a permit.	
12959-007	In sum, I strongly urge BOEM to select Alternative D2 as the Preferred	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative, reject Alternative F as unreasonable, and lower the overall	alternative.
	military and national security cumulative impact rating to minor.	
12960-001	While acknowledging these improvements, we are concerned about the	BOEM has been granted a 300 page limit for the FEIS which assists with the
	integration of the DEIS and SEIS into a comprehensive FEIS. We know	culmination of multiple analyses into the FEIS. Even so, in order to comply
	BOEM is working under Secretarial Order regarding maximum document	with the page limits in the Department of the Interior's Secretarial Order
	length and worry that page limits will relegate too much content to	3355 and focus on the impacts of most concern, BOEM had to include tables,
	appendices, making the document hard to follow. BOEM should carefully	figures, and analysis of resources in appendices. The information located in
	consider whether some information from the appendices can be included in	the appendices is readily accessible and conveniently labeled for the review
	the body of the FEIS. For example, the written descriptions and maps of	of all interested stakeholders.
	resource geographic analysis areas (Appendix A.1 and A.7, respectively) are	
	in the body of the document	
12960-002	In addition Tables 3-1 and 3-2 in Appendix B which provide impact	BOFM has been granted a 300 page limit for the FFIS which assists with the
12900 002	definitions (negligible, minor, moderate, major) are important, and should be	culmination of multiple analyses into the FEIS. Even so, in order to comply
	pulled forward.	with the page limits in the Department of the Interior's Secretarial Order
	1	3355 and focus on the impacts of most concern, BOEM had to include tables,
		figures, and analysis of resources in appendices. The information located in
		the appendices is readily accessible and conveniently labeled for the review
		of all interested stakeholders.
12960-003	To the extent that information must be placed in an appendix, it is essential	BOEM has considered how to incorporate the components of the EIS. To
	that BOEM hyperlink to relevant sections of the document so that related	help comply with the page limits in the Department of the Interior's
	information can be easily identified. It would also be useful to include	Secretarial Order 3355 and focus on the impacts of most concern, BOEM had
	hyperlinks to figures, tables, and section headings throughout the body of the	to include tables, figures, and analysis of resources in Appendices.
120(0.004	EIS Itself.	Hyperlinks will be added where appropriate.
12960-004	To the extent that the EIS references the COP, BOEM should provide very	information has been incorrected by reference. Hymerlinks will be added
	if possible) as the COP itself is a complex document	where appropriate
12960-005	Ideally the FEIS document would stand alone and not incorporate DEIS and	The FFIS is a standalone document and does not incorporate by reference the
12900 000	SEIS sections by reference. Given revisions to the project over time.	DEIS or SEIS.
	referencing entire sections of the DEIS and SEIS would be very confusing.	
12960-006	During preparation of the FEIS, BOEM should ensure that an assessment of	The SEIS and FEIS resource sections include the assessment of magnitude
	magnitude (minor, moderate, major) is made for all alternatives and VECs.	(minor, moderate, etc.) as shown in Chapter 3 and Appendix A. The
		magnitude approach and select ratings are based upon coordination with
		cooperating agencies.
12960-007	Also, we recognize that it is an editorial decision to specify magnitude but	Due to the need to comply with the page limits in the Department of the
1	not direction for adverse impacts (vs. magnitude and direction for beneficial	Interior's Secretarial Order 3355, BOEM will not specify direction for each

Index Number	Comment Text	Response
	impacts), but it might improve clarity to identify the direction of adverse impacts, or, at the very least, reiterate this caveat at intervals throughout the text.	impact determination. Instead BOEM will explain this and their rationale in the Chapter 3.0 introduction.
12960-008	In addition, BOEM should be careful when summarizing the effects of an alternative on a VEC when a range of positive and negative outcomes are expected, over different time frames, due to a range of impact producing factors (IPFs; for example, the diverse range of IPFs and effects associated with fish, invertebrates, and EFH). This is not a significant issue when reading the text, where differences across IPFs are clearly laid out, but should be noted as a caveat where impacts are summarized, for example in Table ES-2 on page ES-5. Some readers may not read much more than these summary tables.	The summary tables are intended to provide an overall impact level, and the details for those levels are included in the body of the EIS.
12960-009	Further, depending on the VEC and IPFs in question, an assessment of net effects might not be appropriate, and instead a range of effects should be specified.	BOEM has decided to provide impact ratings in the FEIS that specify net effects rather than ranges, as was done in the SEIS.
12960-010	It would be helpful for the FEIS to identify BOEM's preferred action, as indicated by NEPA regulations (EIS documents shall "identify the agency's preferred alternatives, if one or more existsin the final statement" (CFR § 1502.14 (e)).	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12960-011	It would also be informative to clearly outline which actions are feasible and preferred on the part of Vineyard Wind. Specifically, Vineyard Wind and other developers have agreed to a 1x1 nautical mile east-west oriented layout (Alternative D2), which differs from the original layout outlined in the COP, and is not part of the 'proposed action' alternative (Alternative A). Also, Vineyard Wind has negotiated with the local community around the Covell's Beach cable landfall (Alternative B), vs. the New Hampshire Ave. landfall (included in Alternative A). The June 3, 2020 COP does not provide any additional clarity as to which options might be likely or preferred. While many readers may be aware of these developments, the FEIS should convey which are the most likely outcomes, and the proposed action as defined in the FEIS should reflect these plans released by the developers.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Vineyard Wind has updated their COP to remove the New Hampshire Avenue landfall location as they have secured all their necessary state and local permits for Covell's Beach landfall site. Therefore, that landfall location has been removed from the Proposed Action. The FEIS has been updated to reflect this change.
12960-012	However, as described on pages 2-4 and 2-5 of the SEIS, the transit lane Alternative F does not seem feasible. For example, a discussion of issues associated with the cables indicates a need for technically impossible factory joints should the transit lanes be incorporated into the design, which seems to render Alternative F impossible to execute. Is this a function of having a 2 or 4 nm distance between wind turbine generators (WTGs) that would need to be covered by longer sections of inter-array cable?	Section 2.1.5 of the SEIS addressed the technical and practical challenges that could occur in Alternative F were implemented. Therefore, no changes to the FEIS are warranted.

Index	Comment Text	Response
Number		
12960-013	With respect to tradeoffs around power loss under Alternative F, is this	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	related to the footprint of the project and turbine spacing? Or to increasing	that could occur in Alternative F were implemented. Therefore, no changes to
	distance from shore as additional areas of the lease are built out?	the FEIS are warranted.
12960-014	Finally, in the context of regional demand, it would be helpful to understand	Section 2.5 of the FEIS has been added which includes the agency-preferred
	how the placement of 2 or 4 nm transit lanes throughout the MA and MA-RI	alternative.
	WEAs intersects with the use of larger 14 MW WTGs, vs. the 10 MW	
	originally considered. As compared to the original project design, it seems	
	that loss of turbine placements due to transit lanes might be balanced out by	
	generating more electricity per turbine, thereby still meeting regional	
	demand. Perhaps an in-depth analysis of number of WTGs vs. WTG capacity	
	would show that this is not the case, but a discussion of these tradeoffs would	
	help to demonstrate this.	
12960-015	Also related to the alternatives, the FEIS should be clear that in the context of	The SEIS included this explanation that if Vineyard Wind were not approved,
	both direct and	the effects of the No Action Alternative which included future offshore wind
	cumulative impacts, no action (Alternative G) means that the Vineyard Wind	actions in addition to other actions would result in the impacts covered in the
	I project would not be built, but that other nearby wind farms are still	resource sections. The FEIS also includes this explanation.
	presumed likely. Readers may assume that no action means no offshore wind	
	construction in the region, especially because this is the first large-scale wind	
	farm to reach this stage of development.	
12960-016	Multiple aspects of wind farm construction and operations involve noise	Section 3.3.2 of the FEIS has been updated to consider higher hammer
	production. Noise can negatively affect biological processes for many species	energies.
	of fishes and invertebrates. The SEIS indicates that pile driving will generate	
	the most impacts. We ask that BOEM carefully evaluate the information on	
	pile size and hammer energy provided in the Vineyard Wind I COP, as well	
	as information available for other reasonably foreseeable future projects, to	
	ensure that the radial estimates of impacted area are accurate (e.g. the	
	difference in effects between 2,500 kJ vs. 4,000 kJ hammers).	
12960-017	It would be useful to monitor noise during construction activities to ground	Section 3.3.2 of the FEIS has been updated to address time-of-year
	truth these estimates at as many locations as possible. Time of year	restrictions and acoustic monitoring.
	restrictions related to pile driving should be considered as a mitigation	
	measure, since some species, including longfin squid, could be	
	disproportionately affected if most pile driving occurs in summer during their	
	spawning season.	
12960-018	It is our understanding that the geographic scope for private recreational	Sections 3.9.1 and 3.10.1 of the FEIS have been updated to include data on
	fishing will be expanded for the FEIS. This is necessary as the geographic	the states from which recreational HMS fishing originates, based on an online
	scope for private recreational fishing as defined in the SEIS excludes impacts	survey (from August 2019 through May 2020), data from the National
	to communities based in Rhode Island, Connecticut, and New York.	Marine Fisheries Service Large Pelagics Intercept Survey, and tagging data
		(Kneebone 2020). As stated in Section 3.10.1, "From 2002 through 2018,
		approximately 12 percent of HMS trips and 18 percent of tagging events in

Index Comment Text	Response
Number	
sou (Ku are Enj dep are wa of	outhern New England occurred within the RI and MA Lease Areas Kneebone 2020). From 2002-2018, HMS trips in the Vineyard Wind lease rea (OCS-A-0501) represented 1 to 5 percent of total trips in southern New ngland and 6 to 28 percent of trips in the RI and MA Lease Areas, epending on the year (Kneebone 2020). Within the Vineyard Wind lease rea, trips primarily originated in Massachusetts and Rhode Island. The same vas true for the RI and MA Lease Areas overall, although a notable number f trips also originated in Connecticut and New York."
12960-019 Precise information on the location of private fishing trips is lacking; however, private recreational fishing effort based out of states other than Massachusetts does occur within the wind energy lease areas included in the geographic area of the analysis. The grouping of private recreational fishing with "recreation and tourism," rather than with commercial and for-hire fisheries, is not intuitive to us and makes it challenging for readers to understand the full picture of potential impacts on all fishery sectors. MA 8 FE State 9 FE State	It this also originated in Connecticut and New York. The DEIS (Section 3.4.5) explained that 97% of recreational boating occurs within 3 miles of shore and addressed the volume of for-hire recreational shing trips from ports in states neighboring Massachusetts. The DEIS noted hat "NOAA NFSC found only about 0.2 percent of for-hire boat trips from fassachusetts, New Hampshire, New York, and Rhode Island were near the fA WEA (Kirkpatrick et al. 2017)." Section 3.10.1 of the FEIS includes this ext, and was updated to include information from the Rhode Island Party and tharter Boat Association noting the importance to their businesses of fishing within the Vineyard Wind WDA, as well as NOAA data showing that a ubstantial number of for-hire recreational fishing trips to the MA wind lease rea originate from Montauk, New York. Additionally, Section 3.9.1 of the EIS has been updated to include newly available data on the originating tates for HMS fishing, which occurs further from shore than most screational fishing and is therefore far more likely to take place within the I and MA Lease Areas. As stated in the FEIS, the data from the New ingland Aquarium study include both charter and non-charter fishing trips and indicated that "HMS trips in the Vineyard Wind lease area (OCS-A- 501) represented 1 to 5 percent of total trips in southern New England and 6 by 28 percent of trips in the RI and MA Lease Areas, depending on the year. Within the Vineyard Wind lease area, trips primarily originated in fassachusetts and Rhode Island. The same was true for the RI and MA ease Areas overall, although a notable number of trips also originated in fornecticut and New York (Kneebone 2020)." Section 3.9.2 of the FEIS was pdated to discuss the potential impacts of offshore wind development on IMS fishing (under the Noise and Presence of Structures IPFs). While there overlap between impacts on for-hire recreational fishing within Section 3.10, and all recreational boating within Section 3.9, because: (1) for-hire (charter) shing busine

Index	Comment Text	Response
Number		
		boating, such as a greater proportion of small vessels that stay within one mile of shore, and impacts resulting from reduced enjoyment rather than reduced income potential. To assist readers in understanding the relationship between the two types of recreational fishing, Section 3.9.2 of the FEIS was updated to cross reference the for-hire fishing analysis in Section 3.10.2 and to explain the relationship between the for-hire fishing analysis in Section 3.10 and the analysis of recreational boating generally in Section 3.9. Section 3.9 of the FEIS has been updated to provide additional details regarding the impact of offshore wind development in the RI and MA Lease Areas on recreational fishing, regardless of where the fishing trips originate.
12960-020	We continue to hear concerns from commercial fishing partners about navigation safety, including the potential for impacts due to use of radar.	Section 3.11.2 of the FEIS includes a discussion of potential radar interference. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines, and the use of AIS enable safe navigation with minimal loss of radar detection.
12960-021	The continued ability of the Coast Guard to effectively conduct search and rescue, or SAR operations, described in the Other Uses analysis, is also of concern.	Section 3.12 of the FEIS has been modified to include additional information about impacts to USCG SAR activities.
12960-022	The ability of fishing vessels to operate within the Vineyard Wind I and adjacent wind farms will influence the magnitude of negative effects of the projects on commercial fisheries.	Section 3.11.2 of the SEIS discusses the impacts to the ability of fishing vessels to operate within Vineyard Wind 1 and additional wind farms; therefore, no change to the FEIS is warranted.
12960-023	A clear description of mitigation measures (which are summarized in the DEIS, but not described in the SEIS) will be important to understanding the impacts of the proposed action and should be included in the FEIS. The document should indicate which mitigation measures are assumed in the EIS analyses and which measures might be required as conditions on the construction permit. It is challenging to piece these mitigation elements together, absent a consolidated summary. This should include a summary of fisheries mitigation funds for fishermen from Massachusetts and Rhode Island, as well as a description of how fishermen from other states can be compensated appropriately for any losses.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
12960-024	Related to this, a robust monitoring program, while not mitigation per se, is important to understanding project effects and adaptively managing wind farm construction in the region going forward. In terms of process, it would be helpful to understand how Vineyard Wind and other regional developers will be held accountable to monitoring plans, as well as the mechanism for modifying these plans over time. Given that large scale offshore wind development is new for our region, and that the spatial scale of reasonably foreseeable projects is unprecedented world-wide, there are certain to be	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of

Index	Comment Text	Response
Number	effects that we cannot fully anticipate at present. We appreciate developer commitments to the work of the Responsible Offshore Science Alliance and the coordination around monitoring that will result, but these are voluntary agreements, vs. permit conditions.	Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
12960-025	There are many opportunities for learning and adaptive management going forward. For example, the SEIS discusses that there may be positive effects associated with the creation of artificial hard bottom habitats. A range of materials could be used for scour protection and for cable armoring where burial is not possible. These materials will likely have different ecological benefits, depending on the species. Materials can be selected for their expected benefits, and/or the effects of different types of materials might be compared.	The SEIS and FEIS address ecological benefits to resources that could be positively impacted by the use of scour protection. The current benthic monitoring plan (Epsilon 2020c) is posted on BOEM's website. Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
12960-026	There are many opportunities for learning and adaptive management going forwardTime of year restrictions on construction and maintenance, e.g. to protect fish spawning activity, also provide an opportunity for data gathering and adaptive approaches. These windows may shift over time as the region continues to experience the effects of climate change. Such shifts could have implications for best practices related to operations and maintenance of the Vineyard Wind I project, as well as other projects in the region.	Thank you for your comment.
12960-027	Consistency of layout across this and future projects is critical to mitigating certain types of adverse impacts, including on fishing operations. Learning from the construction process and from monitoring should lead to adaptive management, for this and other projects. BOEM should articulate how it will ensure that regional development occurs in a coordinated manner across projects. For example, once the Vineyard Wind I turbine layout is established, will extension of this layout to adjacent projects in the MA and MA-RI WEAs be assumed in future COPs, and be the starting point for future EIS analyses? Should a single planning and environmental evaluation process be conducted when multiple projects wish to use similar routes for their export cables? If the effects of installation or operation are found to be unacceptable despite best efforts to mitigate them, will this information be used to alter future projects?	Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
12968-001	The Vineyard Wind 1 project will alone create 3,600 jobs for local residents, and potentially create tens of thousands more as the supply chain and additional projects are built out over the next several years. This project	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction

Index	Comment Text	Response
Number		
	presents a tremendous opportunity for our highly skilled unionized workforce in the manufacturing and building trades.	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. Jobs and investment are national, but are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12968-002	Vineyard Wind pledged to sign the nation's first non-demonstration offshore wind Project Labor Agreement (PLA) for Vineyard Wind 1 to ensure both fair compensation and the highest construction standards for the project. Following through on this commitment will set a precedent for the industry. Offshore wind projects will be constructed by building trades unions, ensuring fair wages and consistent work for a generation of local tradesmen and women.	Although the Project Labor Agreement is not addressed in the FEIS, Section 3.6.2 provides projections of estimated direct job creation by the Vineyard Wind 1 Project in Massachusetts, and primarily in southeastern Massachusetts.
12968-003	This project is an opportunity to not only drive the nation's clean energy future, but to create quality, family-sustaining jobs at the same time.	Thank you for your comment.
12968-004	The S-E-I-S claims that if Vineyard Wind 1 is not approved, the economic potential of the offshore wind industry will be realized by future projects. However, this claim ignores the possibility that the failure of VW1 will have a chilling effect on future investment and could send the signal that the United States is not serious about offshore wind. If VW1 is not approved, the chances this industry moves forward in the United States will be severely compromised, potentially resulting in a reduction in projects built, as well as uncertainty in manufacturing supply chain investment.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-impact scenario in terms of potential impacts.
12968-005	Additionally, the industry has already conceded 13,000 MW of capacity and over 1,000 turbine locations by accommodating fishermen with its proposed 1x1 nautical mile layout. As referenced in Alternative F in the S-E-I-S, additional transit lanes would reduce capacity by another roughly 4,000 MW and over 300 turbine locations. This translates to an estimated 1,400 turbines that would not be built. Cancellation of this project would mean thousands of fewer jobs for the skilled men and women in the region—with no additional benefits to navigation safety.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12972-001	The Vineyard Windfarm will severely impact my summer squid fishery. This is 50 percent of my income. The summer squid fishery is done in two areas 1)off Nantucket/ Martha's Vineyard 3 to 15 miles off the beach and 2) off Long Island 1 to 6 six miles then out through Cholera Bank. Both areas will be heavily impacted by wind farms. Not just by the windfarms but by the	The FEIS discusses qualitative and quantitative impacts to the squid fishery throughout Section 3.10 (Commercial Fisheries and For-hire Recreational Fishing), including potential impacts from construction and projected revenue exposure over 10 years during the build out of future offshore wind development. Section 3.10.2 and Appendix D of the FEIS were updated to

Index	Comment Text	Response
Number	cables that carry the electricity. 100 percent of my summer activity is in and around the Vineyard Wind and Equinor lease areas. Both areas will be lost so that a foreign company can benefit from United States waters at the expense	discuss additional mitigation including daily two-way communication during construction in order to reduce conflict with the commercial squid fishery in the spring and summer.
12972-002	of real US businesses. Tax breaks to foreign companies. The SEIS (Supplemental Environmental Impact Statement) says that there will be major impacts to commercial fishing and navigation. Yet In contrast, it says there will be negligible impacts to climate change and greenhouse gas emission from the Vineyard Wind project. That's The whole point of	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
	offshore wind anyway- to help with climate change. Even if all the wind farms are built, it says that it will only have minor beneficial impacts. So why are we doing it? Do minor impacts outweigh the major ones? Are we going to majorly impact the lives and businesses of Americans to benefit foreign wind companies for zero benefit to the environment?	
12972-003	If I am not supposed to tow over cables or if Vineyard wind is going to put mats over the cables then all surrounding areas are off limits. No matter what wind people say I cannot tow over mats nor can any other fishermen.	Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS discuss that some vessels may choose not to fish near the Proposed Action during its operational period due to restrictions on maneuverability from the presence of structures, the potential for hanging up on structures, and has been updated to discuss potential mitigation measures. BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for details. The FEIS states that some impacts due to the presence of structures may be permanent.
12972-004	As a fisherman with over 50 years of experience I will not fish in, nor will I steam through the areas because of false radar targets. In the summer you have fog and small fiberglass boats that don't show very well on radar so this is a fatal accident waiting to happen.	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1.
12973-001	As an organization, NOIA strongly supports ongoing attempts to build new offshore wind resources in federal waters. We believe projects like the 800 megawatt Vineyard 1—with its potential to bring clean, affordable energy to nearly a half a million homes and businesses in southern New England—are vital to the economic growth of this country and efforts to meet environmental goals for the 21st century.	Climate change is addressed in Section A.8.1 of the FEIS as it related to air quality. Section 3.6 of the FEIS addresses implications for employment and economics from the proposed Project.

Index	Comment Text	Response
Number		
12973-002	According to 2019 estimates, we have a \$70 billion market off America's	Thank you for your comment.
	coasts for offshore wind in the next 10 years. That means clean, reliable and	
	affordable energy in places like New England and New York where building	
	infrastructure onshore is famously difficult and industrial growth has	
	sometimes been hard to come by and energy costs can be prohibitively high.	
12973-003	Given this, southern New England is primed and ready for a new economic	Section 3.6 of the FEIS addresses impacts to employment and economics
	opportunity such as what is offered by offshore wind—and thankfully the	from the proposed Project.
	potential scope of the economic benefits are enormous.	
12973-004	The Massachusetts Clean Energy Center (MassCEC), a state economic	The SEIS in Section 3.7.1.1 noted the waterfront sites identified by MassCEC
	development agency, has identified a host of potential economic	as suitable to support the offshore wind industry. Section 3.6.1.1 of the FEIS
	opportunities within the commonwealth related to offshore wind. This	has been updated to include additional information on the location and
	includes not just ports used for staging and construction but also cables,	possible uses of these 18 waterfront sites, which include manufacturing as
	secondary steel, substations, monopile and gravity foundation manufacture	well as staging and port usage. BOEM is not aware of any other
	and assembly sites, nacelle, tower and blade construction and assembly sites	documentation by MassCEC of potential sites available for offshore wind-
	and also component storage. Even sites that don't see new jobs from	related industrial development.
	Vineyard 1 could benefit from future projects as the scope of the offshore	
	wind opportunities in New England develop.	
12973-005	To drive that point home, we are already seeing efforts to increase	Section 3.6.1.1 of the FEIS was updated to include information on the Bristol
	employment in offshore wind across the region. We know, for example, that	Community College training program and offshore-wind-related
	a wind-centric jobs fair is planned for the weeks aheadBristol Community	infrastructure improvements within the geographic analysis area as examples
	College in southern Massachusetts has also created a training program related	of local economic activity begun in preparation for the anticipated offshore
	to offshore wind workforce development which we suspect will be replicated	wind industry.
	at other schools around the country. As they describe it, the school's National	
	Offshore Wind Institute offers "basic and advanced safety and technical	
	training programs to prepare workers for jobs in construction, deployment,	
	operations and maintenance of offshore wind farms." We have also seen a	
	NOIA member, Ørsted, announce the creation of an innovation center in	
	Providence, Rhode Island to foster next-generation entrepreneurs in offshore	
	wind business. Given the state's current economic morass, the possibility of a	
	startup accelerator in addition to other jobs and investment are significant.	
	There will be very real economic benefits to the region related to offshore	
	wind, possibly beyond what BOEM is considering.	
12973-006	It is also clear that offshore wind will bring benefits far beyond New	Section 3.6 of the FEIS addresses impacts to employment and economics
	EnglandIn fact, many of our member companies along the Gulf Coast are	from the proposed Project.
	interested in the opportunities presented by offshore wind. For example,	
	NOIA member company Gulf Island Fabrication Inc. of Houma, Louisiana	
	created the steel foundations for the Block Island Windfarm.	
12973-007	The Chairman of NOIA's main working group on renewable energy resides	Thank you for your comment.
	not in New England but in Houston, helping guide a company with a long	

Index	Comment Text	Response
Number		
	nistory in traditional fossil fuels as it looks to renewable energy. We know	
	that our member companies with decades of experience working in offshore	
	on and gas nave the technical know-now, training and equipment to work on	
	line initial wave of offshore wind projects, alongside local companies and	
12072 009	local labor.	The state of the second s
12973-008	Further adding to the national impacts of local projects, building offshore	I nank you for your comment.
	wind will also noperully offset some of the Russian gas that is occasionally	
12072 000	Shipped into Boston harbor to provide energy.	
12973-009	Olishore wind is an incredible opportunity not just for the people in	Section 5.6 of the FEIS addresses impacts to employment and economics
	communities across New England but also for national security and a	from the proposed Project.
12072 010	hautonal supply chain hungry for new business.	The state of the second s
129/3-010	In almost every area reviewed in the Drait Supplemental, we see a major	I nank you for your comment.
	More of the monotonic investment and her DOEM monoral the terms area.	
	wany of the negative impacts mentioned by BOEM would be temporary—	
	such as more significant lighting of noise during construction. The infined	
	construction season would be a temporary negative for a long-term net	
12072 011	Similarly, we agree with DOEM's finding in the draft that the impact on	Section 2.4.2 and Annandix D of the EEIS include on undeted discussion of
12975-011	marine mammals would generally be negligible. What moderate impact on	section 5.4.2 and Appendix D of the FEIS include an updated discussion of
	and the manimum swould generally be negligible. What moderate impacts may	implemented to avoid minimize and mitigate adverse impacts to marine
	efforts of companies involved in offshore wind to mitigate such impacts. The	mappendented to avoid, minimize, and mitigate adverse impacts to marine
	company Vineward Wind, for example, signed what a leader in the	limited to avoidance of neak NARW presence, use of sound attenuation
	environmental community called an "unprecedented agreement" to ensure	technologies use of PSOs PAM soft start procedures shut down
	species protectionnarticularly the critical NARWduring	procedures, and other measures
	construction Vinevard Wind has also launched the Offshore Wind	procedures, and other measures.
	Challenge dedicated to finding ways to accelerate innovations around the	
	protection of marine life in areas with offshore wind project plans	
12973-012	Another of our member companies Ørsted has partnered with the Woods	Thank you for your comment
123,70 012	Hole Oceanographic Institution and a group of universities to launch the	
	Ecosystem and Passive Acoustic Monitoring project—explicitly designed to	
	better understand the presence of key mammals. Remarkably, this technology	
	could also prove to be a boon for weather and storm forecasting for coastal	
	communities, improving quality of life and even public safety in New	
	England well away from the proposed offshore wind areas. Further, their	
	innovation hub mentioned previously has been discussed as a potential	
	launching point for novel technologies dedicated to marine mammal	
	protection. Given all of this, we not only agree that the impact on marine	
	mammals in the area will be manageable, but also believe that those impacts	

Index Number	Comment Text	Response
Tumber	will be lessened in the future as new technologies and techniques are	
	developed to further protect species.	
12973-013	Other impacts noted by BOEM, like the physical presence of the towers,	As stated in this comment, the Section 3.14 of the SEIS noted that the
	bring their own positive impacts. We agree with the DSEIS that there will be	offshore wind structures would have potential benefits from recreation and
	some level of benefit related to these structures. In fact, we have seen in the	tourism due to the potential for sightseeing tours to the offshore wind energy
	nearby Block Island area that wind turbines can increase tourism. We have	area and the reef effect of the structures in attracting fish, seals, small
	seen European projects for offshore wind prove popular with tourists as well;	ondontecetes, and sea turtles. The reef effect would provide opportunity for
	for example the Scroby Sands windfarm off the shores of the United	recreational fishing and sightseeing. Therefore, no changes to the FEIS are
	Kingdom has an onshore visitor center that hosts tens of thousands of	warranted. The benefits noted in the SEIS are found in Sections 3.9.1.1 and
	students and others each year. Wind farms built offshore Nysted, Denmark	3.9.2 of the FEIS.
	have attracted pleasure-craft, with the then-mayor commenting that more	
	sailboats have come to the town since the windfarm was built and the	
	harbormaster discussing how popular the ability to sail inside the wind	
	energy area has been with tourists and boat owners. Clearly, the global	
	experience and even limited local experience show that we should not	
	assume negative impacts from wind farms for the domestic tourism economy.	
12973-014	We also know global studies have found that offshore wind can increase the	Section 3.4.1 of the SEIS discussed how a wind farm could create an
	population of certain fish species. For example, studies in Europe have found	artificial reef effect; therefore, no change to the FEIS is warranted.
	that "researchers found evidence that the wind turbines not only attracted	
	fish, providing both shelter and food (from the organisms that grew on the	
	turbines), but also served a role in their life cycle, with young fish attracted to	
	the wind farm where they would grow, then leave to spawn, and then other	
10050.015	juveniles would come to the wind farm to grow."	
12973-015	Even those environmental impacts that have proven thornier have seen	Thank you for your comment.
	Vineyard Wind working hand-in-glove with local officials to mitigate	
	impacts and allay concerns. One example of this can be found in the	
	agreement for the cable landing onshore at Covell's Beach in Barnstable,	
	where project developers agreed to improve the beach area and even improve	
	local infrastructure to save the community money in the future. This type of	
	cooperation is becoming a natimark of offshore wind and we expect that this	
12072 016	For a new and significant infrastructure projects are brought online.	Them! you for your comment
12973-016	For a new and significant infrastructure project that will bring electricity to	i nank you for your comment.
	tomma of local immasts. We know that building new energy constitution in	
	other forms of energy like each in the communities of exactly New England	
	would bring far more significant negative impacts. We can think of faw more	
	environmentally sustainable ways to power 400 000 homes and businesses	
	than by allowing projects like Vinevard 1 to move forward	

Index	Comment Text	Response
Number	That is why NOIA firmly across with the concert of a uniform layout	The SEIS and FEIS agages the offerste of a uniform WTC layout under
129/3-01/	degrite the fact that an even 1 neutrical mile levent of a uniform layout,	Alternative D2, therefore, no changes to the EEIS are warranted
	D 2 A uniform level, 1 liauncal line layout as captured by Alternative	Alternative D2, therefore, no changes to the FEIS are warranted.
	industry, despite the fact it would reduce density of turbines and the ability of	
	an area to produce energy. Quite simply, this type of layout best balances the	
	interacts of all who want to use federal waters and provides a clear path	
	forward for historic fishing communities	
12073-018	We defer to the experts at the Coast Guard who have reviewed a uniform	Section 2.1.3 of the FEIS has been undated to reflect the Final MARIPARS
12975-018	well-spaced layout for offshore wind projects. Just this year in the Port	and that Alternative D2 is consistent with the study
	Access Route Studies, we were told that: USCG has determined that if the	and that Alternative D2 is consistent with the study.
	MA/RI WEA turbine layout is developed along a standard and uniform grid	
	nattern formal or informal vessel routing measures would not be required as	
	such a grid pattern will result in the functional equivalent of numerous	
	navigation corridors that can safety accommodate both transits through and	
	fishing within the WEA. While these pavigation corridors would be smaller	
	than those suggested by some commenters, the USCG believes they should	
	be sufficient to maintain navigational safety and provide vessels with	
	multiple straight-line options to transit safely throughout the MA/RI WFA	
12973-019	Further several of our members were involved in commissioning a report by	Thank you for your comment
12775 017	W F Baird and Associates, which made key findings that fit hand-in-glove	Thank you for your comment.
	with existing work done by BOFM and the U.S. Coast Guard Critically	
	W F Baird concluded that an east/west 1 nautical mile layout (such as	
	Alternative D-2) would create 40 individual transit lanes. These lanes could	
	accommodate ships up to 400 feet. Even many fishing vessels that already	
	skirt the edges of the area in question could simply go around it and adding	
	perhaps only 30 minutes to their travel time. For an area that belongs to the	
	people of the United States and not any one industry or stakeholder, this	
	clearly appears to be a common-sense compromise.	
12973-020	We would though like to express caution regarding one point in particular:	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative F. As you know, this alternative would establish up to 4 nautical	alternative.
	mile-wide transit lanes through the proposed wind energy areas. BOEM's	
	analysis clearly says that this change would increase the impact-producing	
	factors (IPFs) of offshore wind and expand the area we are looking at to	
	produce energy significantly.	
12973-021	Critically, we agree with the Coast Guard's assessment that wider fishing	Thank you for your comment.
	lanes, as contemplated by Alternative F, have the potential to be a safety	
	hazard. As the PARS found, "most traffic would be funneled into the	
	corridors thereby increasing traffic density and risks for vessel interaction."	
	NOIA's member companies have nearly half a century of experience with	

Index Number	Comment Text	Response
	running vessels through multi-use areas, primarily in the Gulf of Mexico. We as an organization do not believe that an arbitrary, limited number of corridors for a variety of ships would be a prudent approach to routing vessel	
	traffic, especially for ships which will come from different fleets, different ports, and different industries. Congested transit lanes can be complicated enough for even the largest commercial vessels, providing no shortage of ink	
	spilled on how to reduce deadly incidents. Subjecting commercial fishermen, the Coast Guard, recreational fishermen, pleasure-boaters, and others to this unnecessarily would be a mistake.	
12973-022	Finally, regarding spacing, we would caution the Department not to "split the baby" and adopt an approach that encompasses both Alternative D2 and Alternative F—even spacing with additional transit lanes. Even beyond the arguments above expressing caution on Alternative F, we think this mixed approach provides unique threats and drawbacks. We absolutely agree with BOEM that a mixture of transit lanes—some 1 nm in an east/west approach with other somewhat wider lanes mixed in at odd angles is a recipe for potential disaster. As BOEM staff found, "The differing orientations of the transit lane and WTG layout could increase navigational complexity for vessels operating within the area including military and national security vessels."A mixed-approach would bring together the "worst of both worlds" in NOIA's opinion; it reduces the density of wind turbines with the 1x 1nm approach—already a compromise by the wind industry—and then adds unnecessary, potentially hazardous intersecting thoroughfares to further reduce that density and add to the complexity for mariners.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12974-001	The Department of Interior's decision to delay Vineyard Wind's final permits last year reverberated through the entire industry and had a chilling effect on the industry's investment capabilities. The SEIS does not factor this into its cumulative analysis. The analysis assumes that even without a green light for Vineyard Wind, industry investment will move forward as planned. This assumption is greatly flawed as companies need regulatory and market certainty in order to justify investment in new markets and the US would be sending a signal that it is not yet ready to get serious about offshore wind.	The methodology for assessing reasonably foreseeable actions or projects that was presented in the SEIS was carried forward in the FEIS.
12974-002	In addition, by requiring additional transit lanes through projects and reducing capacity to develop lease areas to their full extent, BOEM is effectively reducing the industry's opportunities for investment, which will translate to lost economic benefits and jobs for the US overall. As a company with an interest in investing in the US market, we strongly urge BOEM to reject this Alternative F.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
12976-001	These are jobs that will provide working families with fair wages and benefits which will allow them to invest more in our communities and the local economy in a time of uncertainty and despair for many people.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
12977-001	I support offshore wind and urge BOEM to move forward with this project and approve it by the end of the year. Vineyard Wind 1 is slated to be the nation's first large-scale offshore wind farm, but the success or failure of this project will dictate the future of offshore wind projects up and down the east coast.	Thank you for your comment.
12977-002	This project has gone through a decade of exhaustive review and stakeholder negotiations, and it will set an important precedent for the future of offshore wind. It will provide benefits, both economic and environmental, to Massachusetts communities, but Vineyard Wind 1's impact will not be limited to local residents. This project can also lead the way for other states to move towards offshore wind and invest in becoming renewable energy hubs. Please approve Vineyard Wind 1 and kickstart offshore wind in this country.	Thank you for your comment.
12978-001	Please support Vineyard Wind as the project moves forward. I am most concerned about climate change, and wind energy is essential to avoiding catastrophe	Thank you for your comment.
12979-001	It is essential that we invest in renewable energy projects to stave off the impacts of climate change, provide clean energy to our citizens, and to facilitate an economic recovery from COVID-19. Vineyard Wind 1 will create jobs, save ratepayers money, and has been through rigorous study and analysis. We have a huge opportunity with this project for our nation. I support offshore wind.	Thank you for your comment.
12981-001	We hope that the BOEM will continue with original plans and published schedule of the 1x1 Nautical Mile layout that the Coast Guard has already approved, and reject the 4x4 nautical mile proposal.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
12982-001	I am writing to support Alternative F: Vessel Transit Lane Alternative in combination with Alternative D2: East-West and One-Nautical Mile Turbine Layout AlternativeInclement weather, radar interference, search and rescue, gear conflicts and collisions are just some of the many reasons why we have consistently stressed the importance of transit lanes and proper turbine spacing. Both transit and proper spacing will be necessary for the successful coexistence of these two industriesIt is without a doubt that	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index Number	Comment Text	Response
	fishermen are going to be impacted by the development of these wind farms. It is my opinion that	
12982-002	at almost every step of the way the fishermen have been on the losing end of any type of "compromise" or transparency that has been promised to us. For years now the industry has been commenting in detail about the concerns we have with the development of this area. We understand that development is going forward, all we have been asking for all along is that this be done correctly, and that the industry be consulted and involved, and our concerns be taken seriously.	Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing. Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discuss voluntary compensation funds related to the proposed Project. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
12982-003	Due to the lack of science and studies of the effects of wind farms on the ecology in and around the development area we support sufficient scientific research to occur prior to development, we stressed this and all of our concerns to Vineyard Wind at the very start of their outreach efforts. The entire development area and the surrounding grounds and waters are extremely important fishing grounds for multiple fisheries and home to many protected and endangered species.	The environmental assessment for the Vineyard Wind 1 Project has relied upon the best available information regarding impacts from the proposed action by using the results of local site characterization information from the developer, the National Marine Fisheries Service, and others. Impact information from the Block Island Wind Farm and European projects are applicable to the anticipated impacts of the proposed action.
12982-004	The Northeast Fishery Science Center has made it very clear that they will no longer be able to conduct their surveys in these areas, which will add another layer of uncertainty into fishery management that will negatively impact the fishing industry.	Section 3.14 of the SEIS addressed potential project-related and cumulative impacts to scientific research and surveys in detail, and acknowledged potential impacts to the fishing industry. The discussion of impacts on scientific research and surveys was developed through collaboration with NMFS and BOEM will continue to collaborate on survey protocols. It has been acknowledged that additional studies are needed and discussions are ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no change to the FEIS is warranted.
12982-005	We are hoping that BOEM will hear our concerns and help us move forward in a way that will help us maintain our way of life as alternative energy comes to our waters. This process has been fast tracked and has left science	Thank you for your comment.

Index Number	Comment Text	Response
Numper	research and an industry that has thrived and depended on these waters for hundreds of years as an afterthought. We just want to see this done right; we	
	cannot afford any mistakes with projects that have the potential to have great ecological and biological impacts to the resources we rely on.	
12983-001	I oppose offshore wind development in ocean waters for environmental reasons. My reasons include irreparable damage to the ocean ecosystem	Thank you for your comment.
	habitat, and sea creatures, birds, and plant species; environmental effects on humans including white noise. Careful planning, assessment of environmental risks, and construction of wind development on land is better	
	in appropriate locations in the United States.	
12992-001	Lonza is interested in the Vineyard Wind LLC Energy Facility because of the potential for this and other related wind energy facilities that are the subject of the Draft EIS to adversely impact horseshoe crabs from which a critical component of the LAL assay is derived and to adversely impact critical habitat for the horseshoe crab. It is clear that the Draft EIS does not consider the impacts to the horseshoe crab and cannot and must not be made a final Environmental Impact Statement until its omission of assessing this impact on horseshoe crabs is addressed, including essential mitigations of the effects once evaluated.	Section 3.2 of the FEIS has been revised to discuss the current condition and potential impacts on horseshoe crabs. However, a quantitative assessment of the impact on any particular species or stock is beyond the scope of this EIS and is not essential to a reasoned choice among alternatives.
12992-002	The Draft EIS considers environmental impacts not only from the Vineyard Wind LLC Proposed Facility Offshore Massachusetts but also is intended to serve as the Environmental Impact Statement for additional windmill farms, including the one to be proposed within boundaries of the Carl N. Shuster Horseshoe Crab Preserve.	This EIS is not a Programmatic EIS, and therefore it only focuses on the impacts of the proposed Project and how they may combine with those of reasonably foreseeable environmental trends and planned actions.
12992-003	While the Draft EIS considers effects on benthic organisms generally and finds those effects to be moderate, the Draft EIS does not specifically consider effects on horseshoe crabs which are a resource vitally important to human health. Wind farm projects require embedding electric transmission cables in the sea floor and place innumerable boulders around the foundations of the windmill towers. Horseshoe crabs live on the sea floor and embed themselves in its soft bottom. It is obvious that these actions will have impacts reducing the horseshoe crab population and restricting their critical habitat. Furthermore, these facilities will emit electromagnetic radiation from the cables and there is insufficient research on how this radiation will effect horseshoe crabs and their ability to spawn.	Section 3.3 of the SEIS addressed the potential impacts of structures on soft- bottom habitat, of EMF on benthic fauna, and of the proposed Project on horseshoe crab spawning beaches. However, a specific assessment of the impact on any particular species or stock is beyond the scope of this EIS and is not essential to a reasoned choice among alternatives.
12998-001	As someone who has studied environmental science, and seen the effect of climate change throughout my lifetime, I understand that it is important to do everything we can to mitigate climate change effects with ethical and renewable energy sources. I support offshore wind, and I believe that	Thank you for your comment.

Index	Comment Text	Response
Number		
	investing in these projects now will ensure that we have long lasting positive	
	effects in the region for our economy, environment, and public health.	
	Offshore wind is an opportunity to create a domestic energy source that	
	creates good jobs for Americans, creates reliably priced energy, and shows	
	that America can be a leader in	
	mitigating our climate change effects. Additionally, after a decade of	
	environmental study and analysis, it is clear that this project will be as	
	harmless on the aquatic environment as possible. Please approve this project	
	and allow smart and clean renewable energy to thrive in this country.	
12999-001	The Bureau of Ocean Energy Management must reject Alternative F and	Section 2.5 of the FEIS has been added which includes the agency-preferred
	adopt Alternative D2Transit Lanes are unnecessary with a uniform 1x1	alternative.
	NM spacing The Joint Developer Agreement Layout does adopt a uniform	
	1x1 NM spacing for the MA/RI WEA, the impacts will be less than major.	
	The Joint Developer Agreement Layout is consistent with both the Draft and	
	Final MARIPARS and BOEM's assumptions for future OSW development of	
	up to 22 GWs as described in Section A.4 of the Draft SEISAn approval	
	that requires a dramatic reconfiguration of the project - i.e. requiring	
	additional 2 NM or 4 NM-wide transit lanes - is tantamount to no approval at	
	all.	
12999-002	The Department of the Interior must work with CEQ to ensure that the	Thank you for your comment.
	Vineyard Wind federal permitting process strictly complies with the One	
	Federal Decision permitting timeline published on February 7, 2020By	
	approving the full Vineyard Wind project configuration in adherence to the	
	One Federal Decision permitting timeline, the DOI will send a clear message	
	to the OSW market and investors that the U.S. is open for business and	
	intends to be a central player in a global energy industry that will expand to	
	\$1 trillion by 2040.	
12999-003	The failure to approve Vineyard Wind project will have serious negative	Thank you for your comment.
	economic consequences upon Americans, because firms may consider	
	investing in more certain European markets, or may expand manufacturing	
	investments in Asia.	
13001-001	Offshore wind is critical for cleaning up air pollution. As a person with	Thank you for your comment.
	severe asthma this is very important to me. Also, with so many millions of	
	people out of work, this would bring jobs into the area in all its phases from	
	construction to the running of the wind farm. This is the best and only way to	
	go forward to reach our renewable energy goals. I totally support the	
	Vineyard Wind project !!!	
13002-001	Our country is going through a once-off transition to a carbon free economy	Thank you for your comment.
	and with that the creation of a new multi-billion-dollar industry.	

Index Number	Comment Text	Response
13006-001	I love renewable energy. It is a vital next step to a cleaner earth. It can help drive our economic recovery and will create tens of thousands of local jobs in a burgeoning industry over the next ten years. As such I support the vineyard wind project.	Thank you for your comment.
13007-001	I support the Vineyard Wind Project because it's important for our nation to move forward towards a green future for us and the next generation.	Thank you for your comment.
13008-001	First, there is the matter of the document's font size and line spacing. Simply put, the text is so small and dense as to be functionally illegible. It causes eye strain and fatigue, leading even the most engaged reader to lose focus and eventually give up on the document. The "large type" option does not cure the problem; the font size is so large that it degrades any effort to maintain the context in which a given impact assessment is presented. Second, much of the SEIS's impact data is set forth in various tables with font sizes so tiny that one cannot read them without a magnifying glass. Third, some of the key impact analyses are contained in appendices and not in the body of the SEIS itself, which means the reader must rifle through multiple studies and reports to find the critical information he or she is looking for. This practice, too, diminishes the SEIS's value as an informational document.	A large print version of the SEIS was posted to the BOEM website. BOEM has updated the FEIS to use single spacing for document layout to be more in line with the DEIS format.
13008-002	For example, the SEIS categorizes impacts as negligible, minor, moderate, and major, yet does not explain what those terms mean, how they were derived, or the legal authority on which they are based. Worse, the SEIS does not apply the criteria attached to these designations to the impacts of the project. In other words, the SEIS does not test any particular effect against the "major" impact criteria to determine if that effect qualifies for that designation. By failing to apply the evaluative criteria to each impact of the project, the SEIS impedes the public's effort to assess the seriousness of that impact.	The definitions for the impact ratings were included in the introduction text of Section 3.0 and presented in Tables 3-2 and 3-3 of Appendix B of the SEIS and have been carried forward to the FEIS.
13008-003	The document also fails in its stated purpose of analyzing the impacts of the Vineyard Wind Project in conjunction with the impacts of the other off-shore wind projects currently proposed for the coast of New England and elsewhere along the Atlantic seaboard. Regardless of the impact under review – be it damage to benthic fauna or disruption of marine mammal behavior – the SEIS does not provide the basic information necessary to qualify as a NEPA-compliant cumulative analysis	Lacking specific information to update the analysis based on this comment, no change was made to the FEIS.
13008-004	Without a clear understanding of the ambient conditions, including ambient underwater noise, there is no way to assess the cumulative impacts of the project and the other off-shore windfarms currently being proposed adjacent to or near Vinevard Wind.	Each resource section in Chapter 3 and Appendix A of the FEIS includes baseline condition information against which the effects of the proposed Project can be analyzed.

Index	Comment Text	Response
Number		
13008-005	The SEIS makes virtually no effort to quantify the actual cumulative impacts of the projectThe issue to be analyzed and disclosed is whether those cumulative impacts, when subjected to a proper quantitative assessment, are intense enough to cause significant harm to the resource in question (e.g., North Atlantic right whales). The SEIS fails to provide this information	Lacking specific information to update the analysis based on this comment, no change was made to the FEIS.
13008-006	Note also that the number of wind arrays now being contemplated along the eastern seaboard has increased significantly since the Draft EIS for Vineyard Wind was released to the publicGiven that the number of wind turbines has more than tripled since the Draft EIS was prepared and released, the SEIS must make every effort to examine and explain the extent to which these wind arrays, when viewed from a cumulative impact perspective, will affect whales, fish, sea turtles, birds, and other resources. Unfortunately, the SEIS does not provide this information.	BOEM supplemented the Vineyard Wind DEIS released in December 2018, in consideration of the comments received during the NEPA process and in coordination with cooperating agencies. As explained in the SEIS, BOEM thoroughly analyzed the possible extent of future offshore wind development in the United States on the Atlantic OCS to determine reasonably foreseeable planned action effects measured by installed power capacity. BOEM expanded the impact analysis in the SEIS as it had concluded that approximately 22 GW of Atlantic offshore wind development is reasonably foreseeable. Each resource has a geographic distribution and area in which effects of the proposed Project would be felt. Appendix A of the SEIS as well as the FEIS describes the geographic analysis area and provides figures depicting the geographic analysis area for each resource; identifies reasonably foreseeable wind energy projects and other activities in addition to the proposed Project that are or could be located within the geographic analysis areas depicted; and includes an expanded planned action scenario for each resource that considers impacts from these projects and activities collectively.
13008-007	Another structural/system defect in the SEIS is that the document's impact determinations are often conclusory and not derived from any real analysis. Further, the SEIS rarely identifies any technical report or study in support of the conclusions drawn, leaving the reader to wonder how BOEM arrived at those conclusions and whether they are based on scientific evidence or mere conjecture.	The definitions for the impact ratings were included in the introduction text of Section 3.0 and presented in Tables 3-2 and 3-3 of Appendix B of the SEIS and have been carried forward to the FEIS. The FEIS provides adequate supporting information for the conclusions made in the analysis.
13008-008	[Table 3.3-1] provides no information as to the numbers of each benthic species or to their relative abundance. Nor does the Table describe population trends among benthic fauna except to say that according to data collected between 1990 and 2010, benthic fauna along the Atlantic coast appear to be migrating northward in response to rising water temperature Other than this brief and insufficient description of existing benthic conditions in the cumulative impact area, the SEIS provides no baseline information from which to determine the extent of the project's individual or cumulative impacts on benthic resources.	Section 3.2.1 of the FEIS has been revised to include new data sources on existing conditions of the benthic environment. However, a specific assessment of the impact on any particular species or stock is beyond the scope of this EIS and is not essential to a reasoned choice among alternatives.

Index	Comment Text	Response
13008-009	Next, the SEIS indicates that the wind turbine foundations will result in	Sections 3.2.1 and 3.2.2 of the FEIS have been revised to discuss the timing
	benthic mortality covering approximately 2,493 acres. According to the	and dynamics of the recolonization of affected areas. Sections 3.3 and 3.4 of
	SEIS, however, "[t]he affected areas would likely be recolonized in the short	the SEIS discussed impacts on food webs and local ecosystems.
	term." No evidence is cited in support of this conclusion. Further, the SEIS	
	does not examine the extent to which impacts on benthic resources will affect	
	marine animals further up the trophic ladder.	
13008-010	With regard to cumulative impacts on benthic fauna, the SEIS states that	Section 3.3.2 of the SEIS discussed the intensity and extent of impacts when
	"[t]he cumulative impacts of the Proposed Action when combined with past,	they differed from those discussed in Section 3.3.1 of the SEIS. Therefore, no
	present, and reasonably foreseeable activities would be of similar types as	change to the FEIS is warranted.
	described in Sections 3.3.1.1 and 3.3.1.2, but may differ in intensity and	
	extent." (3-16, emphasis added.) The highlighted text shows that BOEM does	
	not understand what a cumulative analysis is supposed to include. It is not	
	enough to identify the types of impacts that might occur; nor is it enough to	
	say that the project will contribute to the cumulative effects on a given	
	resource. Instead, a proper cumulative analysis must examine the "intensity"	
12000 011	and "extent" of those impacts – the very thing the SEIS fails to do.	
13008-011	Finally, Figure A. 7-3, entitled "Benthic Geographic Analysis Area", uses a	As specified in Appendix A of the SEIS and the FEIS, BOEM selected the
	purple line to mark the area evaluated for impacts to benthic resources. This	benthic resources geographic analysis area based on the area that may be
	area, however, fails to include most of the wind-farm leaseholds to the west,	affected by the proposed Project. Since BOEM determined that the proposed
	south, and east of the Vineyard Wind project. By using such a truncated	Project would not affect benthic resources outside of the purple line, an
	study area, the SEIS underreports the cumulative impacts on beninic	expansion of the area is not warranted in the FEIS.
12008 012	resources, resulting in a violation of NEPA.	
13008-012	First, the SEIS does not explain what constitutes a negligible, minor,	of Section 2.0 and presented in Tables 2.2 and 2.2 of Appendix P. of the
	impact of noise on finfish in 2 221 are meaningless. Second even if the SEIS	SELS and have been carried forward to the EELS
	did include some definition of these terms or provided the criterio that would	SEIS and have been carried for ward to the FEIS.
	trigger any of those definitions, there is no avidence that the SEIS applied	
	them in this case. That is, there is no indication that any evaluative criteria	
	were applied with respect to poise impacts on fish: so, there is no way to test	
	whether the EIR's conclusions are valid or arbitrary	
13008-013	The SEIS also acknowledges that the wind turbine structures, including their	Impact ratings in the SEIS are provided for each impact-producing factor:
10000 010	foundations, will alter sea currents and obstruct the movement of some	therefore, overall potential impacts for a given resource could be different
	migratory species, such as summer flounder, monkfish, and lobster, (3-23—	than an individual rating for a particular impact-producing factor.
	3-24.) Nevertheless, the SEIS concludes that the project's contribution to	······································
	these impacts are negligible to moderate, and even indicates that the wind	
	turbines could have a "moderate beneficial" effect on fish. Again, however,	
	the SEIS fails to articulate the criteria which establish whether an impact is	
	deemed negligible or moderate or major; nor does the SEIS attempt to apply	

Index Number	Comment Text	Response
Number	any such criteria to the impact in question. Instead, the SEIS provides only conclusory statements void of support or analysis.	
13008-014	The SEIS provides little information on the current status of the NARW. It does not discuss population trends, current whale numbers, or the most recent data on threats to the species. Nor does it identify the migration routes that NARW [NA Right Whale] typically use or investigate whether those routes have changed over time. The SEIS should but does not address recent information suggesting that NARW are remaining off the coast of Massachusetts for longer periods than previously assumed. Consequently, the SEIS's analysis of cumulative impacts on the NARW lacks context and hovers untethered to any understanding of existing conditions.	A detailed discussion of current marine mammal distribution and occurrence in and around the Vineyard Wind 1 WDA was provided in Appendix E of the SEIS. A discussion of current marine mammal distribution as well as population size and trends are also provided in the Biological Opinion issued by NMFS on September 11, 2020. A detailed analysis of impacts to ESA listed species, including the NARW, is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding impacts to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13008-015	In our comment letters on the Draft EIS, we pointed out that BOEM had failed to evaluate the project's noise impacts on whale communication and echolocation, as such impacts could greatly affect the whale's ability to locate prey, avoid vessels, find mates, and navigate hazards along their migration routes. The SEIS, unfortunately, does not cure this deficiencyInstead, the SEIS focuses almost exclusive on project-related pile driving noise and its ability to physically damage whalesWhile noise- related physical damage is certainly a serious concern, noise impacts on whale behavior – e.g., interference with the whales' ability to locate prey or mates – are just as troubling; yet these impacts are not analyzed.	Section 3.3.7.2 of the DEIS and 3.5.1 of the SEIS provide a discussion of auditory masking. Further, a detailed analysis of impacts to ESA listed marine mammal species, including the potential impacts arising from behavior avoidance during construction is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding masking impacts as a result of the Vineyard Wind 1 Project is provided in the Biological Opinion issue by NMFS on September 11, 2020. As described in the Biological Opinion, communication between animals within and located on different sides of the Project area could be intermittently masked as vessels are transiting through the area on a daily basis. This masking is expected to last intermittently while animals remain in the area. Since the greatest amount of vessel traffic will occur concurrently with pile driving activities, whales may choose to leave the area during construction. In either scenario, some short-term harassment is expected to occur due to vessel operations or pile driving during construction. As described in the Biological Opinion, "even if masking were to interfere with

Index	Comment Text	Response
Number		mother-calf communication in the action area, we do not anticipate that such effects would result in fitness consequences given their short-term nature" (NOAA 2020). As such, no change to the FEIS.
13008-016	How do these "avoidance behaviors" conflict with or otherwise affect the whale's normal life-cycle activities? The SEIS does little to address this issue.	Section 3.3.7.3 of the DEIS discussed the potential impacts of behavioral avoidance during construction activities. Further, a detailed analysis of impacts to ESA listed marine mammal species, including the potential impacts of auditory masking is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional discussion regarding the consequences of avoidance behaviors is provided in the Biological Opinion issued by NMFS on September 11, 2020. Finally, the Sections 3.5.1 and 3.5.2 of the SEIS discuss the consequences of avoidance behaviors. Therefore, no change to the FEIS is warranted.
13008-017	Part of the problem is that the neither the Draft EIS nor the SEIS provides a full and accurate description of the existing/ambient underwater noise environment within the cumulative impact area. The waters off the coast of New England receive heavy vessel traffic, resulting in significant underwater noise. A myriad of other noise sources – some anthropogenic and some natural – contribute to ambient sound levels. Yet, the SEIS does not provide any measurement of existing underwater noise, so one is left to wonder what additive effect the proposed wind projects will have. Without an accurate baseline, the impact analysis is largely abstract and meaningless.	Appendix D of the FEIS provides and updated discussion of mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including the Use PAM buoys or autonomous PAM devices to record ambient noise in the lease area (before, during, and immediately (within 2 year of operation) after construction), record marine mammal vocalizations, and monitor Project noise including vessel noise, pile driving, and WTG operation. Results must be provided within 90 days of construction completion and again within 90 days of the 1-year and 2-year anniversary of commissioning.
13008-018	the SEIS does not discuss zooplankton (copepods, including krill) abundance off the New England coast. This information is critical, given that zooplankton is the NARW's primary food sourceIt is a virtual certainty that the Vineyard Wind project, in conjunction with the other offshore wind projects being proposed, will reduce forage opportunities for the NARW, further driving the species toward extinction. Yet, the SEIS does not discuss this issue.	Section 3.3.7.1 of the DEIS and Section 3.5.1 discuss zooplankton abundance and distribution in the region and the importance of these species for many fish species and NARW. Further, a detailed analysis of impacts to ESA listed marine mammal species, including a discussion of zooplankton abundance and distribution is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard- Wind-Consultation-Documents/. Additional information regarding Project impacts on zooplankton as a result of the Vineyard Wind 1 Project and the consequences to marine mammals is provided in the Biological Opinion issued by NMFS on September 11, 2020. Therefore, no change to the FEIS is warranted.
13008-019	the SEIS discusses noise impacts on whales and it also discusses the impacts of underwater structures (wind turbines) on whales, but these analyses are never combined Both types of impacts have the potential to adversely affect whales in a cumulative/additive way, but the SEIS does not address these impacts from this perspective. Instead, the impact analysis is atomized, with each impact type treated as if it were in a vacuum, cut off	As pointed out by the commenter, a variety of anthropogenic noise sources related to the offshore wind development was discussed in Sections 3.5.1 and 3.5.2 of the SEIS and Sections 3.4.1 and 3.4.2 of the FEIS. Each of the noise sources was analyzed and an impact rating was assigned. However, at the conclusion of the of the noise section, all noise sources collectively were assigned an overall impact rating. As discussed in the Biological Opinion

Index	Comment Text	Response
Number		
	completely from other impacts. Such an approach defeats the entire purpose of a cumulative impacts assessment.	issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Also discussed in the Biological Opinion are the potential effects to copepods and other prey items of marine mammals.
13008-020	First, the issue is not whether vessel traffic connected to offshore wind projects would be small "relative" to ongoing and future non-offshore activities. The issue is whether the offshore wind farm vessels, when added to the already-heavy boat traffic in the affected area, will increase the risk of collision with whales. The SEIS does not address that question.	As described in BOEM's National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf (BOEM 2019a), more than 12,000 vessel calls were made at ports in the North Atlantic. The expected peak of 125-230 vessels associated with offshore wind development, as described in Section 3.5.1 of the SEIS, would represent an approximate 1.0 to 1.9 percent increase in vessel traffic. In reality the increase would be even smaller as the 12,000 vessel calls represent only commercial vessels and does not include recreational vessel trips. In addition, there is currently a high degree of uncertainty regarding the number of vessels, ports to be used, and primary transit routes that future offshore wind developments use. Section 3.4.1 of the FEIS has been updated to reflect this information. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no take of marine mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS. These measures include, but are not limited to, use of PSOs, PAM, vessel speed restrictions and other measures
13008-021	the SEIS provides no evidence as to how many vessels currently enter and cross through the cumulative impact area, so there is no support for the claim that the wind project-related vessels would have "no measurable cumulative impact". In short, BOEM has not measured anything, and thus the entire statement is misleading.	Section 3.11 of the FEIS has been updated to incorporate newer vessel traffic data, including both AIS and VMS data for the WDA and RI and MA Lease Areas. This information is sufficient to support the conclusions in Section 3.11.
13008-022	the Jones Act restricts the ability of non-U.S. vessels to serve the offshore wind arrays, which means that many of the vessels needed to support construction, operation, and maintenance of the wind turbines must be based in U.S. ports, significantly increasing the number of vessel-miles traveled. This, in turn, increases the potential for increased vessel strikes against whales and other marine mammals. The SEIS does not discuss this impact.	As described in BOEM's National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf (BOEM 2019a), more than 12,000 vessel calls were made at ports in the North Atlantic. The expected peak of 125-230 vessels associated with offshore wind development, as described in Section 3.5.1 of the SEIS, would represent an approximate 1.0 to 1.9 percent increase in vessel traffic. In reality the increase would be even smaller as the 12,000 vessel calls represent only commercial vessels and does not include recreational vessel trips. In addition.

Index	Comment Text	Response
Number		
Number 13008-023	the SEIS's discussion of project and cumulative impacts on NARWfails to refer to much of the recent scientific literature about the plight of the whale. The few technical articles cited in the SEIS are seven to ten years old and thus do not provide information on the recent drops in NARW numbers. The SEIS also includes no data as to how many NARW the Vineyard Wind project, both singly and in combination with other wind projects, is likely to "take" over the 30-year operational life of the wind array. Given that even a single NARW death pushes the species ever closer to extinction, it is imperative that the SEIS examine the "take" issue and disclose the number of NARW that will be lost. Again, however, the SEIS provides no data on this critical issue.	there is currently a high degree of uncertainty regarding the number of vessels, ports to be used, and primary transit routes that future offshore wind developments use. Section 3.4.1 of the FEIS has been updated to reflect this information. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no take of marine mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS. These measures include, but are not limited to, use of PSOs, PAM, vessel speed restrictions, and other measures A detailed discussion of current marine mammal distribution and occurrence in and around the Vineyard Wind 1 WDA, including the NARW was provided in Appendix B of the DEIS and Appendix E of the SEIS. A discussion of current marine mammal distribution as well as population size and trends are also provided in the Biological Opinion issued by NMFS on September 11, 2020. A detailed analysis of impacts to ESA listed species, including the NARW, is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding impacts to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding impacts to ESA listed species is provided in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of t
		wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13008-024	As pointed out in the article "Nature's Solution to Climate Change," published last December in Finance & Development, whales stimulate the growth of phytoplankton, which pulls more than 37 billion metric tons of CO2 out of the atmosphere, approximately 40 percent of all CO2 produced each yearThe SEIS does not discuss this issue or evaluate the extent to which Vineyard Wind and the other offshore wind projects could contribute	As discussed in the Section 3.4.2 of the FEIS and in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, as discussed in the Biological Opinion, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of
	to diminished whale numbers, thereby cancelling the very CO2 reductions the wind farms are supposed to provide. In short, the entire Atlantic offshore wind program, including Vineyard Wind, would be counter-productive and	marine mammals is expected to occur as a result of the project.

Index	Comment Text	Response
Number	self-defeating if they directly or indirectly cause whale numbers to drop. We would be killing nature's "carbon sink" (i.e., whales) to install a poor manmade substitute, gaining nothing by the effort but profit for the wind-	
13008-025	The SEIS, however, does not discuss whether and to what extent aerial monitoring will affect [the NARW and other sensitive marine mammals]. The SEIS also does not disclose whether aerial monitoring can be effectively performed after certain of the wind arrays are installed. As to underwater acoustical monitoring, the SEIS should – but does not – evaluate the extent to which the noise and vibrations of the wind turbines would mask the sounds of whales, thereby compromising the monitoring effort.	Section 3.3.7.3 of the DEIS and Section 3.5.1 of the SEIS discuss the use of helicopters and the potential consequences on marine mammals. Section 3.3.7.2 of the DEIS and Section 3.5.1 of the SEIS provide a discussion of auditory masking. Further, a detailed analysis of impacts to ESA listed marine mammal species, including the potential impacts arising from behavior avoidance during construction is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding masking impacts as a result of the Vineyard Wind 1 Project is provided in the Biological Opinion issued by NMFS on September 11, 2020. As described in the BA, communication between animals within and located on different sides of the Project area could be intermittently masked as vessels are transiting through the area on a daily basis. This masking is expected to last intermittently while animals remain in the area. Since the greatest amount of vessel traffic will occur concurrently with pile driving activities, whales may choose to leave the area during construction. In either scenario, some short-term harassment is expected to occur due to vessel operations or pile driving during construction. As described in the Biological Assessment, "even if masking were to interfere with mother-calf communication in the action area, we do not anticipate that such effects would result in fitness consequences given their short-term nature" (NOAA 2020). The FEIS addresses the issue of aerial monitoring surveys throughout Section 3.12 (Other Uses, Scientific Research, and Surveys). Therefore, no change to the FEIS is warranted
13008-026	But then the SEIS backs away from this number [6.9 birds per turbine] and claims without study or proof that the 2,021 wind turbines currently planned for the Atlantic seaboard would kill only 75 marine birds per year. Not only is this number low and unsupported, it is hard to square with the SEIS's claim that the wind turbine structures will attract fish and thereby invite more birds to forage within the wind arrays. If we accept this claim, it is likely that bird mortality will increase well beyond the numbers reported in the SEIS.	Section A.8.3.1 of the FEIS includes an updated discussion of Loss et al. (2013) and the applicability of mortality estimates derived from terrestrial WTGs to offshore WTGs. Several factors as to why potential collision mortality is expected to be much lower are presented in the FEIS. As pointed out by the commenter, and discussed in Sections A.8.3.1 and A.8.3.2, BOEM expects some level of reef affect to attract fish to the WTGS foundations, which would increase collision risk to those individuals utilizing the foundations for foraging. However, based on the biology of these species, most would be flying and foraging well below the Rotor Swept Zone and collision with operating WTG blades would not be expected.
13008-027	The SEIS also fails to provide a true cumulative impacts analysis with regard to birds. As the SEIS points out, marine and shore birds along the Atlantic	Section A.8.3.2 provides an updated discussion of bird use of the Atlantic Flyway along the North American Atlantic Coast. Within the Atlantic

Index	Comment Text	Response
	Coast are on the decline and face a host of stressors. (A-67.) Nevertheless, the SEIS makes no effort to combine these stressors with the wind farm impacts, so the reader has no means to gauge the true cumulative effect of the project on birds.	Flyway, much of the bird activity is concentrated along the coastline concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). Additionally, as depicted in Figures A.8.3-1 and A.8.3-2 in the SEIS, total avian abundance for species with high collision sensitivity and displacement sensitivity are low in the proposed Vineyard Wind 1 Project area, as well as within all of the offshore wind lease areas on the Atlantic OCS. Additionally, the SEIS discussed two studies of offshore wind facilities in Europe (Desholm 2006 and Skov et al. 2018) that used a variety of monitoring methods to monitor operating offshore WTGs for bird collision mortality. In both cases very little bird mortality was documented. The FEIS was updated to explicitly state these conclusions. Further, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices.
13008-028	Neither the Draft EIS nor the SEIS provide an accounting of the fossil-fuel energy required to produce, install, and operate the wind arrays contemplated under BOEM's Atlantic offshore wind program – energy that would not be expended but for the windfarm projects.	Greenhouse gas emissions and climate change were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information. Construction related activities were included in the analysis.
13008-029	to ensure that wind farms maintain their contribution to the energy grid, the operators must use backup generators to produce electricity. These backup generators use fossil fuels and emit GHGs and other air pollutants. The SEIS does not disclose this fact, does not explain the role that such backup generators play, and does not provide a full, accurate, and cumulative accounting of the GHGs and air pollutants emitted by the backup generators.	The FEIS has been updated to specifically call out emergency generators. The emissions of backup generators are part of the total emissions considered (COP Volume III-B, page 14; Epsilon 2020b). The function of the emergency generators is to allow for protection of equipment and communication with WTGs in the event of an emergency. These generators are not commercial scale, and would not be connected to the energy grid.
13008-030	Instead, the SEIS just declares these 2.2 million tons of emissions to be "minor". (Ibid.) The SEIS does acknowledge that Vineyard Wind's construction emissions would include 4,961 tons of NOx and 122 tons of volatile organic compounds (VOCs), which together form ozone, the one regulated pollutant for which coastal Massachusetts is out of attainment. (See, A-42.) The SEIS, however, does not assess whether such ozone emissions would contribute to any exceedances of federal ozone thresholds.	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS. Vineyard Wind is required to have and is applying for an OCS air permit with the USEPA which includes Prevention of Significant Deterioration. Other future offshore wind projects will require similar permitting and will require compliance with the Clean Air Act.
13008-031	It is unclear what the SEIS means by "emergency" generators, but it appears that the SEIS has grossly underreported how often generators will be used and the amount of emissions they will produce.	The expanded plan action scenario considered in the SEIS assumed that operation and maintenance emissions would be similar to the proposed Project. In the COP for the proposed Project, multiple options regarding the potential use of emergency generators in the event of a loss of connection to

Index	Comment Text	Response
Number		
		the grid were considered as a damage prevention and safety measure. The option that yielded the highest emissions was selected to capture the highest impact case. See COP Volume III-B, page 14; Epsilon 2020b. Other offshore wind projects with submitted COPs within the geographic analysis area were also factored into the emissions calculations. Emergency generators including maximum case estimates of their associated emissions are part of these emissions calculations.
13008-032	the wind turbines will be 15 to 20 percent larger and taller than was previously disclosed and studied. It is unclear, however, whether the SEIS's visual impacts studies – including the visual simulations – took these increases into account.	The assumptions for turbine size and height as it related to the impact assessment are included in Chapter 1 and Appendix A of the SEIS and FEIS.
13008-033	In fact, the SEIS should (but does not) include visual simulations – day-time and nighttime – from each tourist location on both islands. The need for such visual simulations is especially acute now that the project applicant has decided to increase the height of the wind turbines by more than 100 feet.	Section 3.9.2 of the FEIS has been updated to discuss new visual simulations provided by Vineyard Wind. The simulations show the proposed taller, 14 MW Vineyard Wind turbines and also show combined simulations for Vineyard Wind with other future offshore wind development within the same viewshed. COP Volume III, Appendix III-H.a (Epsilon 2020d) describes how simulation viewpoints were selected, and discusses how those viewpoints are broadly representative of publicly accessible locations where the Project may be visible. Section 3.10.2.1 of the SEIS stated that Vineyard Wind had committed to use ADLS, which would greatly reduce the time when nighttime aviation lighting is activated. The nighttime simulations for the Vineyard Wind turbines were completed based on the COP submitted in 2017, and do not include the mid-tower lighting that will be required for the taller, 14 MW turbines that are evaluated in the FEIS. The nighttime simulations can be viewed at https://www.boem.gov/vineyard-wind. Although updated simulations for the taller turbines with mid-tower lighting are not available, Section 3.9.1.1 of the FEIS has been updated to address nighttime views and night sky concerns in greater detail than in the DEIS or SEIS.
13008-034	The[construction] vessels may, and likely will, discharge some of their ballast water into ocean near the wind arrays, potentially introducing invasive, non-native species. The SEIS does not provide an adequate assessment of this impact.	Section A.8.2.2 of the SEIS addressed control measures for non-indigenous species. The SEIS stated, "all vessels would need to comply with the USCG ballast water management requirements outlined in 33 CFR Part 151 and 46 CFR Part 162." The FEIS has been updated to reference Subpart D of 33 CFR Part 151, which specifically addresses Ballast Water Management for Control of Nonindigenous Species in Waters of the United States.
13008-035	The waters off Nantucket are clear and pristine, and the southern shoreline is especially fragile and prone to erosion. The Vineyard Wind project, by itself, will alter currents and potentially effect beach sand replenishment, wave size,	Appendix E of the FEIS has been updated to include additional information regarding the oceanographic environment, including the potential impacts on mean flows near offshore wind foundations. Information related to potential changes in mean flows provides implications for shoreline erosion. Section

Index Number	Comment Text	Response
	and sand erosion along Nantucket's coastline. The SEIS does not address this issue on a project-specific or cumulative basis.	3.3.2 of the FEIS has been updated to explain that background hydrodynamic conditions would exist approximately 328 feet (100 meters) from each monopile foundation.
13008-036	it appears that the SEIS's cumulative analysis failed to include key wind energy-related projects, such as the Offshore Export Cable Corridor and Anabaric's Southern New England OceanGrid project. To comply with NEPA, the SEIS's cumulative impact assessment must take these projects into account.	The mentioned projects are discussed in Appendix A of the SEIS and considered in the impact analyses in Chapter 3 of the SEIS, which were carried over to the FEIS.
13009-001	the concerns of the commercial fishing industry have not been included in the plans of any of the Wind Developers. For example, the commercial fishing industry has been saying the turbines must be spaced at least 2 nautical miles apart among many other suggestions yet not one of the 6 Alternatives in the SEIS even considers this spacing.	Section C.5 in Appendix C of the FEIS addresses alternatives considered but not analyzed in detail. Specifically, BOEM provides information on "alternative spacing between wind energy turbines." See that section for more information on why a spacing of 1.5 to 2 nautical miles or greater was not assessed in detail.
13009-002	When questioned regarding [the spacing of turbines] during a BOEM/RODA Q&A session July 14, 2020, a BOEM representative replied, "because it is not economically feasible for the Wind Developers [to space at least 2NM apart]". This was a BOEM report and the most important thing is the economic feasibility to the FOREIGN Wind Developers!? That in and of itself tells you that this process is flawed and unfair to a historic industry on which this country was founded to the benefit of Foreign owned companies coming into our EEZ (which will no longer be exclusive) and displacing thousands of jobs, small businesses and our heritage.	Section C.5 in Appendix C of the FEIS addresses alternatives considered but not analyzed in detail. Specifically, BOEM provides information on "alternative spacing between wind energy turbines." See that section for more information on why a spacing of 1.5 to 2 nautical miles or greater was not assessed in detail.
13009-003	The report [from scientists hired to review the SEIS by the National Science Foundation's Science Center for Marine Fisheries ("SCEMFIS")] states that the cumulative nature of the SEIS falls short. "In the case of the present SEIS, one cannot evaluate the total impact of the proposed development of the Mid-Atlantic Bight as insufficient attention is paid to the impact beyond the Vineyard Wind project, whereas the cumulative impact is the issue of greatest concern," the SCEMFIS team wrote. While the SEIS analysis is "extensive across potentially affected resources," its frequent "lack of detail" is a weakness	The FEIS includes additional detail and responds to public comments.
13009-004	The SCEMFIS report says, "The greatest direct impact of offshore wind on fisheries could be the impact of turbine placement on stock assessments Surveys could not be conducted in wind areas; in which case it is assumed that no stock exists there. This would likely lead to quota reductions, especially due to increased uncertainty in the assessments, and the resulting long-term effects would not be able to be resolved by single-year compensation plan".	Section 3.14 of the SEIS addressed potential project-related and cumulative impacts to scientific research and surveys in detail, including the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed through collaboration with NMFS and BOEM will continue to collaborate on survey protocols. It has been acknowledged that additional studies are needed and discussions are ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no change to the FEIS is warranted. BOEM is funding a process to begin to

Index	Comment Text	Response
Number		
12000 005		understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13009-005	There are also several potential environmental impacts from offshore wind that the SEIS did not adequately explore, the SCEMFIS team found. For instance, the SEIS considered impacts on the ecologically important "cold pool" of water that extends seasonally off the U.S. East Coast, but only focused on impacts during some parts of the year. Weakening this cold pool could help generate "the most catastrophic ecological event on the continental shelf the world has ever seen," the researchers wrote, so great care must be taken to show the chance of an impact from offshore wind is "vanishingly small." Such science is not present in the SEIS, they wrote.	Section 3.4 of the SEIS discussed the cold pool and potential effects of offshore wind development. Therefore, no change to the FEIS is warranted. Potential impacts on the cold pool are dominated by factors other than the Proposed Action; nevertheless, the FEIS considers impacts of reasonably foreseeable environmental trends and planned actions, including the Proposed Action.
13009-006	The biggest indirect threat to fisheries is a likely increase in marine mammal entanglements, according to the SCEMFIS report. This would result from an increased density of fishing gear due to a reduction in available fishing areas, more recreational fishing, and recreational fishing further offshore at the wind sites. Greater threats to marine mammals would lead to greater limitations on fishermen, and the SEIS should have classified these impacts as "major" instead of "moderate," the researchers wrote.	Section 3.5.1 of the SEIS discussed the potential for interactions with commercial and recreational fisheries as a result of either displacement of vessels out of the WDAs or an increased presence of recreational fishing vessels in the WDAs. While the reef effect may result in drawing in recreational fishing effort from inshore areas, an overall interaction between marine mammals and fisheries resulting from increased effort offshore would not change the overlap in recreational fishing effort and marine mammal distributions. Fishing in and around foundations may increase marine debris from fouled fishing gear in the area. However, as discussed, entanglement and ingestion of marine debris, is not considered a new impact-producing factor but rather a change in the distribution of this factor if inshore fishing effort is moved offshore, with the potential for different species to be affected. A detailed discussion of the potential consequences of fishing displacement is provided in the Biological Opinion issued by NMFS. More information regarding the potential for displacement of fishing vessels is provided in Section 3.10 of the FEIS. Therefore, no change to the FEIS is warranted.
13009-007	If wind turbines are placed one nautical mile apart in each direction, the	Thank you for your comment.
	fishing and transit through those areas will dramatically reduce the safety	
	factor for one of the most dangerous occupations in the United States.	
13009-008	Some of the turbine types that have been discussed are monopoles and	Section C.5 in Appendix C of the FEIS, as well as the DEIS and the SEIS,
	as described by Equinor Wind during their development meeting, these	include text related to alternative wind turbine foundation types. BOEM

Index	Comment Text	Response
Number		
	structures would have a rock pile around them that covers 160,000 square	considered such alternatives but did not analyze them in detail in the NEPA
	feet or approximately 4 acres. Even with the water line interaction being 1	document.
	nautical mile apart the bottom interaction is dramatically reduced. The	
	interference to marine radar is known to exist but the true measure in	
12000.000	reduction in safety has not been established.	
13009-009	The Atlantic Surf Clam and Ocean Quahog fishery uses a hydraulic dredge	Section 3.11.1.1 and 3.11.2 of the SEIS discusses vessel displacement and
	method to loosen high energy sands and retrieve the clams as they are	financial impacts on commercial fisheries, including the surfclam fishery.
	released from the bottom. It is our understanding that each wind turbine will	Table 3.11-3 shows a cumulative assessment of projected revenue exposure
	be connected to the grid by a buried cable. These cables are approximately 10	from all potential offshore wind lease areas if a harvester opts to no longer
	inches in diameter and will carry 60,000 volts through each one. Any mobile	tish in the area and cannot recapture that income in a different location.
	tending bottom gear would run the risk of interaction with these electrified	Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS discuss that some vessels may
	cables but a hydraulic dredge that is made out of steel and weighs up to	choose not to fish near the Proposed Action during its operational period due
	32,000 pounds with a cutting edge up to 180 inches wide will not interact	to restrictions on maneuverability from the presence of structures, the
	well with these electrified cables. The Wind Developers say they will bury	potential for hanging up on structures, and they have been updated to discuss
	the cables 2 meters deep, there are many areas within the WEA's that 2	potential mitigation measures. BOEM believes that measures proposed in the
	meters of sand can be moved over night in a storm. If the bottom is deemed	COP and enforced through terms and conditions of approval are sufficient to
	too hard to bury the cables, they will use pads. The pads are made of concrete	avoid interactions between fisheries gear and cable infrastructure. This
	and can be as high as 6 feet off the bottom, thus rendering this tract	includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys,
	unfishable.	and a Distributed Temperature System on the export cable that will monitor if
		burial conditions have deteriorated or changed significantly and remedial
		actions are warranted. Additionally Vineyard Wind is required to submit an
		as-built cable installation report that will include location and burial depth.
		See the updated Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for
		details. Voluntary financial compensation packages are also discussed in
12000 010		Section 3.10, Table 3.10-13, and Appendix D of the FEIS.
13009-010	The Block Island WEA used current technology bury the transmission cables	Resource sections of the FEIS include proposed mitigation, where applicable,
	in the bottom, yet only a few years later the cables have become unburied.	and Appendix D of the FEIS, which is a summary of all proposed mitigation
	I his is actual proof that the right technology does not exist to bury high	considered (including cable burial monitoring), has also been updated to
	voltage transmission cables under the ocean bottom and ensure that they will	include modifications and/or additional mitigation and monitoring measures.
	stay buried.	Additional mitigation and monitoring measures may arise from consultations
		and coordination with Federal and State resource agencies. These additional
		mitigation measures will be considered by decision makers and could be
		adopted in the Record of Decision and required as conditions of approval.
		Section 2.2.1 of the FEIS has been updated to reflect this information.
		Section 2.1.1 of the FEIS has been updated to address cable burial risk for the
		proposed Project. The OECC would have a target burial depth of 5-8 feet
		(1.5-2.5 meters). Potential interactions with fishing gear are discussed in the
		revised Section 3.10.2 of the FEIS.

Index	Comment Text	Response
Number		
13009-011	Why not place the WEA's on land, this has worked for decades in the west? Why not convert electric power producing plants to natural gas and cut emissions by 50% immediately. Solar fields have become common place and seem to have little adverse effect on the environment around them.	BOEM's action is to approve, approve with modifications, or disapprove Vineyard Wind's COP. Other projects or activities that do not meet the purpose and need are not evaluated in the NEPA process.
13009-012	What we are opposed to are US Fishing Vessels protected under the Jones Act and the Magnuson-Stevens Act being displaced from historic fishing grounds without proper consideration of coexistence. It is our understanding that the majority ownership in these Wind Farms will be European and the technology and hardware will be imported from overseas including but not limited to China, Canada, and France.	Thank you for your comment.
13009-013	We would ask that you accept Alternative G, No Action regarding the Vineyard Wind I project.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13009-014	We would ask that you issue a 5-year moratorium on all WEA leasing, construction, and surveying (on foreign vessels) as suggested by RODA in their petition. This 5-year moratorium would allow the proper science to be done so the effects on the environment, ecology and economy are minimal. It would also allow time for US based companies to develop the technology and build plants to truly employ US citizens and make this sustainable US lead path forward if the science proves that this can be safely and effectively accomplished.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13009-015	Streamlined permitting and clear regulatory processes, such as those the Council on Environmental Quality have brought to life through the recent revamping of the National Environmental Protection Act review process, will benefit offshore wind and we support any BOEM efforts to bring needed clarity through the Vineyard Wind review.	Thank you for your comment.
13009-016	As we fight through intertwined economic crises in America - the COVID-19 outbreak and the energy market's disruption - there has never been a more important time for the offshore wind industry to establish its footing for the future while creating jobs on shovel-ready projects that put Americans to work on our economic recovery. Vineyard Wind is such a project, and BOEM and the Department of the Interior have the opportunity to set in place pro-American, business- and labor-friendly policies that can unlock the enormous potential of this industry, while ensuring that the maximum benefits of it accrue to American entities and citizens. These policies can help revitalize port and coastal communities across the country beyond just the Atlantic coast, and all of their maritime industries. We advocate for all those who will benefit from U.S. offshore wind expansion. We encourage BOEM to carefully weigh the economic impacts and potential benefits of this	Thank you for your comment.
Index	Comment Text	Response
-----------	--	---
Number		
	industry to all stakeholder groups - which are vast when the entire supply	
	chain that will be required is considered - against those of smaller, more	
	vocal interests who have no intention of reaching an end state where offshore	
12010 001	Wind development is possible.	These transformers and the second s
13010-001	assential for areating a regulatory environment that can bring much needed	i nank you for your comment.
	progress to this rapidly emerging market and new industry for the United	
	States	
13010-002	Offshore wind is a crucial and emerging new industry for the United States.	Thank you for your comment.
	These first projects and how well they advance through regulatory processes	
	will send a signal to the industry that indicates whether the US is open for	
	business, or not. If projects like Vineyard Wind 1 will need to go back to the	
	drawing board to accommodate onerous conditions such as 4-mile wide	
	transit lanes after years of partnerships, compromises and agreements, all	
	offshore wind projects are at risk of being indefinitely slowed and	
	significantly minimized in positive impacts.	
13013-001	I support the Vineyard Wind Project due to the fact that it will provide a	Thank you for your comment.
10015 001	renewable yet cost-effective source of energy to Massachusetts.	
13015-001	Two particular issues that we feel have been subject to robust processes and	Section 2.5 of the FEIS has been added which includes the agency-preferred
	have received exhaustive and relevant input are where the cables make	alternative. Vineyard Wind has indicated that New Hampshire Avenue
	findfall, and the layout of the turbines as they relate to snipping and the	landfall location is no longer a consideration as they have received all the
	issning industry. On the landiali, we support Alternative B, Covell's Beach,	necessary state and local permits for the Covell's Beach landfall site.
	so as toavoid potential negative impacts on Lewis Day. with regard to	
	conflicts with existing and future marine uses such as fishing and navigation	
	We have been extremely impressed with the stakeholder processes in these	
	two areas and have noted Vinevard Wind's efforts to listen and be flexible in	
	them.	
13015-002	Offshore wind also brings a rare economic opportunity: to cement the Bay	Thank you for your comment.
	State as a global leader in renewable energy, with southeastern Massachusetts	
	as a hub of offshore wind development. All three offshore wind proposals	
	offer economic benefits, and Vineyard Wind has pledged to commit millions	
	on regional workforce and supply chain development, providing an excellent	
	model for building and sustaining a local offshore wind industry.	
13016-001	I highly support the Vineyards Wind project as a crucial step towards	Thank you for your comment.
	producing renewable energy and the transition away from fossil fuels. Not	
	only is this wind energy project important for climate change mitigation, but	
	It will also create thousands of much needed jobs. One of my biggest reasons	

Index	Comment Text	Response
Number		
	for supporting Vineyard Winds is that there has been a decade of extensive	
	scientific study on its impact.	
13017-001	Within the Supplemental EIS, CEA notes the lengths BOEM took to study	Thank you for your comment.
	the "reasonably foreseeable effects from an expanded cumulative activities	
	scenario for offshore wind development". While CEA does not generally	
	favor project delays, the delays caused by BOEM's supplementation process	
	should result in a stronger future for American offshore wind because the	
	agency took the time to "get it right" for the industry – not just for the	
	Project. The additional work done on the reasonably foreseeable effects of	
	development also provide a path forward to future environmental permits to	
	swiftly move through the agency and provide shelter from litigation.	
	Additionally, the delay did not seek to stop development but allowed the	
	agency to consider new fishing data and a transit lane alternative that will	
	protect the Project from legal challenges and now provide a clear path	
	forward for all offshore wind projects in the future.	
13018-001	Offshore wind, with its stellar record in Europe, is the proven alternative that	Thank you for your comment.
	we must turn to today in the United States. Offshore wind has the potential to	
	provide 50% of the potential clean energy in New England. What are we	
	waiting for? Answer: BOEM approval, greenlighting the Vineyard Wind	
	project and future projects as well.	
13018-002	The Intergovernmental Panel on Climate Change (IPCC) has underscored the	Thank you for your comment.
	extreme danger to our planet that is caused by rising temperatures	
	exacerbated by greenhouse gas emissions from the burning of fossil fuels.	
	Extraction, delivery, and combustion of fossil fuels are all causing	
	irreversible damage to our Earth. We are setting records for hottest years.	
12010 002	I his is not a record to be proud of.	
13018-003	SAFE and Salem know firstnand the damage to our health caused by fossil	Additional health benefits of the proposed Project have been added to Section
	ather coute broothing methods have all been decourserted in our community	A.8.1 OI the FEIS.
	but the Herrard School of Public Health and the Dester Heiversity School of	
	Bublic Health and confirmed by the Commonwealth of Massachusette, For	
	veges. Salem bested a coal and oil burning nower plant. The new gas fired	
	plant is betterbut it continues to impact public health. No highly developed	
	urban area should be besting a newer plant	
12018 004	As an historia apastal community. Salam experiences the effects of the	Thank you for your comment
15010-004	leneroaching ocean. Neighborhoods are routinely flooded, and seawalls built	
	to protect us are routinely breached. The recently undeted federal flood many	
	make it eminently clear that some of our neighborhoods will not exist at the	

Index	Comment Text	Response
Number	and of this contumy on contion. Used the noth of hypnicane for dy hear inst a fary	
	degrees off the cours	
13018-005	SAFE cannot agree with the commercial fishing objections to Vineyard Wind. Vineyard Wind has made dramatic adjustments to its initial proposal	Thank you for your comment.
	to make commercial fishing easier in its array area. We also know firsthand from our proximity to and knowledge of the Gloucester fishing industry that numbers of the large commercial fishing operations need to greatly curb	
	some of their practices that are depleting fish stocks and damaging our ocean habitat. Offshore wind development will bring an expanded job market for the building and maintenance of wind turbings and the industry will snawn	
	the development of many ancillary businesses. Again, we look to Europe for the blueprint.	
13018-006	On January 22, 2019, Vineyard Wind signed a landmark agreement with the Natural Resources Defense Council, National Wildlife Federation, and Conservation Law Foundation to protect the highly endangered North Atlantic right whale during project construction and operation. The agreement should give impetus to federal and state governments to adopt measures that avoid, minimize, and mitigate underwater noise, ship strikes, and turbine collisions.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW, and include measures outlined in the referenced agreement. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Project-specific ESA consultations will be required for all future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process
13019-001	In considering the various direct and indirect impacts of Alternative F as required under NEPA, BOEM determined that navigation and maritime safety with respect to commercial fishing would be among the most potentially affected resourcesAdditional transit lanes beyond the ample sea space provided in the predictable and measured 1x1 grid would unquestionably hinder delivery of contracted supply to the market. For Mayflower, this decision would decimate delivery of contracted supply to the market that is currently the lowest levelized net present value for Massachusetts rate payers. In light of the MARIPARS report's expert conclusions, which already took the RODA proposal into consideration, BOEM is justified in relying on the MARIPARS to determine that	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13019-002	BOEM also evaluated the environmental, technical and practical consequences of Alternative F and the six additional (4 nm) transit lanes	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index Number	Comment Text	Response
	proposed by RODA related to assessment of cumulative impactsBOEM acknowledged that Alternative F "could further erode project economics and viability." This threat to viability is certainly true with respect to Mayflower. With respect to Vineyard, Mayflower and other projects to come, this threat would in fact result in failure to meet BOEM's mandate under the Outer Continental Shelf Lands Act to develop the leased area in a "available for expeditious and orderly" manner. For these powerful reasons, Mayflower urges BOEM select Alternative D2 as the agency's preferred alternative for the Project.	
13019-003	By anticipating as reasonably foreseeable an eventual build out of the full 21.8 GW of offshore wind capacity under current state commitments for existing Atlantic leases, a build out that is far from certain and which approval of the Project in no way compels, the SEIS is consistent with, and arguably exceeds, the statutory and regulatory standards that guide the federal environmental impact review process.	Thank you for your comment.
13021-001	Offshore wind renewable resources are key to furthering Governor Cuomo's commitment to achieving 100% clean and carbon-free power by 2040 and at least 9 gigawatts (GW) of offshore wind by 2035 under the Climate Leadership and Community Protection Act (CLCPA), which will only be possible to achieve through the responsible development of existing and new leases in the northeast region.	Climate change is addressed in Section A.8.1 of the FEIS as it related to air quality.
13021-002	The Agencies generally agree with the scope of the issues identified in the Supplement and believe that these issues can be addressed in ways that will provide for a successful outcome.	Appendix C of the FEIS includes updated information on agency consultation and coordination performed for the proposed Project.
13021-003	BOEM's No Action Alternative is not an acceptable path forward based on the analysis of impacts in this Draft EIS.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13021-004	The Supplement's cumulative impacts analysis, which covers virtually the entire east coast, appears to be intended as a template and sets an untenable threshold for future evaluation of potential offshore wind impacts at other leases in the region. It is appropriate for BOEM to acknowledge future projects' existence, but the Agencies caution against weighing the potential impacts of those projects on the same level as a project undergoing active federal review. Potential projects are real but may still be unformed, and the Supplement should infer that those potential projects.	Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
13021-005	there may be adaptive management measures gleaned from the monitoring of constructed projects that could reduce future projects' long-term impacts (e.g., project design and layout, construction methods and timing, technology changes, advances or changes in monitoring techniques, mitigation on noise	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring

Index	Comment Text	Response
Number	and electro-magnetic fields). In these ways, near-term offshore wind development is anticipated to evolve to support a lower incremental impact when compared to the Vineyard Wind Project.	measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13021-006	Should the Supplement indeed represent a template for future evaluation, the Agencies express concern regarding the jurisdictional scope exerted by BOEM in exploring inland impacts, such as cable landfall, operation and maintenance facilities, and environmental justice. New York has robust state processes to inform the permitting and approval of the onshore elements of offshore wind projects. New York, furthermore, has the nation's most aggressive legislation to support the replacement of harmful fossil-fuel electrical infrastructure with renewable energy under the CLCPA which is designed to directly address environmental injustice issues and provide direct support for disadvantaged communities. This duplication of review could cause confusion and/or conflicts in layering questions of jurisdiction and has the potential to invoke further unnecessary development risk, which can translate to higher costs for New York ratepayers.	For future offshore wind applications, BOEM will coordinate with New York and other states as applicable in order to avoid duplicating any analyses of onshore impacts. In addition, as part of NEPA, connected actions need to be included. Connected actions are those proposed Federal actions that are "closely related" and "should be discussed" in the same NEPA document (40 CFR 1508.25 (a)(1)). The USACE is a cooperating agency to the proposed Project and the USACE has jurisdiction over some of these port expansions. BOEM, as the lead federal agency, is responsible for organizing the federal environmental review and authorization processes for a proposed project, including the preparation of a single EIS and ROD for the project in coordination with the other federal cooperating agencies. BOEM is required to evaluate the entire proposed Project as submitted in an applicant's COP, including inland impacts.
13021-007	Because the Supplement's cumulative impacts analysis is complicated by a vast geographic extent, difficulty in analyzing unformed, future projects, and may in part duplicate states' reviews, it ultimately provides only a marginal improvement in the identification of potential cumulative impacts as compared to the substantial diligence already inherent in BOEM's standard offshore wind permitting and approvals processes.	As noted in Section 1.7 of the SEIS, BOEM thoroughly analyzed the possible extent of future offshore wind development in the United States on the Atlantic OCS to determine reasonably foreseeable cumulative effects measured by installed power capacity and expanded what offshore wind actions were considered reasonably foreseeable beyond those included in the DEIS to include approximately 22 gigawatts of offshore wind power projects. Therefore, no change to the FEIS is warranted.
13021-008	Moreover, these inefficiencies [in the identification of cumulative impacts] could inhibit BOEM's ability to deliver on new lease areas, including advancing the draft New York Bight Wind Energy Areas, which as the Supplement acknowledges, are necessary for both New York and New Jersey to realize their offshore wind goals. Based upon the projections presented by BOEM at its November 2018 Intergovernmental Renewable Energy Task Force Meeting on the New York Bight,4 which cited the announcement of "Final" Wind Energy Areas in 2019 followed by a Lease Sale in "Early 2020", this process is already significantly delayed.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
13021-009	Just as the State is re-evaluating its renewable energy regulatory processes, we encourage BOEM to explore options within its existing regulatory framework to conduct environmental reviews responsibly and expeditiously, maintain project timelines, and thereby indirectly incentivize the necessary capital investment in offshore wind development to encourage this nascent	The focus of the NEPA process for the proposed Project is specific to assessing the potential impacts of the proposed Project. It is not intended to evaluate or amend BOEM's regulatory framework for all offshore wind projects.

Index	Comment Text	Response
Number	industry to address the massing issue of alimete alience and most the	
	industry to address the pressing issue of climate change and meet the	
12021 010	renewable energy goals of the east coast states.	
13021-010	BOEM's cumulative impacts analysis identified major impacts to the	BOEM will continue to work with maritime community and USCG regarding
	Commercial Fisheries and For-Hire Recreational Fishing" and "Navigation	sale navigation through offshore wind facilities.
	and vessel frattic resource categories, including impacts to New York. The	
	Draft EIS identifies New York interests in the Knode Island/Massachusetts	
	Wind Energy Areas ("RI/MA WEAs") and Vineyard Wind Lease Area by	
	acknowledging the regional setting of commercial fishing, highlighting the	
	importance of the Montauk, New York fishing port in value and volume of	
	commercial landings, and drawing attention to the fact that, on average, more	
	for-hire recreational fishing trips to this area originate from Montauk, New	
	Y ork than any other state. While the Agencies support the inclusion of the	
	Ix I nautical mile (nm) alternative in the Supplement, BOEM should continue	
	evaluating transit issues regionally alongside developers and fishermen to	
10001011	deconflict and minimize future navigation risks.	
13021-011	Turbine layout schemes, like the 1x1 nm alternative, may not be appropriate	Thank you for your comment.
	at all lease areas. East-west and diagonal routes through the RI/MA WEAs	
	provide access for Long Island fishermen to and from very productive fishing	
	grounds on the shelf edge. Activities that impact access to fishing grounds,	
	safety conditions, and the availability of fish in the RI/MA WEAs would	
	have reasonably foreseeable effects on New York's commercial fishermen. In	
	these and other ways, the Supplement sufficiently illustrates the regional and	
	connected nature of offshore wind projects and the need for New York's	
	participation in future reviews.	
13021-012	fishing is pressed by many topics, not the least of which is climate change	Thank you for your comment.
	which offshore wind development will help to mitigate. While the layout	
	alternatives could decrease impacts to the fishing community on a local scale,	
	it is unlikely to appreciably change the overall major cumulative impact.	
13021-013	Wider spacing of turbines reduces the overall energy density of a lease area,	Chapter 2 of the SEIS addressed the practical and technical challenges of
	ultimately requiring more lease areas to achieve states' goals and mandates.	wider turbine spacing. Therefore, no change to the FEIS is warranted.
13021-014	a growing body of evidence points to fishing communities from Maine to	Section 3.10.1.1 of the FEIS discusses climate change impacts on fisheries
	North Carolina facing declining fishing options, catching different species	and was updated to include this study.
	and/or fishing in different areas, which have already introduced a range of	
	impacts to their livelihoods prior to any projects being constructed [(Lauren	
	A. Rogers, Robert Griffin, Talia Young, Emma Fuller, Kevin St. Martin,	
	Malin L. Pinsky. Shifting habitats expose fishing communities to risk under	
	climate change. Nature Climate Change, 2019; DOI: 10.1038/s41558-019-	
	[0503-z)]. Fishermen may require fundamentally new approaches to fishing	

Index Number	Comment Text	Response
	and appropriately managed fisheries that account for species population	
13021-015	Where the experience of the United States in permitting, approving, constructing, and operating offshore wind farms is still in early stages versus the region's potential development, BOEM should proceed prudently in requiring mitigative measures for cumulative impacts, given that many of these impacts are presumed, not known. The Agencies recommend a precautionary approach that reasonably estimates future projects and acknowledges the uncertainty of impacts across these projects. Measures that are promulgated absent direct experience with this technology could easily result in approaches that, even despite the best of intentions, risk being counterproductive to the coexistence of both this new industry and existing important offshore uses and resources.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13021-016	The State has demonstrated a strong commitment to actively address the interests of ocean users and establish environmental protections for offshore resources while working with BOEM to develop existing contracted projects and site new lease areas off its coast Additionally, New York is collaborating directly with the fishing industry through the Responsible Offshore Development Alliance (RODA) to develop fishing transit options in the New York Bight to assess how to maximize commercial fishing access within turbine arrays and to aggregate commercial fishing data to support better decision-making These types of research, collaborations, and stakeholder engagement supplement the baseline stakeholder engagement prescribed by the BOEM processes and should be presumed to continue to play an important role in addressing impacts to fishing and fisheries, including an emphasis on regional dialogue and cumulative impacts.	Thank you for your comment.
13021-017	the Agencies recommend greater collaboration between BOEM and the National Oceanic and Atmospheric Association (NOAA) so as not to conflate offshore wind development and fisheries regulation (e.g., quotas). BOEM presents an accurate analysis that the integrity of scientific surveys in the North and Mid-Atlantic and the resulting data/indices could decline as more WEAs are built-out if survey vessels are excluded from these areas due to navigation risks (e.g., significant impacts to Northeast Fisheries Science Center [NEFSC] bottom trawl survey strata). As the Supplement points out, poorer data equates to larger uncertainty in stock assessment results. Consequently, larger uncertainty in stock assessment will result in more conservative catch limits (i.e., lower "quotas"). While this may be beneficial to stock biomass, it has a negative impact on fisheries and the management process. Significant federal investment is needed to evolve major scientific surveys to adapt and develop calibrations for long-term time series so that	Section 3.12 of the FEIS has been updated to address additional information on the NMFS scientific research and surveys. BOEM will continue to collaborate with NMFS on the subject of survey protocols. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long- standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07

Index Number	Comment Text	Response
	adequate surveys can be undertaken and offshore wind development does not become a dominant driver for fisheries management decisions.	
13022-001	Vineyard Wind represents the first utility scale offshore wind project in the United States. The release of this SEIS and its subsequent timely approval are key milestones for offshore wind on our shores. We urge BOEM to adhere to the published schedule for issuance of the Final Environmental Impact Statement and Record of Decision on Vineyard's Construction and Operations Plan.	Thank you for your comment.
13022-002	One of the major factors in supporting any emerging market is regulatory certainty. Unfortunately, this has often been missing in the US business. Consequently, we are far behind Europe in developing this critical resource. BOEM now has the opportunity to begin solidifying regulatory certainty by approving Alternative D2 and rejecting Alternative F in the SEIS. As you are aware, the US Coast Guard has approved the turbine spacing provided in alternative D2 and has said that the transit lanes in Alternative F are not necessary for safe navigation. Implementation of the unneeded transit lanes would remove significant portions of the lease area from potential wind turbine siting, thus reducing the benefits of job creation and greenhouse gas mitigation.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13022-003	Our economy faces significant and unprecedented challenges as a result of the spread of COVID-19. In light of this, WSP is pleased to see that the offshore wind sector remains strong. We believe that offshore wind can be a contributor to sustaining and growing employment as we manage and emerge from this pandemic to re-build our economy. Timely approval of Vineyard Wind is essential for that to continue.	Thank you for your comment.
13029-001	While I support offshore wind energy development as a means of reducing greenhouse gas emissions and their effects on global climate change, I remain concerned about the interests of the commercial and recreational fisheries, safe navigation, and the environment I am aware that the Rhode Island Coastal Resources Management Council has recently submitted comments on this matter in favor of Alternative D2 in the EIS as the preferred altherativeI am also aware that many in the Rhode Island commercial fishing industry still have significant concerns about the project and are most supportive of Alternative F, which was recently added to the EIS and is essentially Alternative D2 with the addition of several wider transit lanes.	Thank you for your comment.
13029-002	I submit these comments to advocate for BOEM to, at a minimum, adopt Alternative D2 in the EIS as the preferred alternative for the Vineyard Wind project and require the developer to construct the wind farm in a uniform grid	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
	pattern with 1 x 1 nautical mile spacing between all turbine foundations	
	(including the OSS platforms) in an East-West, North-South orientation, as	
	recommended by the U.S Coast Guard (USCG) in their June 14, 2020 final	
	Massachusetts Rhode land Port Access Route Study (MARIPARS).	
13029-003	I also ask that BOEM review and consider Alternative F, which includes 4	Thank you for your comment.
	nautical mile wide transit zones through the project area.	
13029-004	I further request that BOEM adopt the USCG MARIPARS recommendation	Section 3.11.2.4, 3.13.2.3, and 3.13.2.3 of the SEIS discusses the USCG
	on the wind farm configuration as a condition of COP approval not only for	Final MARIPARS recommendation on the wind farm configuration;
	the Vineyard Wind project, but for all southern New England offshore wind	therefore, no change to the FEIS is warranted.
	projects. Uniformity by BOEM in adopting the USCG MARIPARS	
	recommendation for all southern New England offshore wind farm	
	configurations will provide regulatory certainty for the offshore wind	
	industry and provide stakeholders with the assurance that there will be a	
	predictable and uniform wind farm pattern that accommodates and facilitates	
	safe navigation, commercial and recreational fishing activities, and USCG	
	search and rescue operations. In addition, this configuration will limit the	
	impacts to navigation and fishing as required by the federal Outer	
	Continental Shelf Lands Act ("the right to navigation and fishing therein shall	
	not be affected."). See 43 U.S. Code§ 1332.	
13029-005	Of additional significance here is that all (or virtually all) stakeholders in this	The formulation of Alternative D2 was explained in the Chapter 2 of the
	process have either expressly supported Alternative D2 or expressed support	DEIS and is carried forward to Chapter 2 of the FEIS.
	for one or all of the design elements in this Alternative. The Alternative D2	
	configuration is entirely consistent with the USCG's MARIPARS	
	recommendation. It is also consistent with the offshore wind industry's	
	November 1, 2019 collaborative proposal to the USCG for wind farm layout	
	in the southern New England offshore renewable energy lease areas. It is also	
	supported by the Rhode Island Coastal Resources Management Council (RI	
	CRMC) and the Massachusetts Office of Coastal Zone Management (MA	
	CZM). Additionally, the Rhode Island Fisheries Advisories Board, the	
	Massachusetts Fisheries Working Group, fisheries groups that serve as	
	representatives to the Leaseholders, fishing fleet operators, and fish	
	processing companies, as well as the National Marine Fisheries Service, have	
	all expressed support for one or all of the Alternative D2 design elements.	
13029-006	Rhode Island does want this project to move forward, as it represents a key	Thank you for your comment.
	step in lessening our country's reliance on fossil fuels.	
13029-007	while I am supportive of offshore wind development, I remain concerned	Impacts to commercial fisheries and navigation from offshore wind
	about the interests of the commercial and recreational fisheries, safe	development in the geographic analysis area are discussed in Sections 3.10
	navigation, and the environment. It is of the utmost importance for BOEM to	and 3.11 of the FEIS.
	balance the interests of the fishing industry, the environment, and wind	

Index	Comment Text	Response
Number		
	energy development when reviewing this unprecedented project. The	
	decisions made here will directly affect construction and operation plans for	
	the 14 other upcoming offshore wind projects, covering nearly two million	
	acres in federal waters. Without sound planning here, BOEM's decisions will	
	permanently impact our nation's most important ocean resources and	
	commercial fishing industry.	
13033-001	Although most of the world is consumed by the pandemic currently, the	Thank you for your comment.
	climate crisis continues to grow and will not 'magically disappear' or be	
	resolved without a commitment to green energy. As a resident of Salem, MA,	
	I am especially concerned because my community and my home are	
	threatened by extreme weather events and sea level rise. Offshore wind has	
	proven to be a major benefit for many countries, but the U.S. has lagged	
	behind. It is time for us to turn the global warming ship around and make a	
	major investment in offshore wind - especially since opportunities for land-	
	based wind are limited.	
13036-001	Offshore wind is critical to ensuring that the United States achieves	Thank you for your comment.
	emissions reductions consistent with avoiding the most catastrophic impacts	
	of climate change.	
13036-002	It is not, however, simply a given that offshore wind development will	Thank you for your comment.
	proceed along the	
	Eastern Seaboard. If the Bureau of Ocean Energy Management ("BOEM")	
	declines to approve	
	the Project's Construction and Operations Plan ("COP"), other wind	
	developers will take note	
	and could be discouraged from proposing new facilities, or from continuing	
	with an existing	
	permitting process. The protracted and ultimately unsuccessful effort to build	
	the Cape Wind project, for example, subsequently cast a pall over offshore	
	wind in the United States.12 A failure to permit the Project at this stage is	
	likely to have a similar impact. A decision imposing new requirements that	
	would render the Project economically nonviable—as envisioned by	
	Alternative F—could also act as a deterrent to developers, who may	
	subsequently see no reason to invest in new offshore wind facilities By	
	contrast, if the Project goes forward, it will represent a crucial precedent and	
	pave the way for wind development along the Eastern SeaboardIts	
	[[Vineyard Wind] approval will signal that the federal government is serious	
	about allowing sensibly sited and environmentally sound large-scale offshore	
	wind development—that the Eastern Seaboard is open for business, and not	
	only for small-scale or pilot projects.	

Index	Comment Text	Response
Number		
13036-003	For these reasons, Win With Wind urges BOEM to approve the Facility's	Section 2.5 of the FEIS has been added which includes the agency-preferred
	COP without	alternative.
	imposing new requirements such as those included in Alternative F.	
13038-001	As a resident of Salem, MA, I live within one-third of a mile from a gas-fired	Thank you for your comment.
	power plant. In Salem, we feel that this plant should be used only to	
	supplement renewable energy such as that which can be provided by	
	Vineyard Wind. Let's use natural gas only as a last resort. We have the	
	technology to do much better for the planet and ourselves.	
13044-001	We commend BOEM for preparing this Supplement in consideration of	Thank you for your comment.
	agency and stakeholder input. We are pleased BOEM has expanded the	
	cumulative analysis to address comments related to the more narrow scope of	
	analysis in the December 2018 DEIS. We appreciate you taking the time to	
	work with us to understand applicable datasets, as well as the limitations of	
	the data and how the information should be considered and applied.	
13044-002	The additional fisheries data that have been incorporated into the Supplement	Section 3.6 of the FEIS uses the NMFS Social Indicator Map as a reference
	help to strengthen your analysis. We recommend also integrating Fishing	and identifies communities within the geographic analysis area that have
	Community Social Vulnerability Index data and the results of the recent New	medium or high ratings for commercial fishing reliance and engagement (see
	England Aquarium study on highly migratory species ¹ [See	Sections 3.6.1 and 3.6.2). The resource is one source of information leading
	https://www.fisheries.noaa.gov/national/socioeconomics/social-indicators-	to the conclusion that the impacts on commercial fishing and onshore seafood
	fishing-communities-0. Data query can be found here:	businesses resulting from the Proposed Action would have moderate impacts
	https://www.st.nmfs.noaa.gov/data-and-tools/social-indicators/. New England	on employment and economic activity for this component of the analysis
	Aquarium report: https://www.vineyardwind.com/fisheries-science] in the	area's economy. Section 3.9 and 3.10 of the FEIS were updated to include the
	Final Environmental Impact Statement (FEIS) and for other future projects to	New England Aquarium report on highly migratory species fishing.
	more fully evaluate impacts to affected communities reliant on fishing	
	activities and pelagic recreational fisheries.	
13044-003	We welcome your consideration of additional issues of importance to the	Thank you for your comment.
	fishing industry. You have included an additional alternative focused on	
	facilitating vessel transit to address concerns raised by the fishing industry	
	and are considering known mitigation agreements from Rhode Island and	
	Massachusetts. Although vessels from Massachusetts and Rhode Island are	
	the primary entities affected by the project, they do not represent all fishing	
	interests affected by this or other projects considered in the Supplement. You	
	should consider ways to ensure existing mitigation agreements are carried out	
	and explore ways to mitigate impacts to all affected entities for this and	
	future projects. Specifically, going forward you should consider the	
	feasibility of the existing state-by-state mitigation approach, based on the	
	anticipated number of upcoming projects and level of impacts under the	
	cumulative scenario.	

Index	Comment Text	Response
Number		
13044-004	Given the major impacts to the fishing industry anticipated from foreseeable proposed development, it will be critical to fully engage with all affected communities and give full consideration to the input they provide. Consistent with the March 2019 Memorandum of Understanding between BOEM, NOAA, and the Responsible Offshore Development Alliance, we are committed to working with you to effectively consider and evaluate the interests of and impacts to existing fishing operations and affected communities.	Thank you for your comment.
13044-005	We understand the geographic scope of the analysis for recreation and tourism will be expanded in the FEIS to ensure recreational fishing activity occurring in the project area from ports in other states is considered. We appreciate you incorporating additional information on angler trips from Connecticut, New York, and Rhode Island in the Supplement. Expanding the analysis in the FEIS is important to ensure the analysis fully considers all existing fishing activities within the project area.	Sections 3.9.1 and 3.10.1 of the FEIS have been updated to include data on the states from which recreational HMS fishing originates, based on an online survey (from August 2019 through May 2020), data from the National Marine Fisheries Service Large Pelagics Intercept Survey, and tagging data (Kneebone 2020). As stated in Section 3.10.1, "From 2002 through 2018, approximately 12 percent of HMS trips and 18 percent of tagging events in southern New England occurred within the RI and MA Lease Areas (Kneebone 2020). From 2002-2018, HMS trips in the Vineyard Wind lease area (OCS-A-0501) represented 1 to 5 percent of total trips in southern New England and 6 to 28 percent of trips in the RI and MA Lease Areas, depending on the year (Kneebone 2020). Within the Vineyard Wind lease area, trips primarily originated in Massachusetts and Rhode Island. The same was true for the RI and MA Lease Areas overall, although a notable number of trips also originated in Connecticut and New York."
13044-006	We also previously discussed with you our concern that impact designations were not incorporated consistently throughout the cumulative effects section, and we were glad to see they were incorporated into the Future Offshore Wind Activities conclusion. We understand you will expand these designations throughout the no action alternative section in the FEIS. We believe all these changes together will make it easier for the reader to understand and compare impacts of each alternative, with context of the cumulative impacts of future offshore wind development. We think using the same designations of magnitude and intensity in the different sections consistently throughout the analysis will make the document clearer and easier to compare impacts.	The FEIS has been updated to include an overall impact rating for reasonably foreseeable activities other than offshore wind and for the combination of ongoing activities and reasonably foreseeable activities other than offshore wind.
13044-007	We noted several comments from our cooperating agency review that have not been fully addressed in this Supplement. This includes comments in the sections pertaining to sea turtles, sturgeon, marine mammals, and coastal habitats, in addition to other areas where clarifications should be made in the FEIS. We believe these comments can be easily addressed, and we are willing to work with you so that you can include the correct information in the FEIS.	BOEM appreciates your willingness to continue to work with us as we develop the EIS. The FEIS has been updated to capture your comments.

Index	Comment Text	Response
Number		
13044-008	It is our expectation that you will incorporate the conclusions of our ongoing consultations under the ESA and MSA into the FEIS. Consistent with the milestone date posted on the Permitting Dashboard, we anticipate the Biological Opinion will be completed by September 13, 2020. Any findings, reasonable and prudent alternatives, reasonable and prudent measures, or terms and conditions resulting from our ESA Section 7 consultation should be included in the FEIS.	Consultation under the ESA was completed on September 11, 2020. Sections 3.4.2, 3.5.2, and Appendix D of the FEIS includes updated discussion and descriptions of all monitoring and mitigation that would be required to avoid, minimize, and mitigate adverse impacts on marine mammals and sea turtles. These measures include Terms and Conditions as well as Reasonable and Prudent Measures provided by the National Marine Fisheries Service (NMFS) during the course of consultation under Section 7 of the Endangered Species Act and updated conditions developed through consultation under the Magnuson-Stevens Fishery Conservation and Management Act. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval.
13044-009	We have reviewed your Essential Fish Habitat (EFH) Addendum received on	BOEM has coordinated with NMFS on the EFH consultation.
	June 26, 2020, and will provide our response under a separate cover. We have not yet received your response to our EFH conservation recommendations. It will be important to have an understanding of how these will be addressed as you move forward on the FEIS. As you know, we have significant concerns with the deficiencies in the habitat information provided by the applicant. We request that you continue to work with us as you develop the FEIS to ensure information related to habitat in the project area is accurately depicted in the final document.	
13044-010	As highlighted in the Supplement, the cumulative impacts of reasonably foreseeable offshore wind activities are expected to have major impacts to both our NOAA scientific surveys and the fishing communities that would be directly affected by any added uncertainties to fisheries data used for management. While we are beginning to work with you to better understand the implications of these impacts on our multispecies bottom trawl survey, this is just one of seven core NMFS Surveys. A plan has not yet been established to holistically mitigate these impacts, but addressing the level of impact will require significant effort on NMFS' behalf. We expect substantially more work will be needed to evaluate impacts and develop and implement necessary survey adaptations. Until such a plan is established, information generated from project-specific monitoring plans may be required to supplement or complement existing survey data.	Section 3.12 of the FEIS has been updated to address additional information on NMFS scientific research and surveys. BOEM will continue to collaborate with NMFS on the subject of survey protocols. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13044-011	However, to potentially offset some of the impacts to our [NMFS] surveys under the cumulative scenario, it is important that such monitoring plans be developed in a comprehensive and integrated manner consistent with our long-standing surveys. In order to address this need, these fisheries monitoring plans should be developed collaboratively with our agency and	Section 3.12 of the FEIS has been updated to address additional information on the NMFS scientific research and surveys. BOEM will continue to collaborate with NMFS on the subject of survey protocols. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-

Index	Comment Text	Response
Number		
	incorporate NMFS survey standards and requirements to ensure collected	standing NMFS surveys would not be able to continue as currently designed
	data is usable. We consider it paramount that BOEM and developers work	and extensive costs and efforts will be required to adjust survey approaches.
	with our agency to mitigate the impacts to our scientific surveys and the	Therefore, potential impacts on scientific surveys and research is anticipated
	scientific advice on which sound management of our Nation's marine	to be major. Please refer to the following link:
	resources depends. We look forward to working with you, developers, and	https://www.boem.gov/environment/environmental-studies/20-x07
	groups like the Responsible Offshore Science Alliance to address these	
	difficult issues.	
13045-001	Offshore wind is our region's best opportunity for new sources of energy.	Thank you for your comment.
	This clean energy resource is the single biggest lever we can pull to reduce	
	emissions, address the climate crisis, and grow the economy at the same time.	
	All New England states have mandated emissions limits or goals, and	
	offshore wind energy is critical for meeting those targets.	
13045-002	Per ISO-New England's analyses, around 1/6 to 1/3 of New England's old	Thank you for your comment.
	fossil fuel plants will likely retire over the next decade, and it is imperative	
	that we fill any gap with clean energy. Closing these plants and replacing	
	them with offshore wind will also reduce pollution and lead to improved air	
	quality, which as COVID-19 has clearly demonstrated, is an extremely	
	important public health issue.	
13045-003	The economic potential of offshore wind must be recognized, and this	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
	potential is more important in this time of a severe economic downturn	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
	Analyses by the American Wind Energy Association (AWEA) have found	3,600 FTE job years, including 1,100 to 1,550 job years during construction
	that the responsible expansion of this industry would bring at least 83,000	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
	Jobs as well as generate annual economic impacts of \$25 billion by	during operation. These data were also provided in the DEIS. Section 3.6.1.1
	2030 The Vineyard Wind I project will alone create 3,600 jobs for local	of the FEIS has been updated to provide estimates from several sources of
	residents, and potentially create tens of thousands more as the supply chain	projected employment and investment from growth of the wind energy
	and additional projects are built out over the next several years. This project	industry along the Atlantic coast. Jobs and investment are anticipated to be
	presents a tremendous opportunity for the highly skilled, unionized New	concentrated in and near the east coast states that would host offshore wind.
	England workforce, particularly in the manufacturing and building trades.	This information was also included in the SEIS (Section 3.7.2.1), and the
12045-004		FEIS provides additional detail and analysis.
13045-004	The SEIS claims that if Vineyard Wind T is not approved, the economic	BOEM determined that it is reasonable to assume that if the proposed Project
	It is a fair of the state of the second filler that the fair of the second state of th	is not built, another project or projects would be constructed to meet
	However, this claim ignores the possibility that the failure of this project	Alternative and also allowed DOEM to assume the manimum immediates
	would have a chilling effect on future investment and would send the signal	Alternative and also allowed BOEN to assess the maximum-impact scenario
	that the United States is not serious about offshore wind. If Vineyard wind I	in terms of potential impacts.
	is not approved, the chances this industry moves forward in the United States	
	would be severely compromised, potentially resulting in a reduction in	
	projects built, as well as uncertainty in manufacturing supply chain	
	investment.	

Index	Comment Text	Response
Number		TT1 1 0
13045-005	We believe strongly in the responsible development of offshore wind. The	I hank you for your comment.
	SEIS reinforces our belief that offshore wind energy can be developed in a	
	responsible development allows	
12045 006	We support the uniform 1x1 neutical mile grid levent and command the	Section 2.5 of the FEIS has been added which includes the agency preferred
13043-000	offehere wind industry for finding this compromise with the fishing industry	steernetive
	which the US Coast Guard found allows for safe newigation through the wind	
	energy areas	
13045-007	We oppose additional transit lanes through the wind energy areas, which	Thank you for your comment
15045 007	would greatly reduce the amount of energy that could be produced render	Thank you for you comment.
	this offshore wind project not viable and seriously curtail our ability to	
	mitigate the severe impacts of climate change.	
13046-001	As a nation that generates nearly 25 percent of the climate-change gases	Thank you for your comment.
	(with about 5 % of the world's population), we must make every effort to	
	accelerate our use of renewable energies to combat climate change. Vineyard	
	Wind is a major step in that direction and should be approved soon. We, as a	
	nation, must be responsible citizens of a world that is at increasing risk of	
	survival as we have known it.	
13046-002	The poles of the earth are warming at twice the rate of the mid-latitude	Thank you for your comment.
	regions of the earth. This has produced very high rates of ice melting and	
	associated sea-level rise. This rise has already impacted Miami, Florida for	
	several years - with sea water in the streets during many days - all year.	
13046-003	The technology related to wind energy is well understood, robust and proven	Thank you for your comment.
	to high standards. The equipment and winds that are available for Vineyard	
	Wind will produce power at rates that are competitive with traditional,	
	terrestrial energy sources and will reduce the energy bills of Massachusetts	
12047-001		
1304/-001	I fully support the comments put forth by Garden State Seafood Association	Thank you for your comment.
12049-001	The Design the second consideration.	
13048-001	The Project is an important component of Massachusetts' clean energy future	I hank you for your comment.
13048 002	The SELS will halp facilitate and henefit NEPA raview for subsequent wind	Thank you for your comment
13048-002	energy facility projects, including those in development in Massachusetts and	
	New England	
13048-003	The Project is critically important to the Commonwealth meeting the	Thank you for your comment
15040 005	greenhouse gas emission reductions mandated by the Massachusetts Global	Thank you for your comment.
	Warming Solutions Act (GWSA). Thus, Massachusetts law requires the	
	state's utilities to solicit a combined total of 3.200 megawatts of offshore	
	wind capacity by 2035. The state's utilities have already committed to buy	

Index	Comment Text	Response
Number		
	the Project's 800 megawatts of wind generated power, the first project to be	
	awarded such a contract. The Project is also fundamentally important to	
	expanding Massachusetts' renewable energy portfolio, as directed by the	
	Green Communities Act.	
13048-004	when evaluating the bid, the electric distribution companies found that the	Section A.8.1 of the FEIS has been updated to include additional information
	Project will reduce greenhouse gas emissions by 4.92 MMT CO2 equivalent	from AVERT from air emissions from power generation.
	from 2019 to 2040 versus the base case' [D.P.U. 18-76/18-77/18-78,	
	Petitions of Eversource Energy, National Grid, and Fitchburg Gas and	
	Electric Light Company for Approval of Long-Term Contracts for Offshore	
	Wind Generation, Joint Testimony of Waltman/Brennan/Glover, at 34 (July	
	31, 2018)]. The Project will also reduce emissions of harmful pollutants.	
13048-005	Air pollution disproportionately impacts Massachusetts communities of	Section 3.7.1 of the FEIS has been revised to incorporate the suggested
	color, in part because energy and industrial facilities are heavily concentrated	references. This section has been revised to include a discussion of the health
	in low-income communities and communities of color. ⁸ [See Rosofsky,	impacts of fossil fuel consumption and resulting degraded air quality on
	Anna, Jonathan I. Levy, et al., "Temporal Trends In Air Pollution Exposure	different racial groups, as well as different income groups, as well as benefits
	Inequality In Massachusetts," Environ Res. 2018 February; 161: 76–86. See	from reduction of fossil fuel power generation displaced by offshore wind
	also Rosofsky, Levy, et al., "The Impact Of Air Exchange Rate On Ambient	energy (including the proposed Project and other projects).
	Air Pollution Exposure And Inequalities Across All Residential Parcels In	
	Massachusetts," J Exp Sci Environ Epidemiol 29: 520-530 (2019).] As the	
	AGO recently explored, the environmental factors which exacerbated the	
	unequal impact of the COVID-19 pandemic on these communities could be	
	minimized through investment in and development of clean energy	
	generation like this Project ⁹ [Office of Massachusetts Attorney General	
	Maura Healey, COVID-19's Unequal Effects in Massachusetts: Remedying	
	the Legacy Of Environmental Injustice and Building Climate Resilience,	
	May 2020, https://www.mass.gov/doc/covid-19s-unequal-effects-in-	
	massachusetts/download. 10 D.P.U. 18-76/18-77/18-78, at 48 (April 12,	
	2019).].	
13048-006	as the Project is anticipated to kickstart a regional industry, its success is	Thank you for your comment.
	anticipated to contribute towards other New England States' meeting their	
	state-law renewable energy requirements.	
13048-007	the Vineyard Wind I Project will result in savings for ratepayers in	Thank you for your comment.
	connection with their energy and renewable energy credit costs as compared	
	to 20-year forecasts without the Project. Indeed, the Massachusetts	
	Department of Public Utilities estimates that the Project will yield ratepayer	
	savings of \$1.289 billion (nominal) ¹⁰ [D.P.U. 18-76/18-77/18-78, at 48 (April	
	12, 2019)].	

Index	Comment Text	Response
Number		
13048-008	BOEM's decision to expand the cumulative impact analysis and consider a new vessel transit corridor alternative will ultimately delay Project construction by at least eighteen months.	Section 2.1.5 of the SEIS addressed the technical and practical challenges that could occur in Alternative F were implemented. Therefore, no changes to the FEIS are warranted. Furthermore, Chapter 1 of the SEIS explains why BOEM undertook the SEIS and expanded the planned action scenario. This information is also contained within Chapter 1 of the FEIS.
13048-009	Any additional delay could threaten the Project's financial viability and ultimate construction.	Thank you for your comment.
13048-010	Further delay of the Project's commercial operation date also jeopardizes the achievement of Massachusetts' clean energy and climate goals and the promise of substantial ratepayer cost savings. For this reason, the AGO strongly urges BOEM to expeditiously proceed with and maintain the current Project schedule by issuing the ROD no later than December 18, 2020, with all remaining federal permits issuing within 90 days thereafter.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project as well as BOEM's anticipated date for a decision on the COP.
13048-011	BOEM's expanded analysis evaluating cumulative impacts of the Project and other already proposed or reasonably foreseeable offshore wind energy facility projects can be used in the NEPA reviews of subsequent projects. This will help facilitate timely review of upcoming projects, including those in development for the benefit of Massachusetts and New England residents.	Thank you for your comment.
13048-012	BOEM's SEIS concluded that implementation of Alternative F may require additional survey work, which, if significant, "would delay Project construction." SEIS at 2-5. Relocation of Project WTGs would also result in additional transmission losses from cables lengthened to accommodate the Alternative F transit lanes, which "could translate to technical difficulties and additional unanticipated costs" and may require "cable joints not currently technically possible by cable manufacturers."	Section 2.1.5 of the SEIS addressed the technical and practical challenges that could occur in Alternative F were implemented. Therefore, no changes to the FEIS are warranted.
13048-013	implementation of all the proposed transit lanes intersecting with the Project WDA would diminish the technical capacity of the Project's offshore wind power generation. Id. While the extent of diminished capacity would vary with width of the incorporated transit lanes between two- and four- nautical miles wide, "less clean energy in the region would be produced" for the Alternative F transit lanes passing through the Project WDA. Id. Implementation of all six of the RODA-proposed, four-nautical mile transit lanes "would reduce the technical capacity of the Rhode Island and Massachusetts (RI and MA) Lease Areas by approximately 3,300 megawatts, which is 500 megawatts less than the current state demand for offshore wind in the area." Id. See also SEIS Section 3.14.2.4 at 3-122 – 22.	Thank you for your comment.
13048-014	displacement of Project WTGs further south "could reduce the area available for Vineyard Wind to construct future projects within the lease area." Id. at 2-5.	Thank you for your comment.

Index	Comment Text	Response
Number		
13048-015	incorporation in the ROD of the Alternative F vessel transit lane	Section 2.5 of the FEIS has been added which includes the agency-preferred
	intersecting with the WTD could threaten the Project's financial feasibility.	alternative.
	Even if the Project could proceed with the Alternative F vessel transit lane	
	passing through the WTD, implementation of either the two- or four-nautical	
	mile width lane will result in a loss of wind-generated energy delivered from	
	the Project to New England, and as a result, diminish the Project's clean	
	energy benefits to Massachusetts and New England. As discussed above,	
	these benefits include the Project's contributions to the state's progress	
	toward meeting greenhouse gas emission reduction requirements under the	
	GWSA and its renewable energy portfolio standard, as well as the Project's	
12050 001	promised ratepayer savings.	
13050-001	I am writing to you to express my ardent support for vineyard wind and the	I hank you for your comment.
	potential of the entire US offshore wind industry to both bring us needed	
12050 002	We need the according stimulation that this industry can provide to the	Thealt you for your comment
13030-002	US We need the economic simulation that this industry can provide to the	Thank you for your comment.
	train US workers to be qualified to get the jobs	
13050-004	Vineward Wind and the other developers of the New England Wind Energy	Section 2.5 of the FFIS has been added which includes the agency preferred
13030-004	Area agreed to develop all future projects with a uniform 1 x 1 nautical mile	alternative
	(NM) layout throughout the lease areas. This change reduces the notential	
	output of the wind turbine projects by 30% but addresses the main concerns	
	from the commercial fishing industry raised during the comment period of	
	the Vinevard Wind 1 project. The layout creates over 200 transit lanes	
	throughout the entire wind development area.	
13050-005	We encourage BOEM to require future developers to incorporate ADLS on	Sections 3.10.1 and 3.10.2 of the SEIS stated that use of ADLS for offshore
	their turbines, to significantly reduce the amount of time that lighting will be	wind other than Vineyard Wind 1 would reduce visual impacts for the
	visible from shore.	combined scenario. Vineyard Wind has committed to use ADLS at night to
		greatly reduce nighttime impacts of aviation safety lighting on the wind
		turbines. BOEM is in the process of developing guidelines and minimum
		standards for other offshore wind development. Each applicant will be
		required to submit a COP that describes the proposed FAA lighting scheme.
		Therefore, no change to the FEIS is warranted.
13050-006	We need the economic stimulation that comes from building out the projects	Thank you for your comment.
	that brought in record revenue from the BOEM offshore wind leasing	
	process. We need the electricity to meet the needs of consumers, both	
	businesses and residents, who want clean energy.	
13053-001	I support the SEIS for Vineyard Wind and urge action on the permitting.	Thank you for your comment.

Index	Comment Text	Response
13058-001	On page 2-2, Table 2.2-1 there are several changes to the proposed project all happening under the same COPwith all of these changes there appears to be	BOEM has assessed the changes to the Vineyard Wind COP and has analyzed the potential impacts to the resources outlined in Chapter 3 and
	a lack of a thorough analysis to determine how these increases will change	Appendix A of the SEIS as well as in FEIS.
	the level of impactsIt should not be acceptable to make changes of this	
	scale to a plan without having to revisit the consequential scaling of impacts.	
	Changes like this should require the Vineyard Wind Project to resubmit COP	
13058-002	In addition, these [COP] analyses seem to have only been done over the	Thank you for your comment
15050-002	course of one year which does not seem like a logical time period to predict	Thank you for your comment.
	long-term impacts. In a quick and ever changing environment, data should be	
	taken over the course of several years to account for any outlying variability.	
13058-003	There is also a serious lack of attention and analysis on noise pollution that	Sections 3.3, 3.4, 3.5, and 3.6 of the SEIS discussed the potential impacts of
	will come with not only the construction of the turbines, but also the	WTG operational noise. Therefore, no change to the FEIS is warranted.
	operation. Nearly all mention of noise refers to the initial construction in a	
	short term manner. It is concerning that there is no mention of an analysis of	
	effects from the noise the turbine will produce in the long term, day-to-day	
	operation. While the amount of noise may be lower than during construction,	
	the turbines would emit a more consistent and long term noise that no doubt	
	will have impacts on the oceanscape and biomass.	
13058-004	behavioral impacts would likely extend radially less than 5.7 miles (8	Section 3.4 of the SEIS addressed the intensity and extent of behavioral
	kilometers) around each pile," but this must be considered in scale of the	impacts likely to result from noise from the Proposed Action and other
	proposed 2,066 piles that could be potentially planted in the ocean. It is	planned actions; these impacts are described in more detail than by distance
	simple main to determine that the area in which the noise will reach and the	or area alone. Therefore, no change to the FEIS is warranted.
	equation yet this is not accounted for in the EIS	
13058-005	An attempt to address this concern is seen on page 3-95 where it reads that	The SEIS describes the impacts of construction noise (primarily pile-driving
15050 005	the noise is "Not anticipated to rise to fishery-level impacts since the noise	noise) as temporary because each instance would happen for a small portion
	would be very temporary in nature." and then proceeds to describe this short	of the day and would not occur every day of the year. According to the
	term period as anywhere from 2-10 years. It seems illogical to consider 10	Biological Opinion from NOAA for this Project, such noise would occur for
	years as a short term period when it comes to the livelihoods of our	no more than approximately 7.5% of the time during construction.
	fishermen and the lifespan of most of their catch.	
13058-006	All of the impacts described under noise are categorized at short term,	Sections 3.3 and 3.4 of the SEIS discussed that the impacts of noise are short
	however within those are adverse effects such as permanent injury, loss of	term. The anticipated extent of permanent injury or mortality of individuals is
	hearing and even death to many species. These are not short term effects.	expected to be, when considered at the level of the entire population in the
	Mortality of eggs is not short term as it directly impacts future generations of	Project Area, irrelevant or fully recovered after a short time, perhaps one or a
10050.005	that species.	few spawning seasons. Therefore, no change to the FEIS is warranted.
13058-007	The current analysis does not capture long-term trends or short-term	Section 3.4 of the SEIS acknowledged seasonal and long-term trends in fish
	anomalies in fish distribution and fishing activity, so resources must be	distributions. The EIS does not assume that fish and fishing are distributed in
	commuted in order to address and IIII data gaps.	a static manner. The COP includes a benthic monitoring plan and a

Index	Comment Text	Response
Number		
		commitment to fisheries monitoring. BOEM continues to fund studies to
		(https://www.boem.gov/environment/environmental_studies/renewable-
		energy-research) Therefore no change to the FFIS is warranted
13058-008	As for the fishing industry many of their major concerns seem to have been	Section 3.10.1 of the FEIS discusses that even under the No Action
12020 000	brushed off with this same flawed idea of "short term" impacts or the thought	Alternative BOEM expects all foreseeable factors to result in major adverse
	that they can simply fish elsewhere. It is important to know that this is not	impacts on commercial fisheries and moderate adverse impacts on for-hire
	necessarily the case as they are already extremely restricted as to where they	recreational fisheries. Section 3.11.1.1 and 3.11.2 of the SEIS discussed the
	can fish already, and now to push them out of what fishing grounds they have	impacts from offshore wind development on commercial and for-hire
	left is potentially fatal to the industry.	fisheries, including impacts to access and potential revenue exposure if they
		cannot fish elsewhere. Section 3.10 and Appendix D of the FEIS also
		discusses the voluntary compensation funds related to the proposed Project.
		Additionally, the FEIS considers all substantive comments, including public
		testimony, received on the DEIS and SEIS. Three of the Alternatives, D1,
		D2, and F, were a direct result of commercial fishing industry comments.
10050.000		Therefore, no change to the FEIS is warranted.
13058-009	It seems there has been some effort to address this by offering up transit lanes	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar
	that boats could potentially travel through and/or fish in. However, what is	interference, including an expanded discussion of potential impacts on
	not addressed here is how extremely dangerous that is. One of the leading	marine radar in Section 3.11.1. The Final MARIPARS (USCG 2020)
	factors to this is wind turbine radar interference. I his issue has been	concluded that general mitigation measures, such as properly trained radar
	acknowledged but not addressed yet as there is suin much more research that	turbines, and the use of AIS all enable safe novigation with minimal loss of
	needs to be done to implement the best initigation options.	radar detection.
13058-010	This radar interference poses a serious threat not only to our fishermen, but to	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar
	national security.	interference, including an expanded discussion of potential impacts on
		marine radar in Section 3.11.1. Sections 3.12.1 and 3.12.2 of the FEIS
		provide discussions of potential interference with land based radars and
		related national security considerations. The Final MARIPARS (USCG
		2020) concluded that general mitigation measures, such as properly trained
		radar operators, properly installed and adjusted vessel equipment, marked
		wind turbines, and the use of AIS all enable sale navigation with minimal
13058-011	On page FS 3 there is a list of major impacts. These are extremely	The information presented in the executive summary is purposefully high
15050-011	concerning issues that are hardly even addressed. As a citizen I want to know	level information and the details of the impacts described are intended to be
	what is going to be done to mitigate or avoid these impacts all together or if	in the resource-specific sections of Chapter 3 and Appendix A of the FEIS
	the plan is to sacrifice the safety of our nation in exchange for this wind farm.	Additionally. Appendix D of the FEIS has been updated to reflect the
		mitigation and monitoring requirements that BOEM could require as
		conditions of COP approval.

Index	Comment Text	Response
13058-012	The claim that this is a clean energy source is used as a counter to many of the cons of offshore wind, however the EIS clearly states that these wind farms will only provide minor beneficial impacts to air quality (chart on ES-5). It then appears that the wind farms then do not really help combat climate change, and then cannot be used as an argument to support the outweighing of pros to cons.	Thank you for your comment.
13058-013	Before this moes forward, there needs to be extensive research dedicated to addressing these national security threats.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The FEIS has also been modified to specify that other project developers would be required to coordinate with military and national security entities to identify and mitigate potential conflicts. The impact ratings for military and national security uses and SAR activities were updated due to additional analysis and comments provided by the USCG and other entities in the conducted extensive coordination with the DoD and the USCG, including coordination through the DoD Clearinghouse, which is described in Section 3.12 of the FEIS.
13058-014	Considerations of safe navigation should happen in the first design stages of offshore wind projects, not balanced against the maximum possible power generation after a power purchase agreement is set.	BOEM has consulted with USCG throughout the process for identifying lease areas, reviewing individual COPs, and preparing the EIS.
13058-015	We need a better process for planning, locating, and monitoring transmission lines. This needs to be implemented after significant uncertainties are resolved regarding cable impacts to fisheries and the environment, and the likely benefits of a coordinated transmission system are fully explored.	This is a Project-specific EIS, not a Programmatic EIS, and it complies with the requirements of NEPA. Section 3.4 of the SEIS discussed the potential impact of the cable involved in the proposed Project in light of reasonably foreseeable environmental trends and planned actions. However, a coordinated transmission system is not included in the COP that is the subject of this EIS.
13059-001	This SEIS assessment builds upon our input submitted to the Federal Register on the Draft Environmental Impact Statement, dated March 1, 2019, and includes the enclosed recommended mitigations to further reduce the impact on navigation safety and Coast Guard missions.	Thank you for your comment.
13059-002	In the Massachusetts/Rhode Island Port Access Route Study (MARIPARS) report (referenced in the SEIS as USCG 2020), we concluded the best outcome to mitigate effects on safe navigation, and Coast Guard missions is the adoption of a uniform grid pattern across the entire wind energy area. This outcome is in alignment with SEIS Alternative D2. We concur with the	Thank you for your comment.

Index	Comment Text	Response
Number	SEIS that for alternatives that do not incorporate the principles of Alternative	
	D2 there will be a sumulative major impact on payigation and search and	
	D2, there will be a cumulative major impact on navigation and search and rescue (SAP)	
13059-003	The standard and uniform grid pattern with 1 pautical mile (NM) spacing	Section 3.11.2.4 of the SEIS discusses cumulative impacts from Alternative
15059-005	identified in Alternative D2 may also mitigate cumulative impact to	D2: therefore no change to the FEIS is warranted
	commercial and recreational fishing	D2, therefore, no change to the r Ers is warranted.
13050 004	The Coast Guard recommends the adoption of a wind farm layout in the	Section 2.5 of the FEIS has been added which includes the agency preferred
13039-004	Vineword Wind lesse area and the Massachusetts/ Phode Island Wind Energy	alternative
	Area in a uniform grid pattern with at least three lines of orientation and	
	standard spacing Based on the historic data studied in the MARIPARS lanes	
	for vessel transit should be oriented in a northwest to southeast direction 0.6	
	NM to 0.8 NM wide to allow vessels to maneuver in accordance with	
	Convention on the International Regulations for Preventing Collisions at Sea	
	(COLREGS) while transiting through wind energy areas along historical	
	natterns.	
13059-005	Based on the historic data studied in the MARIPARS lanes for commercial	Section 2.1.3 and Section 3.11 of the FEIS incorporate, where appropriate.
	fishing vessels actively engaged in fishing should be oriented in an east to	the Final MARIPARS.
	west direction, 1 NM wide.	
13059-006	Based on the historic data studied in the MARIPARS to ensure two lines of	The FEIS has been updated in the appropriate chapters or sections to
	orientation for USCG helicopters to conduct SAR operations, lanes should be	incorporate the Final MARIPARS.
	oriented in a north to south and east to west direction, 1 NM wide.	1
13059-007	We understand small variances may take place in the siting of individual	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS
	wind turbine generators. Small variances throughout the wind farm should	and that Alternative D2 is consistent with the study.
	not significantly affect safety of navigation. The MARIPARS provided	
	quantitatively-derived recommendations for turbine spacing and transit lane	
	widths, including that diagonal lanes be 0.6 to 0.8 NM wide. Any variances	
	in turbine location should not reduce these diagonal lanes to less than the 0.6	
	NM recommended.	
13059-008	The use of a uniform layout along three lines of orientation, in concert with	The FEIS has been updated in the appropriate chapters or sections to
	the recommendations and considerations detailed in the enclosure, will	incorporate the Final MARIPARS.
	provide substantial mitigation of impacts for navigation and Coast Guard	
	missions, including SAR.	
13059-009	Include the USCG recommended mitigations for the EIS	Section 3.11.2 and Appendix D of the FEIS includes a discussion of the potential USCG mitigation measures.
13060-001	We support the five-year moratorium put forth by the Responsible Offshore	Resource sections of the FEIS include proposed mitigation, where applicable,
	Development Alliance (RODA) on all wind energy area (WEA) leasing,	and Appendix D of the FEIS, which is a summary of all proposed mitigation
	construction and surveying. WEAs will carry irreversible socioeconomic and	considered, has also been updated to include modifications and/or additional
	biological impacts, so a five-year moratorium is essential to assuring that	mitigation and monitoring measures. Additional mitigation and monitoring
	offshore wind as a component of alternative/renewable energy expansion in	measures may arise from consultations and coordination with Federal and

Index	Comment Text	Response
Number		
	the context of domestic energy independence, is done correctly and consistently with overall economic growth.	State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13060-002	A moratorium on WEA development does not mean a moratorium on alternative energy development. Using estimates from the USDA, EPA and DOEi, the American Biogas Council incorporated recent industry data to conclude that a fully-developed infrastructure of renewable natural gas (RNG) in the United States could power 7.5 million homes.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13060-003	development in RNG infrastructure does not come with the very foreseeable and quantified economic dislocation of a primary production sector, such as the economic dislocation of commercial fishing that accompanies offshore wind development.	Thank you for your comment.
13060-004	Dislocation of commercial fishing and other marine uses is inherent with offshore WEAs because they are among the lowest in terms of power densityIn other words, offshore WEAs must cover vastly larger areas to achieve equivalent power delivery thereby vastly increasing the probability of economic dislocation of other marine uses. Economic dislocation is not confined to the loss of fishery landings. The Science Center for Marine Fisheries (SCEMFIS) has funded analyses of economic multipliers for landings of several US Atlantic commercial fisheries. Dislocation of total economic activity generated from landings of surf clams and ocean quahogs (SCOQ) would be especially magnified due to the notable high economic outputs and impacts reported by Murrayix for SCOQ landings. Combined landings in 2014 of \$54.873 million resulted in an economic multiple of 11.4x and a total economic output of \$1,308 million. SCEMFIS has also supported similar economic research on the longfin squid commercial fisheryx, which is also subject to severe economic dislocation by WEAs.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries, including estimates of fishing revenue exposure as more offshore wind energy facilities are developed (Table 3.11-3), and Section 3.7 discusses the impacts on commercial fishing and onshore seafood businesses resulting from offshore wind on community employment and economic activity. BOEM acknowledges that any reductions in commercial fisheries landings would impact the seafood supply chain (including processors, dealers, and distributors). However, BOEM did not quantify these impacts because there is uncertainty regarding the net change in landings for each species (once substitution patterns are accounted for). Therefore, BOEM estimated the "exposed value" for each species, which one can more accurately estimate based on available data. However, it would be inappropriate to apply exposed values to economic multipliers since doing so would overstate the potential impacts.
13060-005	While economic expansions are typically anticipated to increase energy prices, natural gas prices declined from the Great Recession through 2019 as domestic production increased over this time. This highlights the importance of increasing supply of domestic energy strategy in spurring and sustaining economic growth.	The SEIS and Sections 3.6.1 and 3.6.2 of the FEIS include the establishment of a resilient and secure electric supply as a benefit of the Vineyard Wind 1 Project and other offshore wind projects.
13060-006	Offshore wind energy should remain a viable component of domestic energy development. Support of offshore wind energy halts when such projects	Thank you for your comment.

Index Number	Comment Text	Response
	accompany the likelihood of economic displacement of commercial fishing	
13060-007	In consideration of the findings contained herein, the conclusion my comments is to recommend Alternative G, No Action on the Vineyard Wind I project.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13062-001	The Vineyard Wind offshore wind project is several orders of magnitude larger than Berkshire Wind. It represents a critically important, renewable energy project for Massachusetts and New England. In our opinion it represents our region's best near term solution to significantly increasing our renewable energy capacity.	Thank you for your comment.
13062-002	The proposed Project has been thoroughly vetted. It will deliver power to the New England energy grid and contribute to Massachusetts' renewable energy requirements. In addition, the development of utilityscal offshore wind has the potential to stabilize competitive renewable electric prices over the long term. Finally, approval of this Project will kick start a new offshore wind industry that promises new industrial growth, and very importantly, new manufacturing jobs in Massachusetts, New England, and across the United States.	Thank you for your comment.
13064-001	CTDEEP is concerned about the potential material adverse impacts of the new Alternative F reviewed by BOEM on important state policy goals.	Section 2.1.5 of the SEIS addressed the technical and practical challenges that could occur in Alternative F were implemented. Therefore, no changes to the FEIS are warranted.
13064-002	CTDEEP supports analysis of cumulative impacts, with the recommendation that permit approval is granted with recommendations for coordinated regional monitoring to better guide understanding of the impacts of offshore wind development where information is incomplete.	BOEM would not be able to impose monitoring on a developer for an area greater than their project being evaluated.
13064-003	Through its Comprehensive Energy Strategy and its Integrated Resources Plan, CTDEEP directs the state's efforts to meet both its Global Warming Solutions Act obligations and the requirement of Executive Order 3 to study pathways to achieve a zero-carbon grid by 2040. Integral to this effort are CTDEEP's procurement of large-scale offshore wind resourcesCTDEEP issued a request for proposals in August, 2019 and selected an 804 Vineyard Wind II project in December, 2019. The Vineyard Wind project, combined with the previously contracted offshore wind projects, will account for about 19% of Connecticut's total electric load.	Thank you for your comment.
13064-004	As part of CTDEEP's planning obligations, the agency continually evaluates the state's and the region's electric generation resource mix and the rate and nature of planned retirements. In order to ensure that sufficient new zero- carbon generation is available to replace retiring fossil generation, CTDEEP is studying in its Integrated Resources Plan (IRP) how to schedule	Thank you for your comment.

Index Number	Comment Text	Response
	procurements of new renewable energy resources and particularly procurements of offshore wind. Connecticut, therefore, is directly and substantially affected by any action or actions that could delay the installation of contracted resources or adversely affect total potential offshore wind capacity in regional lease areas.	
13064-005	The proposed Project would deliver power to the New England energy grid to contribute to states' renewable energy requirements. BOEM's decision on Vineyard Wind's Construction and Operation Plan (COP) is needed to execute its duty to approve, approve with modifications, or disapprove the proposed Project in furtherance of the United States' policy to make Outer Continental Shelf (OCS) energy resources available for expeditious and orderly development subject to environmental safeguards (43 USC § 1332(3)), including consideration of natural resources and existing ocean uses.	Thank you for your comment.
13064-006	Alternative F, or the Vessel Transit Lane Alternative, includes a new vessel transit lane in response to the January 3, 2020, Responsible Offshore Development Association (RODA) layout proposal (Figure 2.2-1) (RODA 2020) Although the proposal includes six total transit lanes, only one intersects the Vineyard Wind 1 Project Wind Development Area (WDA), the action for which this EIS is being prepared. The purpose of the proposed northwest/southeast transit corridor would be mainly to facilitate vessel transit from southern New England ports—primarily New Bedford—to fishing areas on Georges Bank. The wind turbine generators (WTGs) that would have been located within the transit lane proposed to intersect the Wind Development Area would not be eliminated from the Proposed Action; but instead, the displaced WTGs would be shifted south within the Vineyard Wind lease area. Connecticut recognizes that this Project, like other OSW projects will have impacts to the commercial fishing industry. Any evaluation of impacts from this and similar projects is a balancing act and it is always important to find the correct balance for the benefit of all parties.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13064-007	Vineyard Wind has opted to change from 12 to 14 MW turbines. These larger turbines permit the use of fewer monopoles potentially reducing impacts.	The development of the DEIS, SEIS, and FEIS has been based on Vineyard Wind's utilization of the PDE. The FEIS assesses the impacts of the reasonable range of Project designs that are described in the Vineyard Wind COP and presented in Appendix G by using the "maximum-case scenario" process.
13064-008	Even though Vineyard Wind I is a Massachusetts project, there are several potentially important impacts associated with Alternative F that are of direct concern to Connecticut, primarily because the new transit route will displace turbines from the corridor and relocate them much further to the south	Section 2.1.5 of the SEIS addressed the technical and practical challenges that could occur in Alternative F were implemented. Therefore, no changes to the FEIS are warranted.

Index Number	Comment Text	Response
Nulliber	increasing cable distances and the associated seafloor disturbances	
	Simultaneously, the new transit corridor will potentially reduce the total	
	leasehold area available for all projects, including projects under contract	
	with Connecticut.	
13064-009	BOEM found that if Alternative F is used. Offshore Export Cable Corridor	Section 2.5 of the FEIS has been added which includes the agency-preferred
	(OECC) routes would be longer due to shifting project elements further into	alternative.
	the southern portion of the lease area. Due to the WTGs being relocated	
	further away, the amount and length of inter-array cabling would need to be	
	increased in excess of the maximum design parameter in the Vineyard Wind	
	COP PDE of 171 miles (275 kilometers). Under Alternative F, total length of	
	inter-array cabling is now estimated to be between 221 and 234 miles (355	
	and 376 kilometers) depending on the width of the transit lane, number of	
	WTGs utilized, and WTG arrangement within the WDA. This would result in	
	up to a 37 percent increase of additional inter-array cabling. Finally, BOEM	
	also found that total disturbed acreage from all causes could increase as high	
	as 61 percent.	
13064-010	Implementation of Alternative F would delay proposed Project construction	Section 2.5 of the FEIS has been added which includes the agency-preferred
	if significant additional survey work is required. Additional site	alternative. Section 2.1.5 of the SEIS outlined some of the technical and
	characterization surveys for Alternative F, if required, would be similar to	practical challenges that could result if Alternative F were implemented.
	those described in Section 3.1.3 of BOEM 2012a, with the attendant	
10051011	environmental impacts described in Section 4.2 of BOEM 2012a.	
13064-011	Vineyard Wind's proposed 66-kilovolt inter-array cables would experience	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	additional transmission loss if cables are lengthened to accommodate the	that could occur in Alternative F were implemented. Therefore, no changes to
	transit lanes assumed under Alternative F. Such transmission losses are not	the FEIS are warranted.
	considered as part of the Project design and could translate to technical	
120(4.012	difficulties and additional unanticipated costs.	
13064-012	Cable lengthening [under Alternative F] would require factory joints, which	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	are not currently technically possible by cable manufacturers. Joints could	the EEIS are werented
	land to increased environmental effects due to a variety of factors including	the FEIS are warranted.
	bottom disturbance and vessel traffic	
13064-013	The space required for implementation of the [Alternative F] transit lane	Section 2.5 of the FFIS has been added which includes the agency-preferred
15004-015	could reduce the area available for Vinevard Wind to construct future	alternative
	projects within the lease area	
13064-014	There are other consequences of using Alternative F which are of	Section 2.1.5 of the FEIS has been undated to reflect the impact that delays
15001 011	considerable concern to CTDEEP Each of the above referenced impacts	could have on the proposed Project and states' clean energy goals. The SEIS
	will have adverse impacts to important Connecticut energy policies. Delay	and FEIS stated the notential consequences of Alternative F including
	itself would potentially delay future offshore wind procurements needed to	potential construction delays: therefore, no changes to the FEIS are
	meet the state's zero-carbon goals. And this problem would not be limited to	warranted.

Index Number	Comment Text	Response
	Connecticut. Massachusetts, New York, and Rhode Island area also looking	
	context that BOEM's conclusion that "potential construction delays could	
	create more overlap with other future offshore wind projects' construction	
	schedules, potentially leading to increased cumulative impacts on resources	
	that are sensitive to overlapping construction activities" is most alarming.	
13064-015	Beyond delay issues, additional line losses associated with longer alternating current (AC) cables [for Alternative F] will reduce the amount of zero-carbon	Section 2.1.5 of the SEIS addressed the technical and practical challenges that could occur in Alternative F were implemented. Therefore, no changes to
	energy needed to replace fossil energy and will simultaneously result in	the FEIS are warranted.
	Connecticut ratepayers receiving less power for the same price from	
	contracted resources. Increase cable array vulnerability threatens the entire	
	project and loss of leasehold space will result in less available total capacity	
	cutting down the amount of total potential zero-carbon offshore wind energy	
	that is needed to meet state goals.	
13064-016	BOEM found the following technical and practical challenges of Alternative	Thank you for your comment.
	F as they relate to the assessment of cumulative impacts: If all six transit	
	lanes proposed by RODA were implemented, the technical capacity of	
	offshore wind power generation assumed in Chapter 1 would not be met. The	
	magnitude of the diminished technical capacity would depend on the width of	
	transit lanes implemented, but ultimately, less clean energy in the region	
	would be produced. BOEM assumes this to be true of any combination of	
	alternatives that includes Alternative F. As explained in Section 3.14.2.4,	
	BOEM assumes that the addition of all six of the 4-nautical mile transit lanes	
	proposed by RODA would reduce the technical capacity of the Rhode Island	
	and Massachusetts (RI and MA) Lease Areas by approximately 3,300 MW,	
	which is 500 MW less than the current state demand for offshore wind in the	
12064 017	area. The loss of 2.2 CW of zone control funder Alternative El reason	Section 2.5 of the EEIS has been added which includes the approxy mathemat
13004-017	direct threat to important state public policy goals for Connecticut and the	section 2.5 of the FEIS has been added which includes the agency-preferred
	entire ragion. In this regard, it is not immediately apparent from the SEIS	anemative.
	why Alternative E continues to be under consideration. Furthermore, the	
	United States Coast Guard has fully endorsed the 1 x 1 nm layout without	
	Alternative F	
13064-018	In fact, according to the SEIS itself. Alternative F, which is much more	Both the SEIS and the FEIS provide a detailed analysis of the potential
15001 010	impactful to state policy goals, has essentially the same impacts as	effects that could result if Alternative F were implemented.
	Alternatives A-E. A review of table ES-2, a cross comparison of the various	
	project alternatives, shows that the Proposed Action and Alternatives A	
	through E and the new Alternative F, appear to have very similar impacts	

Index	Comment Text	Response
Number	with the execution that Alternative E could materially immede state some	
	asrbon planning	
13064-019	CTDEEP supports the efforts to incorporate reasonably foreseeable effects from an expanded cumulative activities scenario for offshore wind development. CTDEEP wants to acknowledge that there will always be some level of incomplete information in this type of cumulative analysis, however, the state wants to stress that BOEM should avoid slowing the process towards offshore wind approval. Instead, areas with incomplete information regarding impacts should be noted. As developments advance, data to better inform decisions should be collected through adaptive monitoring and management at the project level and through cooperation with regional level studies.	Appendix C of the SEIS included a discussion on incomplete or unavailable information, in accordance with Section 1502.22 of the CEQ regulations. Appendix H of the FEIS has been updated where appropriate on the incomplete or unavailable information, in accordance with Section 1502.22 of the CEQ regulations.
13064-020	Specific seasonal risks to migratory birds and bats have the potential to impact large congregations of animals. There is evidence that these risks are predictable. Connecticut feels more information and monitoring will help guide future decisions.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision. The monitoring that is being proposed for the Vineyard Wind 1 Project will provide the necessary data to better assess avoidance and minimization measures for future offshore wind development.
13064-021	CTDEEP has concern that there is the potential for significant negative impact to migratory bat populations from collision with operating wind turbines. The analysis specifies that that the 1nm (1.85km) spacing will allow bats to "avoid" collisions by flying around structures but does not present any observational data to support that avoidance behavior.	Section A.8.4.1 of the FEIS includes an updated discussion, and associated citations, relating to the lack of landscape features that would serve to funnel bats; thereby decreasing the potential exposure of migrating tree bats to operating WTGs.
13064-022	Although it is noted that "Use of the OCS by tree bats is expected to be very low and limited to spring and fall migration periods," it is this pattern and predictability that may be beneficial for developing avoidance measures for collision. Migratory tree bats are regularly observed offshore with a consistent and predictable pattern. Migratory tree bats are among the most highly impacted by onshore wind turbines. The three most impacted by onshore wind installations are also currently state listed in Connecticut	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional

Index	Comment Text	Response
Number		
	(RCSA Sec. 26-306), the hoary bat (<i>Lasiurus cinereus</i>), eastern red bat (<i>Lasiurus borealis</i>), and the silver-haired bat (<i>Lasionycteris noctivagans</i>).	collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13064-023	Although the period of exposure is short, it has the potential to impact many adult [migratory tree bats] during a sensitive portion of their life cycle, when populations are concentrated for migration. Connecticut disagrees that BOEM has enough information to assume that "very few individuals would be expected to encounter operating WTGs or other structures." Insufficient knowledge is acknowledged in Section A. 8.4.	Section 8.4 of the FEIS uses the best available information, including Hatch et al. (2013), Pelletier et al. (2013), Stantec (2016), and Dowling et al. (2017); and thus complies with the procedural requirements of NEPA to predict potential impacts on bats from the Proposed Action. Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13064-024	Connecticut also notes that there are no plans in the Vineyard Wind 1 COP (COP Section 6.3) to continue to monitor collisions for bats based on the conclusion that risk would be "negligible." Insufficient knowledge is not a basis for dismissing any need for mitigation, but it is a justification for additional research and monitoring. The risk to bats onshore and the evidence that bats occur offshore support the conclusion that monitoring of the risk should continue as the project develops.	Section 8.4 of the FEIS uses the best available information, including Hatch et al. (2013), Pelletier et al. (2013), Stantec (2016), and Dowling et al. (2017); and thus complies with the procedural requirements of NEPA to predict potential impacts on bats from the Proposed Action. Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation that could be implemented to avoid, minimize, and mitigate adverse impacts on bats as well as monitoring measures, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision. The monitoring that is being proposed for the Vineyard Wind 1 Project will provide the necessary data to better assess avoidance and
13064-025	CTDEEP has similar concerns for migratory birds with respect to collision with structures. The assessment recognizes the risk for turbine collision	Section A.8.3.1 of the FEIS includes an updated discussion of collision risk to nocturnal passerine migrants. As shown in Robinson Willmott et al.

Index	Comment Text	Response
Number	Connecticut disagrees that the Wind Development Area for Vineyard Wind has enough data at this time to conclude that there would be low use and negligible risk, especially with reference to migratory landbirds. For example, the Blackpoll warbler (<i>Setophaga striata</i>) has been observed to migrate offshore. This risk during the migratory period was determined to be "insignificant" in the COP (Section 6.2). In contrast, the IUCN has listed this species as Near Threatened, and understanding the potential threat from offshore wind development is highlighted as a conservation action to protect this species.	(2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014).
13064-026	CTDEEP recommends BOEM does not dismiss the risk of collision for migratory tree bats and migratory birds in the operations phase for Vineyard Wind 1. Connecticut recommends: Vineyard Wind continue to monitor and measure bird and bat fatality risk specific to migration during operations and share data to better quantify the impact from this project, as well as the cumulative impact from other sites.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation that would be implemented to avoid, minimize, and mitigate adverse impacts on bats as well as monitoring measures, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13064-027	CTDEEP recommends BOEM does not dismiss the risk of collision for migratory tree bats and migratory birds in the operations phase for Vineyard Wind 1. Connecticut recommends: Vineyard Wind engage with and contribute towards entities that are developing collision avoidance tools to minimize this risk.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13064-028	CTDEEP recommends BOEM does not dismiss the risk of collision for migratory tree bats and migratory birds in the operations phase for Vineyard Wind 1. Connecticut recommends: Vineyard Wind consider options for compensatory mitigation if substantial risk is quantified and cannot be avoided.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations

Index	Comment Text	Response
Number		
		and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision as well.
13064-029	The collision risk for migratory birds and bats is limited to specific periodicity and weather conditions, and the mitigation efforts to avoid impact have the potential to be simple and have precision in application. This risk should not be dismissed without further evaluation.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13064-030	CTDEEP fully supports BOEM's NEPA process and greatly appreciates the immense effort undertaken by the agency. CTDEEP does not believe that any impacts detailed in this analysis should halt the approval process.	Thank you for your comment.
13064-031	Connecticut, however, is concerned that Alternative F may have excessive impacts that will prevent Connecticut, and the region, from attaining important climate change policies and urges BOEM to consider that as it proceeds with its review.	Thank you for your comment.
13065-001	Our country must contribute to the global effort that is needed by decarbonizing our energy supply. The use of fossil fuels must be systematically phased out across all sectors of our economy and functioning society. We support the building of the Vineyard Wind offshore energy project. We strongly urge the BOEM to permit this project to go forward. The onshore region adjacent to the siting of Vineyard Wind is densely populated with high energy demands. The region also needs and would benefit from jobs in this green economy.	Thank you for your comment.
13065-002	Our committee is impressed with the environmental safeguards outlined in the SEIS that would protect the endangered North Atlantic right whale during project construction and operation. We applaud the collaboration between key environmental NGO's like the National Wildlife Federation, the NRDC,	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW, and include measures outlined in the referenced agreement. These measures

Index Number	Comment Text	Response
	and the Conservation Law Foundation to sign a landmark agreement to adopt measures that will avoid, minimize and mitigate underwater noise, ship strikes, and turbine collisions. These well-respected organizations developed this agreement based on marine ecology and the relevant science and technology that pertains to operating offshore wind in a marine environment.	include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13065-003	We strongly support this project for its economic benefits to the region. It is our understanding that approximately 3,600 jobs will be created for local residents and that Vineyard Wind 1 will save ratepayers more than \$1.4 B in energy-related costs over the 20-year contract with the Commonwealth of Massachusetts. This cost savings amounts to \$70M per year.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS.
13065-004	we support the 1x1 nautical mile turbine layout that was reached as a compromise proposed in response to commercial fisheries' concerns. We oppose adding additional transit lanes within wind farms because we have learned from a recent Coast Guard study that this has been deemed unnecessary.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13065-005	We obviously support this offshore wind energy project for its important contribution to climate change mitigation - in terms of producing clean, renewable energy to the grid that does not emit greenhouse gases. We are a coastal community worried about sea level rise, coastal flooding, and storm surges.	Thank you for your comment.
13066-001	I support the SEIS for Vineyard Wind! We need the energy for MA, since we'll need 6X the electrical power as we electrify heating, cooling, transportation and more.	Thank you for your comment.
13067-001	This Project Labor Agreement will ensure that our local skilled workers will construct the United States' first commercial scale offshore wind farm and set the precedent that future projects will utilize local union labor as well.	Although the Project Labor Agreement is not addressed in the FEIS, Section 3.6.2 provides projections of estimated direct job creation by the Vineyard Wind 1 Project in Massachusetts, and primarily in southeastern Massachusetts.
13067-002	Alternative F requiring needless transit lanes would further reduce their ability to develop by another 4,000 MW and over 300 turbine positions. This reduced capacity means fewer projects and fewer jobs for the hardworking men and women of the trades.	Section 3.6.4 of the FEIS has been updated to note that the transit corridor (Alternative F) could result in lower economic investment and employment due to the lower capacity for offshore wind development in the RI and MA Lease Areas that could result from this alternative.
13067-003	Massachusetts, New England, and the United States need the clean energy and the jobs that Vineyard Wind and other offshore wind projects will generate.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment

Index	Comment Text	Response
Number		resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13067-004	Any further delays, reductions in scope or obstacles could jeopardize not only this project, but the industry itself.	Thank you for your comment.
13068-001	This wind farm alone will create 3,600 jobs for reside and save ratepayers more than 1.4 billion.	Section 3.6.2 of the FEIS provides economic and employment contributions of the Vineyard Wind 1 Project. These were also included in the DEIS. Estimated job creation by the Vineyard Wind 1 Project in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operations. Section 3.6.2.1 and Tables 3.6-3, 3.6-4 and 3.6-5 also list the grants that would be provided by Vineyard Wind and show economic value and first year tax revenues that would result from the Vineyard Wind 1 Project.
13070-001	I would like to emphasize the positive benefits of offshore wind and the building of this offshore wind farm. The production of wind power and other renewable energy sources is essential in the reduction of greenhouse gas emissions to limit the effects of climate change. Combatting climate change is absolutely essential, and renewable energy is an extremely important part of making this a reality.	Thank you for your comment.
13070-002	the increase in job opportunities is encouraging, especially during such challenging economic times.	Section 3.6.2 of the FEIS provides estimated job growth from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13070-003	The fossil fuel industry has also led to many, many instances of environmental racism and injustice. It unacceptable how many dirty energy plants have been places around low-income communities and communities of color. Increasing the use of clean energy will decrease these instances of environmental justice issues.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
13070-004	It has been argued that offshore wind will create visual disturbances, and while this is a valid concern, it actually would not be too large an issue. Due to the distance between the reasonably foreseeable wind development and the nearest cultural resources, in most instances exceeding 15 miles, WTGs within individual projects would appear relatively small on the horizon, and	The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the offshore wind development. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations provided by Vineyard Wind that provide views of the 14 MW wind turbines as well as simulations of Vineyard Wind 1 combined with other offshore wind development. The

Index	Comment Text	Response
Number	the visibility of individual structures would be further affected vegetation, clouds, fog, sea spray, haze, and wave action.	simulations can be viewed at https://www.boem.gov/vineyard-wind- cumulative-visual-assessment.
13070-005	there is concern surrounding the impact of fisheries, however wind areas were chosen specifically because they aren't heavily fished areas, and thus there would be minimal impact.	Thank you for your comment.
13070-006	A third concern is the impact on tourism, however, a survey-based study found that for prospective offshore wind facilities (based on visual simulations) about 68 percent of respondents indicated that the visibility of turbines would neither improve nor worsen their experience.	The comment refers to one finding from the study "Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism" (Parsons et al. 2018); other results of the study are summarized in Section 3.10.1 of the SEIS. Overall the study supports the SEIS finding that while certain seaside locations on the southern coast of Nantucket and Martha's Vineyard could experience a small reduction in recreational and tourism activity, the visible presence of WTGs from limited shore locations would be unlikely to impact shore-based recreation and tourism in the geographic analysis area as a whole. Therefore, no change to the FEIS is warranted.
13071-003	In order to realize the many benefits - both economic and environmental - of Vineyard Wind 1 and future projects, the industry needs certainty that offshore wind can and will be permitted in the US. Without this certainty, the US will lose out on significant investment and economic benefits.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13071-004	The business sector needs confidence that demand in the US offshore wind market is real. This means that projects in the permitting and development timeline must be permitted in a timely and reasonable manner. This starts with Vineyard Wind 1. If we launch this industry now, the potential for additional jobs multiplies exponentially, with the potential for hundreds of thousands of jobs in different parts of the country.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13071-005	New England Wind Energy Areas (NE WEA) collaborated to propose a uniform, 1 x 1 nautical miles spacing between turbines, a layout that was recently endorsed by the United States Coast Guard (USCG). Despite this fact, the fishing industry has proposed additional transit lanes of at least 4 NMs (reflected in Alternative F of the SDEIS), a move that would severely constrain clean energy production and not meaningfully improve navigation or safety.	The FEIS addresses the USCG recommendations and findings in Sections 3.11.4 and 3.11.5.
13071-006	Alternative "F" slashes the generation capacity of the project and puts the entire region at risk of not meeting energy demand even as many of New England's fossil fuel and nuclear power plants are retiring. For these reasons, I oppose the additional transit lanes outlined in Alternate F.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13072-001	Offshore wind is a critical component of our regional clean energy strategy, and this project will go a long way towards combatting climate change and promoting energy independence in New England.	Thank you for your comment.

Index	Comment Text	Response
13072-002	Vineyard wind has the potential to create thousands of skilled labor jobs in our region, while cutting GHG emissions by approximately 1.7 million tons of CO2 per year. Further, Vineyard is estimated to save ratepayers more than \$1.4 billion in energy cost-savings over the life of the project. The economic benefits of offshore wind are well documented	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Appendix A, Section A.8.1 of the FEIS has been updated to address air quality benefits of
13072-003	it is imperative that the construction of this wind farm is done in a manner that minimizes acoustic impacts to the greatest extend possible. Research shows that high frequency and high-decibel noises can confuse and severely injure these mammals' auditory systems.	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project.
13072-004	The Vineyard Wind developers have entered into an agreement with the State of Massachusetts toestablish mitigation measures aimed at protecting marine mammals from harmful acoustic impacts. Unfortunately, it is unclear if these measures will be sufficient at providing adequate protections for echolocators that are commonly found in these waters.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW, and include measures outlined in the referenced agreement. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project.

Index	Comment Text	Response
Number		
13072-005	recent reports indicate that the true number of marine mammals travelling through Northern Atlantic waters at any given time has been grossly underestimated in recent years. Warming water temperatures have caused certain species to deviate unpredictably from normal migratory patterns, resulting in dangerous close calls and at times resulting in the death and injury of unfortunate marine mammals. It's possible that the 1-month delay in construction intended to protect the right whale may prove ineffective at preventing impacts to other aquatic mammals.	A detailed discussion of current marine mammal distribution and occurrence in and around the Vineyard Wind 1 WDA was provided in Appendix E of the SEIS. A discussion of current marine mammal distribution is also provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals is expected to occur as a result of the project. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures.
13072-006	Since no safe levels have been established for acoustic impacts to marine mammals, a cautionary approach should be employed towards approving potentially damaging construction techniques.	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met. Additional information regarding acoustic impacts and the potential consequences to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project
13072-007	since it is impossible for monopiles to achieve safe ambient noise levels.	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the
	other construction options should be explored that do not necessitate pile	potential impacts of the proposed Project on marine mammals, including the
	driving at all. Concrete gravity bases in particular offer a promising	NARW. Section 3.4.2 and Appendix D of the FEIS discuss updated
	alternative, as they have been employed around the world and do not require	mitigation and monitoring measures that would be implemented to avoid,
Index	Comment Text	Response
-----------	--	--
Number		
	disruptive pile driving techniques that can adversely affect marine mammal populations. Further, concrete gravity bases do not leave behind steel refuse in the same way monopile structures do, once they have reached the end of their useful lifespan.	minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met. Additional information regarding acoustic impacts and the potential consequences to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project.
13073-001	I support the SEIS for the Vineyard Wind Project and request you to approve this project. Off shore wind is one of the only viable option on the scale needed to begin to address our reliance on fossil fuel and to begin to slow the impacts of climate change. The Vineyard wind project has been reviewed in sufficient detail and taken precautions to limit its impacts. No project is without any impacts, but those impacts must be weighted against both the options if the project does not proceed (continue reliance on fossil fuels that are continue to weaken our personal and all wildlife habitats, continue climate change risks, and have a continued high cost) and the methods that the project has reduced its impacts if it does proceed (while avoiding the impacts of not proceeded and staying on fossil fuels, and making accommodations for fisherman with spacing and orientation of the array, bird migration, whale activity with reduced operations when whales are in the area, and determining the best place to land the power).	Thank you for your comment.
13073-002	There is no logic to delaying a positive development like this, while we continue to degrade our environment through the extraction and use of fossil fuels.	Thank you for your comment.
13074-001	Approval of the project is pivotal for states on the Atlantic Coast to realize their renewable energy development and carbon reduction legal requirementsThe 800-megawatt Vineyard Wind I and the several other projects in adjacent lease areas that are now under contract will also provide significant economic development benefits for Atlantic Coast states.	Thank you for your comment.

Index	Comment Text	Response
Number		
130/4-002	At sites located on the Outer Continental Shelf, the Department of Energy	Thank you for your comment.
	estimates offshore wind's technical potential at over 2,000 gigawatts (or	
	double the amount of all existing installed U.S. electricity), 86 gigawatts of	
	which could be developed by 2050. Atlantic Coast states, recognizing the	
	economic and environmental opportunities afforded by the technology, have	
	collectively issued procurement targets for 29 gigawatts of offshore wind. A	
	recent economic development study from the American wind Energy	
	Association (AWEA) reported that offshore wind development off the	
	Atlantic Coast could translate into \$57 billion in direct investment, add \$25	
	billion in annual economic output and create 83,000 well-paying jobs by	
	2030, all while stabilizing retail electricity rates and emitting no climate-	
12074 002	altering greenhouse gases.	
130/4-003	One of the pivotal outstanding items being reviewed by BOEM is that of	Section 2.5 of the FEIS has been added which includes the agency-preferred
	navigational lanes. RENEW supports the Alternative D2 uniform 1 x 1	alternative.
	nautical mile layout. The U.S. Coast Guard with its mission to ensure our	
	nation's maritime safety, security, and stewardship determined the layout,	
	which will provide more than 200 transit lanes in all directions, will	
	maximize sale navigation . It concluded in its final report, The Areas	
	(MADIDADS) that the 1 x 1 levent which was acread to by all New	
	(MARIPARS), that the 1 x 1 layout, which was agreed to by all New	
	England offshore wind leasenoiders, will provide ample and uniform	
	mayigation chamiers and is significantly larger than routes provided in the	
13074 004	The Alternative E proposal to insert uppeessory wider transit lanes would	Section 2.5 of the FEIS has been added which includes the agency preferred
130/4-004	according to the MARIPARS report increase risks to pavigation safety. That	alternative
	report found that the transit corridors in Alternative F would make	
	"navigation more challenging [as] most traffic would then be funneled into	
	the corridors thereby increasing traffic density and risks for vessel	
	interaction "RENEW acknowledges the significantly more extensive	
	comments concerning the transit lane issue in the SEIS submitted by AWEA	
	and stands in agreement with AWEA's analysis in support of Alternative D2	
	and in opposition to Alternative F.	
13075-001	In January 2020, Rhode Island Governor Gina Raimondo launched a nation-	Thank you for your comment.
	leading initiative to meet 100% of Rhode Island's electricity demand with	
	renewables by 2030 (E.O. 20-01). As such, the Rhode Island Department of	
	Environmental Management (RIDEM) is supportive of offshore wind energy	
	development to mitigate the impacts of climate change and reduce	
	greenhouse gas emissions. RIDEM is committed to ensuring that the local	
	and regional environmental and socioeconomic impacts of offshore wind	
	development are minimized.	

Index	Comment Text	Response
Number		
13075-002	The new limits of the proposed project design envelope include a modified limit of 14-megawatt (MW) wind turbine generators (WTG) for the VW1 project (Table 2.2-1). However, the Bureau of Ocean Energy Management (BOEM) is using 12 MW WTGs during evaluation of potential impacts under reasonably foreseeable assumptions (1.2.1.1). While 12 MW is the largest turbine currently available, it is likely that larger options will be developed and available for use in future projects, especially considering 14 MW are being considered for the first commercial scale project to be developed in US federal waters. The impacts of complete buildout of Wind Development Areas (WDAs) may be different under a 14 MW scenario than the 12 MW scenario presented.	As noted in Section 1.7.1.1 of the SEIS, it is difficult to predict turbine capacity and spacing or other future engineering for planned but currently unscheduled offshore wind awards. Therefore, BOEM used reasonably foreseeable assumptions for the analysis and no change to the FEIS is warranted. The impact analysis prepared for the proposed Project implemented a maximum-case scenario for all resources so that BOEM's decision makers understand the most impactful scenario.
13075-003	New cable emplacement and maintenance are expected to have moderate short-term impacts in most areas, but impacts may be permanent if in hard bottom habitat or areas of submerged aquatic vegetation. These impacts are expected to be caused by direct disturbance during cable laying. However, there is limited discussion of potential impacts from cable armoring. Impacts caused by armoring will depend on the type of armoring utilized (e.g., concrete mattress, rocks) and may include some positive benefits after the initial disturbance phase. However, placement may also smother existing soft bottom habitat and benthic organisms.	Sections 3.1 and 3.2 of the FEIS discuss the potential impacts associated with the use of cable protection or "armoring" under the subheading of "Presence of structures." The FEIS has been updated to discuss additional mitigation measures regarding cable protection.
13075-004	It should also be noted that while some soft-bottom habitats may recover in the short term, other soft-bottom benthic communities may take 2-4 years to recover (van Dalfsen et al. 2000). Therefore, moderate effects may not necessarily be short-term.	Section 3.2 of the FEIS was updated to discuss the potential impacts associated with the proposed Project and the duration of effects.
13075-005	The presence of turbine structures may increase the likelihood of ghost fishing gear within wind farm arrays. If commercial boats get gear hung up within the array, they may feel less comfortable retrieving gear due to added safety concerns (i.e., drifting into wind turbine monopiles), which would result in additional gear loss and ultimately ghost gear within the WDAs.	Section 3.4.1 of the SEIS discussed the potential effects of ghost fishing; therefore, no change to the FEIS is warranted. Furthermore, Section 3.5 of the SEIS discussed the potential effects of ghost fishing gear on marine mammals. Additionally, Appendix D of the DEIS discussed mitigation relative to the monitoring and removal of ghost fishing gear in the WDA. The commenter did not provide any new information not already considered in the SEIS, and no change to the FEIS is warranted. Appendix D of the FEIS includes all the comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW.
13075-006	While the proposed project intends to utilize Alternating Current (AC) cables, future projects may utilize Direct Current (DC) cables for transmission of energy to specific landfalls, which produce larger Electromagnetic Fields (EMF). There are already DC cables operating in the Southern New England waters (e.g., the Cross-Sound Cable in Long Island	Section 3.3 of the FEIS has been updated to include the new Hutchison reference and the 2020 State of the Science Report. Researching non-lethal behavioral effects on marine fauna would not likely result in a change in impact rating and is not essential to a reasoned choice among alternatives.

Index	Comment Text	Response
Number		
	Sound). A study on American lobster (<i>Homarus americanus</i>) and little skate	
	(Leucoraja erinacea) behavior in close proximity to the Cross-Sound cables	
	found that there was a strong increase in exploratory/foraging behavior in	
	skates in response to EMF and a more subtle exploratory response in lobsters	
	(Hutchison et al. 2020). It remains inconclusive whether behavioral changes	
	could result in broader biological impacts (e.g., increased energy	
	expenditure), but assuming that EMF produced by the full buildout of all	
	proposed projects will have negligible to minor impacts may underestimate	
	possible ecosystem effects. Bejder et al. (2009) stress that species perceived	
	tolerance to anthropogenic stimuli should not be mistaken for absence of	
	adverse impact. Additional research on EMF is necessary to determine the	
	level of effect for a variety of key species, especially invertebrates where	
	research is lacking (e.g., scallops, squid).	
13075-007	BOEM suggests that presence of structures and corresponding habitat	Section 3.4.1 of the SEIS discussed the potential effects of habitat
	conversion will be moderate beneficial. Certain structure-oriented species	conversion; therefore, no change to the FEIS is warranted.
	will likely benefit (e.g., black sea bass, tautog), while species with soft-	
	bottom habitat preferences (e.g., flatfish, squid, scallops) may be negatively	
	affected. Degraer et al. (2019) explain that artificial hard substrata differ	
	significantly from naturally occurring hard substrata and should therefore not	
	be considered a substitute. Given the value of hard-bottom habitat, it is often	
	assumed that impacts will be lower if wind farms are sited in soft bottom due	
	to their ability to recover more quickly from benthic disturbance (Grabowski	
	et al., 2014), but the number of species and ecosystem functions affected may	
	actually be greater (Henriques et al., 2014; Kritzer et al., 2016). As such, the	
	introduction of hard bottom habitat may add benefits for some species, but	
	negative impacts to soft-bottom preferring species of high ecosystem and	
	economic importance. Further research is needed to elucidate these notions.	
13075-008	RIDEM agrees that noise associated with pile driving will have at least	Section 3.4.1 of the SEIS discussed the potential effects of construction,
	moderate, but potentially major, impacts during construction For example,	including noise, on species and already considered the findings of Jones et al.
	longfin inshore squid (Doryteuthis pealeii) is an important, high value	(2020); therefore, no change to the FEIS is warranted.
	species for the Rhode Island commercial fishery that has been documented as	
	sensitive to pile driving noise. The species migrates seasonally, moving	
	inshore in the spring and summer, often in large numbers directly north of the	
	Vineyard Wind WDA. Longfin squid have been found to elicit alarm	
	responses and eventually habituation to pile driving noise. There was also "a	
	lack of long-term increased tolerance (in terms of alarm responses) after	
	extended gaps in pile driving bouts", suggesting that squid may exhibit alarm	
	responses each time pile driving is initiated again (Jones et al. 2020). This	
	research demonstrates that squid may adjust to the noise on a daily basis, but	
	increased tolerance may still result in ecologically relevant effects (Beider et	

Index	Comment Text	Response
Number		
	al. 2009). The Woods Hole Oceanographic Institution study (Jones et al.	
	2020) was unable to assess potential avoidance behavior due to the small size	
	of the experimental chamber; however, it is reasonable to assume the squid	
	may avoid areas where the noise is at high-amplitude or intensity based on	
100-5-000	their startle responses, including jetting.	
13075-009	RIDEM agrees that noise associated with pile driving will have at least	Section 3.4.1 of the SEIS discussed the potential effects of construction,
	moderate, but potentially major, impacts during construction Proposed	including noise, on species and already considered the findings of Jones et al.
	construction timelines indicate that pile driving activity will occur during	(2020); therefore, no change to the FEIS is warranted.
	summer months, overlapping with the seasonal squid migration and	
	spawning aggregation in the shallow waters south of Martha's vineyard and	
	Nantucket. Population-level effects may be possible if pile driving of several	
	projects (over ten years, as described within the SEIS) causes disruptions to	
	spawning aggregations for multiple years. Furthermore, effects of pile	
12075 010	And any to impose on squad eggs (mops) have not been studied.	
130/3-010	introduction of structure and	Section 5.4.1 of the SEIS discussed now a wind farm could create an
	potential for fish aggregation. It is not yet understood whether fish	artificial reel effect, therefore, no change to the FEIS is warranted.
	aggregation around wind turbines is the result of increased fish production	
	resulting from the new structure of represents the same biomass now simply	
	this area	
13075 011	The SEIS states that "nile driving activities may affect marine mammals	Section 2.51 and 2.52 of the SEIS provided a discussion of acquisite impacts
13073-011	during foraging orientation migration predator detection social	on marine mammal species including the NARW Further details regarding
	interactions, or other activities (Southall et al. 2007). Whales would be	acoustic effects to these species were provided in Appendix E of the SEIS
	displaced up to 6 hours per day during jacket installation. Thus, foraging	and in the BA submitted to NOA A which can be found at the following link:
	displaced up to 6 hours per day during jucket instantion. Thus, foruging disruptions would be temporary and are not expected to last longer than a	https://www.hoem.gov/Vinevard-Wind-Consultation-Documents/
	day." "Noise from nile driving would occur during installation of	Cumulative impacts were further considered in the September 11, 2020
	foundations for offshore structures for 4 to 6 hours at a time over a 6- to 12-	Biological Oninion issued by NMFS. The Biological Oninion concluded that
	vear period." Given the poor stock size of the federally-endangered NARW	the proposed action may adversely affect but is not likely to icopardize the
	(NARW) (approximately 411 individuals as of 2019 NOAA update) and the	continued existence of threatened and endangered species. Future offshore
	ongoing unusual mortality event (2017-2020), major negative impacts to	wind projects will require separate ESA Section 7 consultation, and a
	NARWs specifically are possible, as there are significant concerns about	cumulative effects analysis will be completed based on the best available
	additional anthropogenic and ecosystem changes adversely impacting this	information. Additionally, the Section 3.4.2 and Appendix D of the FEIS
	depleted population.	include comprehensive mitigation and monitoring measures that would be
		implemented to avoid, minimize, and mitigate adverse impacts to marine
		mammals, specifically the NARW. These measures include, but are not
		limited to avoidance of peak NARW presence, enhanced detection and
		mitigation measures for NARWs, use of sound attenuation technologies, use
		of Protected Species Observers (PSOs), Passive Acoustic Monitoring (PAM),
		soft start procedures, shut down procedures, and other measures. Such
		conditions can be considered further for their applicability to avoid or

Index	Comment Text	Response
Number		
		minimize impacts to NARWs during the environmental review of future
12075 012		orishore wind projects.
130/3-012	NAR w are listed as endangered under the Endangered Species Act and the	Broizet on marine mammals, including the NARW. A detailed analysis of
	WDAs assure within on area of year round right whole presence in the	Froject on marine manimals, including the NARW. A detailed analysis of
	w DAS occur within an area of year-round right whate presence in the	impacts to ESA listed species, including the NARW is provided in the
	northern half of Statistical Areas 557 and 520. The presence of NAR ws	Additionally, the Section 2.4.2 and Amonday D of the EEIS include all the
	increasing since at least 2016 (Poherts Duke and Entre IEC, 2010). The	Additionally, the Section 5.4.2 and Appendix D of the FEIS include all the
	areas south of Martha's Vineward and Nantucket are particularly important	implemented to avoid minimize, and mitigate adverse impacts to morine
	for NAPW growth reproduction and survival due to the occurrence of high	mammale specifically the NAPW. These measures include, but are not
	concentrations of a linid-rich conepod (Calanus finmarchicus) on which	limited to avoidance of neak NARW presence use of sound attenuation
	NARWs feed (Pendleton et al. 2012) Thus even temporary disruptions to	technologies use of PSOs PAM soft start procedures shut down
	foraging migration or social interactions could contribute to declining health	procedures, and other measures
	and a single death of a NARW could have population level effects RIDEM	
	commends the implementation of soft start procedures and [marine mammal]	
	PSOs, as required by National Oceanic and Atmospheric Administration	
	(NOAA).	
13075-014	Four sea turtle species (leatherback - Dermochelys coriacea, loggerhead -	A detailed analysis of impacts to ESA listed species was provided in the
	Caretta caretta, Kemp's ridley - Lepidochelys kempii, and green - Chelonia	revised Biological Assessment that was submitted to NOAA, which can be
	<i>mydas</i>) occur within the Vineyard Wind WDA and coastal waters off Rhode	found at the following link: https://www.boem.gov/Vineyard-Wind-
	Island and Massachusetts. All species of sea turtles are protected under the	Consultation-Documents/, as well as the Biological Opinion issued by NMFS
	Endangered Species Act (ESA); green and loggerhead turtle distinct	on September 11, 2020. Section 3.5.2 and Appendix D of the FEIS have been
	population segments are listed as threatened under the ESA and Kemp's	updated to include modifications and/or additional mitigation and monitoring
	ridley and leatherback turtles are endangered. RIDEM staff agree that	measures that could be implemented to avoid, minimize, and mitigate adverse
	impacts to turtles from pile driving noise may be moderate due to the overlap	impacts on sea turtles including the use of Protected Species Observers
	in seasonal migrations and the proposed timing of wind farm construction.	(PSOs), and soft start procedures, and other measures. Additional mitigation
	However, use of soft start procedures and protected species observers may	and monitoring measures may arise from consultations and coordination with
	help to mitigate these impacts.	Federal and State resource agencies. These additional mitigation measures
		will be considered by decision makers and could be adopted in the Record of
12075 015		Decision and required as conditions of approval.
130/5-015	RIDEM strongly recommends that BOEM select Alternative D2 – East-West	Section 2.5 of the FEIS has been added which includes the agency-preferred
	and One-Nautical Mile Wind Turbine Layout alternative for the following	alternative.
	reasons: a. This recommendation stems from guidance from the Rhode Island	
	DIMEC members "recommend to the Director of DEM and CBMC that all	
	wind nower lesses off southern New England he required to have turbings set	
	in an east west pattern with 1 nm of spacing to minimize the negative	
	In an easi-west pattern with a min of spacing to minimize the negative	

Index	Comment Text	Response
<u>Number</u> 13075-016	RIDEM strongly recommends that BOEM select Alternative D2 – East-West and One-Nautical Mile Wind Turbine Layout alternative for the following reasons b. Alternative D2 is also supported by the United States Coast Guard, as described within the Final Report: The Areas Offshore of Massachusetts and Rhode Island Port Access Route Study (MARIPARS) (USCG-2019-0131). The Final MARIPARS recommends: i. "That the MA/RI WEA's turbine layout be developed along a standard and uniform grid pattern with at least three lines of orientation and standard spacing to accommodate vessel transits, traditional fishing operations, and search and rescue (SAR) operations, throughout the MA/RI WEA. The adoption of a standard and uniform grid pattern through BOEM's approval process will likely eliminate the need for the USCG to pursue formal or informal routing	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13075-017	measures within the MA/RI WEA at this time." RIDEM strongly recommends that BOEM select Alternative D2 – East-West and One-Nautical Mile Wind Turbine Layout alternative for the following reasons c. Selection of a uniform grid pattern that is contiguous among abutting lease areas (as committed to by the developers Equinor, Mayflower Wind, Ørsted/Eversource, and Vineyard Wind on a letter to the USCG dated November 1, 2019) will improve fishing access within the turbine array and may reduce risk of allision or collision due to more logical navigation patterns.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. The FEIS includes BOEM's Preferred Alternative as well as an assessment of potential impacts and mitigation measures. Section 3.10.2.4 discusses impacts of the uniform grid pattern and increased spacing between WTGs for Alternative D2; therefore, no change to the FEIS is warranted.
13075-018	Fishing within the Vineyard Wind WDA has been demonstrated to occur primarily in an E-W pattern based on Vessel Monitoring System (VMS) data (SEIS Figure 3.11-1, appendix B.2). This pattern was described to Vineyard Wind on many occasions by the Rhode Island Fishermen's Advisory Board (FAB) and the RIMFC prior to development of the Vineyard Wind Draft Environmental Impact Statement (DEIS) and has now been confirmed by NOAA through analysis of VMS data. Historically, mobile gear fishermen towed gear in a roughly E-W pattern (along loran-C lines), while avoiding fixed gear (e.g., lobster pots) set on the 0 and 5 loran-C lines; this is primarily driven by the Rhode Island Squid, Mackerel, Butterfish fishery (SEIS Figure 3.11-6). This informal agreement between commercial fishery sectors prevented conflicts between mobile and fixed gear fisheries while allowing both to operate fully within the area.	Section 3.11.2.4 of the SEIS includes a discussion about this informal agreement between the mobile and fixed gear fisheries; therefore, no change to the FEIS is warranted.
13075-019	A 1 nm E-W and N-S grid pattern should allow for some vessels to continue towing gear in an E-W fashion between turbine rows, while fixed gear could be set closer to the turbine foundations.	Section 3.11.2.4 of the SEIS addressed that wider spacing would improve maneuverability and the ability to deploy mobile and fixed gear given the east-west orientation (only Alternative D2) and increased spacing between the WTGs except for some commercial fisheries in the northern portion of the WDA.; therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
13075-020	RIDEM strongly recommends that BOEM select Alternative D2 – East-West	Section 2.5 of the FEIS has been added which includes the agency-preferred
	and One-Nautical Mile Wind Turbine Layout alternative for the following	alternative.
	reasons d. This alternative could also be combined with Alternative F to	
	incorporate a vessel transit lane, as recommended by the Responsible	
12075 021	Offshore Development Alliance (RODA).	TT1 1 0
13075-021	RIDEM agrees with the conclusion that the presence of structures (navigation	Thank you for your comment.
	hazard and allisions; entanglement, gear loss, gear damage; space use	
	conflicts) has the potential to cause moderate to major impacts to commercial	
	and recreational fisheries.	
13075-022	Rhode Island is home to the most heavily-affected port: Little Compton, with	Thank you for your comment.
	22% exposure to full buildout of all lease areas (SEIS Figure 3.11-4,	
	appendix B.2). While this is a small portion of exposure relative to other port	
	values, it demonstrates that impacts are not evenly distributed. Rhode Island	
	also has the port with the second largest average annual revenue exposed:	
	Port Judith, at \$2.4 million annually. This validates the need for	
	comprehensive mitigation plans for all individual projects moving forward,	
	in addition to the existing Vineyard Wind agreement with the FAB.	
13075-023	The RIDEM understands why vessel trip reports (VTR) were used to assess	Section 3.10.1 of the FEIS was updated to include a RIDEM analysis using
	economic exposure to the fishing industry of development in all lease areas.	VMS data to provide estimates of the fishing activity in the WLA.
	However, given that VTRs, and other fishery-dependent data sources, were	
	not designed for the purpose of characterizing the location of fishing activity,	
	multiple data sources should be considered Vessel monitoring systems	
	(VMS) provide much more accurate and frequent location information than	
	self-reporting on VTRs. VMS can be linked to VTR and then to dealer	
	reports to determine landings values from given areas. NOAA has the ability	
	to link these datasets through the Data Matching and Imputation System	
	(DMIS) [, which] can link VTRs, VMS, Observer Data, NOAA Vessel	
	Permit data, and other NOAA datasets. Other analyses using VMS already	
	exist to estimate exposure (e.g., RIDEM 2017) and methods (detailed code)	
	have been provided to allow for incorporation of new data.	
13075-024	The analysis performed to analyze VTR data and understand fishery	Section 3.11.1.1 and 3.11.2 of the SEIS discusses qualitative impacts from
	exposure only includes the areas to be directly developed. Exposure is	increased vessel traffic, space use conflicts, and the availability of targeted
	calculated as the estimated loss if no fishing were to occur within the wind	fish species during construction; therefore, no change to the FEIS is
	lease areas, which is unlikely; hence it is considered exposure, not loss.	warranted.
	Nevertheless, this approach does not address potential losses associated with	
	crowding in areas outside of WDAs or potential avoidance of development	
	areas by target species during certain components of construction (e.g., pile	
	driving).	

Index	Comment Text	Response
Number		
13075-025	If squid avoid the construction zone and nearby areas during pile driving, which could occur over ten years for full buildout of the WDAs, reduced catch for squid trawlers may occur.	The FEIS discusses qualitative and quantitative impacts to the squid fishery throughout Section 3.10 (Commercial Fisheries and For-hire Recreational Fishing), including potential impacts from construction and projected revenue exposure over 10 years during the build out of future offshore wind development. Section 3.10.2 and Appendix D of the FEIS have been updated to discuss potential additional mitigation including daily two-way communication during construction in order to reduce conflict with the commercial squid fishery in the spring and summer.
13075-026	RIDEM also agrees with the conclusion that there may be moderate impacts on commercial fisheries as management adjusts to new data and potential changes to fisheries operations; this is tied directly to probable major impacts to federal scientific surveys. RIDEM Division of Marine Fisheries (DMF) staff have concerns about adverse impacts to scientific surveys used to asses status of managed species (targeted and protected species alike).	The SEIS addresses these issues throughout Section 3.11.1.1 and 3.11.2 (Commercial Fisheries and For-hire Recreational Fishing), as well as Section 3.14 (Other Uses, Scientific Research and Surveys), and Section 3.14.2 addresses potential project-related and cumulative impacts to scientific research and surveys in detail. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no change to the FEIS is warranted. BOEM is funding a process to begin to develop a strategy with NMFS to evaluate the scientific research and surveys that would be affected by offshore wind development: https://www.boem.gov/sites/default/files/documents/environment/environme ntal-studies/AT%2020-x07.pdf
13075-027	The National Marine Fisheries Service (NMFS) Northeast Fisheries Science Center will lose survey grounds for their bottom trawl survey as projects are developed, and aerial surveys for marine mammals may also be unable to effectively spot and identify marine mammals within wind farm areas due to increased survey height. Loss of survey grounds may make determining stock status more difficult, by increasing uncertainty in assessments, potentially leading to more restrictive fishing regulations. Scientific surveys may need to be revised, restructured, or supplemented with additional surveys (e.g., industry supported surveying).	The FEIS addresses these issues throughout Section 3.12 and has been updated to include mitigation measures to address survey effects. Appendix D of the FEIS has been updated as well. BOEM is funding a process to begin to develop a strategy with NMFS to evaluate the scientific research and surveys that would be affected by offshore wind development: https://www.boem.gov/sites/default/files/documents/environment/environme ntal-studies/AT%2020-x07.pdf.
13075-028	BOEM argues that impacts to birds from increased foraging opportunities (due to the reef aggregation effect) will be moderate negative or positive, but it is unclear whether they think moderate negative or moderate positive effects are more likely: "Recent studies have found increased biomass for benthic fish and invertebrates, and possibly for pelagic fish, marine mammals, and birds as well (Raoux et al. 2017; Pezy et al. 2018; Wang et al. 2019), indicating that offshore wind farms can generate beneficial permanent impacts on local ecosystems, translating to increased foraging opportunities for individuals of some marine bird species. BOEM anticipates that the presence of structures may result in permanent beneficial impacts.	Section A.8.3.1 of the FEIS provides an updated discussion of potential impacts arising from the presence of structures including the acknowledgement that there is a large amount uncertainty around bird response to offshore wind facilities due to the novelty of this type of development on the Atlantic OCS. Monitoring studies would be able to determine more precisely any changes in bird behavior.

Index	Comment Text	Response
Number		
	Conversely, increased foraging opportunities could attract marine birds,	
	potentially exposing those individuals to increased collision risk associated	
	with operating w10s. If the uncertainty surrounding this assessment is	
12075 020	Targe, it should be stated as such.	The set second state by Martin and Share (2010) discusses the sector tight for
130/3-029	For this analysis, based on the assumption that structures would be spaced 1	three gravity of hinds to callide with terrestrial neuron lines. The authors show
	nautical mile apart, ample space between wirds would allow birds that are	that these three gracies (V of Dustend, hus grand, and white start) may have
	abanging course or to make minor course corrections to avoid operating	difficulty recognizing obstacles in front of them when shifting their field of
	WTGa "Con migratory birds and sochirds observe rotating turbing blades	unificative recognizing obstacles in front of them when similing them field of view to the ground while in flight. In contrast Dashalm and Vahlart (2005)
	well enough to actively avoid the swept area? Martin (2011) contends that	show that common eiders and geese avoided the Nysted Wind Form in the
	birds in flight may predict that the airspace sheed of them is not cluttered	Baltic See offichere of Denmark Each year 200,000 common eiders and
	when they are in the presence of manmade artefacts like wind turbines. Even	10,000 geose pass through the study area each autumn (Deshalm 2006)
	if they are looking forward, they may not be able to see obstacles because	Reder tracks of migrating flocks showed a substantial avoidance response
	they cannot predict obstructions. If they cannot effectively observe moving	While a larger proportion of flocks entered the wind facility at night
	turbine blades avoidance becomes less likely	individuals appear to have counteracted the notential higher collision risk by
		remaining a greater distance from individuals turbines (Desholm and Kahlert
		2005). Overall, of all the individuals observed in the study area less than 1
		percent close enough to the WTGs to be at risk for collision.
13075-030	The inclusion of up to 100 miles offshore for potential tree bat occurrence is	As discussed in Section A.8.4.1 of the SEIS, existing data from
	logical, as multiple species have demonstrated the ability to fly considerable	meteorological buoys provide the best opportunity to further define bat use of
	distances (up to 130 km) offshore during migration (Peterson et al. 2016).	open-water habitat far from shore where Vineyard Wind 1 would site the
	However, the assertion that impacts will be negligible because bats use of	proposed Project WTGs. Despite significant distance from any suitable
	offshore habitat is limited is unsubstantiated within the SEIS.	terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected
		bats; however, detection rates were the lowest at these sites and use was
		sporadic when compared to sites located on offshore islands (Stantec 2016).
		Therefore, no change to the FEIS is warranted.
13075-031	Offshore [bat] habitat use may be limited to migrations, but mortality during	Section A.8.4.1.1 of the FEIS has been updated to include a discussion of
	migrations may be significant, as migratory bat species are disproportionately	bats being attracted to WTGs. As discussed, there appears to be some level of
	affected by wind turbines because they appear to be attracted to turbine	attraction to onshore WTGs, and several authors (e.g. Kunz et al. 2007,
	structures (USGS 2014).	Cryan and Barclay 2009 and Cryan et al. 2014) have provided some
		hypothesis as to why this the case. However, to date, no definitive conclusion
		regarding this apparent attraction has been documented, despite extensive
		studies at onshore wind facilities. Further, Section A.8.4.2 and Appendix D
		of the FEIS includes updated mitigation and monitoring measures that would
		including deployment of acoustic bat detectors on a subset of WTCs and/or
		ESP to refine our understanding of bat use of the OCS and WDA
		Deployment configuration and number of detectors would be determined in
		consultation with applicable stakeholders. Additional mitigation and
		consultation with applicable stateholders. Additional integation and

Index	Comment Text	Response
Number		
		Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13075-032	Few studies have monitored bat activity far offshore and numbers of bats utilizing the WDAs during migration are not known.	An updated discussion of bat use of open water habitats, as described in Stantec (2016) is provided in Section A.8.4.1.1 of the FEIS. Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13075-033	Moreover, monitoring of mortalities associated with offshore wind farms is challenging, as injured or deceased bats fall into the water and may not be documented. The University of Rhode Island is conducting ongoing research funded by BOEM on bats at the Block Island Wind Farm (Using Nanotags to Measure Shorebird and Bat Responses to Offshore Wind Turbines (AT 17- 01)), but results are not available at this time.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13076-048	Clean energy, fair wages, many jobs - just what our country needs right now!	Thank you for your comment.
13076-105	We need clean energy and the jobs this will bring.	Thank you for your comment.
13076-140	Offshore wind projects will create huge numbers of jobs, and also huge amounts of clean and non-polluting energy. Please approve the Vineyard Wind 1 project. Thank you for your consideration.	Thank you for your comment.
13076-300	We can not overlook Wind Power and the jobs it would create.	Thank you for your comment.
13076-379	What a wonderful thought - we can move away from fossil fuels, create jobs and grow the economy all with this plan.	Thank you for your comment.

Index	Comment Text	Response
Number		
130/6-486	I ne planet shouldn't have to wait for you to act. Act now! And if you do,	I nank you for your comment.
	for my grandshildren, and future generations	
12076 516	I oppression the therewerk englysis done into the Vineward Wind Project. If the	Thenk you for your comment
13070-310	appleciate the thorough analysis done into the vineyard wind Floject. If the	Thank you for your comment.
	the adverse ones, please approve the project	
13076-523	We need jobs and we need clean energy. This is a win win	Thank you for your comment
13076-523	You are protecting right whales Good Now redesign the blades so they will	Section A 8.3.2 and Annendix D of the FEIS include undated mitigation and
15070-557	be seen by the birds, thus preventing thousands of bird slaughters annually	monitoring measures that would be implemented to avoid minimize and
	The bird population is decreasing at alarming rates birds of all kinds and we	mitigate adverse impacts on birds. These measures include, but are not
	cannot tolerate any more kills. This is so important and I ask you to take my	limited to installation of bird deterrent devices use of ADIS installation of
	remarks seriously. Thank you for your attention	digital VHF receivers and acoustic monitoring devices to estimate the
	remarks serieusly. Thank you for your allement.	exposure of ESA-listed species and other migratory birds, preparation of a
		post-construction monitoring plan, and other measures.
13076-592	Protect the advantage that an offshore wind energy industry gives to our	Thank you for your comment.
	nation's economy by issuing a decision to proceed with Vineyard Wind 1.	
13076-661	It is past time for the U.S. to step up to the plate to develop fossil-free, non-	Thank you for your comment.
	polluting energy sources. These offshore wind projects, if done right, will	5 5
	create jobs, protect wildlife, and begin to repair the damage done to low-	
	income populations near fossil-fuel power plants. Please approve the	
	Vineyard Wind project.	
13076-740	This is the best thing, the Vineyard Wind Project, for our nation, for jobs, for	Thank you for your comment.
	the future!	
13076-831	Jobs lost to Covid-19 can be mitigated by creating the many jobs needed to	Thank you for your comment.
	get wind energy set up now.	
13076-884	It is my firm belief that green energy jobs not only stimulate economy but are	Thank you for your comment.
	also necessary to combat global warming.	
13076-939	We need more wind power which will not contribute pollution to the air we	Thank you for your comment.
100-60-51	breathe.	
13076-951	This is a no brainer! A way to create jobs and to lessen pollution.	Thank you for your comment.
13076-986	Harnessing the natural forces on Earth like Wind Energy, is an inexpensive	Thank you for your comment.
	and positive way to create good paying jobs as well and enhancing the	
12076 002	quality of life on Planet Earth for everyone.	
13076-993	LET Vinyard Wind get on with it! The developers have made landmark	Thank you for your comment.
	commitments to 1) protect the North Atlantic Right Whale, and 2) create 200	
1207(1020	one-mile-wide sale navigation lanes.	
130/6-1030	I have hirde from flying into them tool!	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring many that would be implemented to avoid minimize $-\frac{1}{2}$
	save onds from flying into them too!!	monitoring measures that would be implemented to avoid, minimize, and
		mugate adverse impacts on birds. These measures include, but are not

Index	Comment Text	Response
Number		
		limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the
		exposure of ESA-listed species and other migratory birds, preparation of a
		post-construction monitoring plan, and other measures.
13076-1107	In the coming years for infrastructure, the only way the constituents of the	Thank you for your comment.
	US will continue into the next century is if we invest heavily in jobs centered	
	around giving people clean water and free renewable energy.	
13076-1134	With the Corona Virus, we know people with asthma, and breathing issues	Thank you for your comment.
	are more susceptible to a severe impact, and we know air pollution is a major	
	contributor to asthma. It is past time to move our country to clean, renewable	
	energy.	
13076-1138	I'm a conservative business owner and strongly feel we should aggressively	Thank you for your comment.
	pursue wind energy development both on and off shore and would be happy	
	to have some in 'my back-yard.' Accordingly, we Must insure that these	
	projects are environmentally conscious with their development and	
	implementation.	
13076-1184	It is time to switch to wind and solar. Temperatures globally indicate that we	Thank you for your comment.
	have little time before our climate tips to runaway warming. We need wind in	
	the right locations and Vineyard Wind is in one of these good locations.	
13076-1185	It is only through the implementation of projects like this that we will be able	Thank you for your comment.
	to reduce the extent of impending impacts of the current/on-going climate	
	crisis and at the same time create much needed green energy jobs and reduce	
	the impacts of the pollution afforded to the low income communities typical	
	of people of color and indigenous people. The time to act to approve this	
	project is well overdue. Please approve this project now.	
13076-1206	Please support the launch of a new offshore wind industry that can create	Thank you for your comment.
	jobs and a thriving clean energy economy.	
13076-1210	Please approve the wind projectit's the right choice for our planet and will	Thank you for your comment.
	provide much needed jobs. Thank you Wendy McGovern	
13076-1224	Let's create jobs and clean energy together to move into the future with a	Thank you for your comment.
	positive step and bring positivity back into our great nation! Trump has	
	FAILED this country by 'rolling back' and deregulating. We need to	
	overcome this failure together.	
13076-1235	Please support the Vineyard Wind 1 as an environmental as a solution	Thank you for your comment.
	energy, job growth, climate change and pollution. Thank you	
13076-1237	With so many unemployed, please do all you can to create and promote	Thank you for your comment.
	healthy jobs that keep our planet healthy.	
13076-1259	We need clean energy now and the jobs that go along with it! It will help our	Thank you for your comment.
	health and economy at the same time.	

Index	Comment Text	Response
Number		
13076-1292	Think about creating thousands of clean energy jobs as well as the economic impact in doing the right thing.	Thank you for your comment.
13076-1295	Let's continue the clean up of Mother Earth that started as a wonderful side	Thank you for your comment.
100,012,0	effect of the CoVid - 19 shutdown. Wind power is as unobtrusive as it comes	
	- clean, quiet, productive and not bad looking. It will provide jobs and the	
	power we need, in a safe clean way.	
13076-1305	Any source of power has its pluses and minuses and wind energy has more	Thank you for your comment.
	positives than fossil based fuels.	
13076-1323	Not only is it economically positive, but also it's healthier for us and does not	Thank you for your comment.
	damage wildlife. I have wind energy and have had it for almost 10 years. It's	
	been a positive experience.	
13076-1407	We should put as much energy as possible into initiatives like this that can	Thank you for your comment.
	improve not only our environment, but our economy too.	
13076-1445	What better way to provide clean energy than to harness A natural resource -	Thank you for your comment.
	wind power. It's so much better for the environment than burning fossil fuels.	
13076-1453	This is exactly the right moment to encourage renewable energy projects with	Thank you for your comment.
	the smart jobs and healthier environment they bring! Good for the economy,	
	good for the world!	
13076-1488	What a great way to stimulate the sagging economy. Jump start a new long	Thank you for your comment.
	term industry that also helps the entire area to reduce greenhouse gasses and	
	access energy for all its needs	
13076-1491	If the vineyard wind project is approve then we will have diminished climate	Thank you for your comment.
	change on the east coast by a great margin. Also the project will provide jobs	
	for people in need. This is a win win situation if you please approve the	
12076 1517	vineyard wind project.	
13076-1517	Respect my choice to have clean air. I lost a brother to lung cancer and he	I hank you for your comment.
1207(1522	never smoked.	
130/6-1522	I hanks to changes in environmental laws, the skies are now brighter and	I hank you for your comment.
	vind anoral	
13076 1550	Offshore wind generation is a great idea. The wind is free, no cost to	Thank you for your comment
15070-1550	taxpavers!	
13076-1552	If we build solutions that provide renewable resources like energy we can	Thank you for your comment
15070 1552	become independent of outside interference in our economy. Just do it	Thank you for your comment.
13076-1588	We have been learning more and more that we must think outside of the so-	Thank you for your comment.
12070 1200	called box in order to create new jobs and creative, intelligent and innovative	
	projects such as Vinevard Wind will serve to not only provide jobs but to	
	help hugely in our efforts to be environmentally responsible!	

Index Number	Comment Text	Response
13076-1592	Creating jobs, protecting fisheries, not endangering recreational and other "shore jobs" which could negatively be impacted by offshore drilling for petro chemicals, and improve air quality by eliminating emissions from fossil fueled energy plants.	Thank you for your comment.
13076-1646	Just what America needs more wind farms for power without pollution.	Thank you for your comment.
13076-1648	To promote American jobs and energy security, and to mitigate the effects of climate change, we must increase American production of energy from non-fossil sources.	Thank you for your comment.
13076-1696	Offshore wind development will also tap into the skills of workers in existing U.S. oil and gas companies, which have decades of experience developing ocean energy infrastructure. A study by the Workforce Development Institute found that 74 different occupations(Opens in a new window) are needed during the various stages of planning, development and operation of offshore wind farms. And as offshore wind continues to grow, costs will continue to fall, saving money for families and businesses alike. 'There is enormous opportunity, especially off the East Coast, for wind. I am very bullish,' said former Interior Secretary Ryan Zinke(Opens in a new window). 'Market excitement is moving towards offshore wind. I haven't seen this kind of enthusiasm from industry since the Bakken shale boom.'	Thank you for your comment.
13076-1714	It is imperative that we make the switch over to clean energy sooner rather than later. The United States of America should be the one setting the example for other countires to follow. Wind energy is an excellent resource to be investing in now, as it would save is money and lives later on that may be lost due to the consequential environmental damage of fossil fuels and the jobs lost in a dying industry.	Thank you for your comment.
13076-1737	Good new jobs! And clean energy. What's not to like. I vote for approval.	Thank you for your comment.
13076-1780	Create new job, make use of a totally renewable resource, bring "justice for all" and eliminate pollution. What more could you want'	Thank you for your comment.
13076-1812	This will be a great boon to the economy, create thousands of well paying jobs and move us forward toward carbon neutrality, all of which we urgently need.	Thank you for your comment.
13076-1880	We need the jobs and the clean energy that this project will create while boosting the wind energy throughout the country.	Thank you for your comment.
13076-1915	Jobs! Energy! Come on, get this industry going!	Thank you for your comment.
13076-1949	It is so important to our future that we work now to build up sustainable energy sources and invest in creating new energy jobs. This project will not only generate clean energy, and reduce our reliance on foreign fuel, it will also create new jobs for thousands of people. It's good for the earth, good for our health, and good for hard-working Americans.	Thank you for your comment.

Index	Comment Text	Response
Number		
13076-1951	Clean energy jobs will help the economy while helping our environmental.	Thank you for your comment.
13076-1961	Its time for the US to move to clean energy to mitigate climate change, create	Thank you for your comment.
	jobs and to provide ALL our citizens with clean air and water.	
13076-1970	Please approve the Vineyard Wind Project. We urgently need clean energy,	Thank you for your comment.
	clean air	
13076-2001	Clean energy that is also promoting social, economic, and environmental	Thank you for your comment.
	justice is exactly what our country and the world need. Please make it a	
	reality as soon as possible.	
13076-2042	We need to create new sources for electricity so that we can reduce the levels	Thank you for your comment.
	of atmospheric carbon dioxide so that our planet does not overheat!	
13076-2080	The economic boost from the offshore wind industry could not come at a	Thank you for your comment.
	better time. Please approve the Vineyard Wind project and help kickstart an	
	economic revival that is forward looking and creates jobs!	
13076-2084	We need o give up fossil fuels now for a cleaner environment for future	Thank you for your comment.
	generations. This plan for wind power will bring us closer to cleaning our air	
	while creating new jobs. Please Vote in the affirmative for this.	
13076-2104	Wind energy is a free resource, practically. It has very few of the polluting	Thank you for your comment.
	downsides of coal, oil, gas and nuclear energy supplies. It is very	
	shortsighted of us not to use this resource and slow the rise of atmospheric	
	heat around the globe.	
13076-2118	We own a property in a New Jersey and feel that this project is important,	Thank you for your comment.
	locally, nationally and globally. Windmills are effective and beautiful.	
13076-2122	I'm asking you to approve the Vineyard Wind 1 and jumpstart the offshore	Thank you for your comment.
	wind industry, because I'm interested in the development of a clean energy	
	economy as well as investing in the progress of communities underserved by	
	economic opportunities.	
13076-2135	Renewable energy is the future, and can create more jobs and less emissions	Thank you for your comment.
	for the United States	
13076-2163	The technology is already present and would do wonders to the ecology of	Thank you for your comment.
	the planet. I plan to be a bit longer and value clean air.	
13076-2168	Please!! We need new industry in this country, and we need clean, renewable	Thank you for your comment.
	energy. Put the pieces together and make this happen!!	
13076-2175	As we have seen with COVID-19, our world can change in the blink of an	Thank you for your comment.
	eye. Alarming new developments are in the news every day about the	
	progression of global climate change. There is no time to wait! When we	
	pass the climate change tipping point it will be too late. We must act now	
	with renewable energy projects' and many other programs to reduce carbon in	
	the atmosphere.	

Index Number	Comment Text	Response
13076-2183	The Vineward Wind project is a win for everyone. This is an opportunity to	Thank you for your comment
15070-2105	take advantage of strong, reliable winds to generate clean power while at the	Thank you for your comment.
	same time minimizing the negative impacts on offshore ecosystems. This is	
	exactly the type of project the US needs to lift us beyond the long lasting	
	economic stranglehold COVID 19 places on the US economy. I cant see this	
	project in conflict with the environment or any other industries. At last we	
	can support a major US industry we can all feel good about!	
13076-2189	We should be make an all-out effort to decrease our CO2 emissions to reduce	Thank you for your comment.
	climate change. A major part of that should be switching as fast as possible to	
	renewable energy sources and away from fossil fuels. Our country should	
	become a leader in renewable energy technology that is creating many more	
	jobs than there are in the fossil fuel industry. Our country should invest in	
	this and become a leader in renewable energy technology that is creating	
	many more jobs than there are in the fossil fuel industry. Renewable energy	
	sources instead of the fossil fuel industry are the ones we should be	
	supporting.	
13076-2201	For the health of us and our descendants please support this project.	Thank you for your comment.
13076-2203	Please start protecting the environment and wildlife, including adding jobs to	Thank you for your comment.
	help with this rather than supporting polluting and destructive corporations	
	and big businesses.	
13076-2236	just do it to styart cleaning the air just a wee bit	Thank you for your comment.
13076-2248	We need jobs and we need clean energy. It's a no brainier. Do the right thing.	Thank you for your comment.
13076-2311	Clean energy that is safe for everyone and good and creates good job and will	Thank you for your comment.
	help economy tremendously!	
13076-2321	Due to the economic impact of the COVID-19 pandemic, now more than	Thank you for your comment.
	ever, we need to encourage and support new industries with economic	
	potential. Not only will this project provide much needed jobs to help people	
	get back on their feet it will also cut energy costs for people who are	
	struggling financially as a result of this pandemic. Please do the right thing	
12076 2222	for hard- working Americans and approve this project.	
13076-2323	It's simple - put people to work doing things that create sustainable solutions.	Thank you for your comment.
130/6-2325	I his is a fantastic way to create jobs and reduce carbon footprint.	Thank you for your comment.
130/6-2330	we need to invest in clean energy projects. Not only to offset climate change,	I nank you for your comment.
	but also so people can benefit from the cleaner air we have enjoyed while the	
12076 2407	world took a pause during the pandemic.	
130/6-240/	without environments there is no me; without good environments there is no	I nank you for your comment.
1	quality of life. The Vineyand Wind project contributes to our quality of life in	

Index	Comment Text	Response
Number		
13076-2414	Thank you for your kind consideration. I believe this is an important part of	Thank you for your comment.
10076 0440	our energy security.	
13076-2443	This a great project and should be approved. The blades will not be in the	Thank you for your comment.
12076 2445	way of most birds.	TT1 1 C
13076-2445	please approve the project to help all of our communities on land and in the	Thank you for your comment.
	sea. slashing climate and health-damaging pollution. We need you to make it	
12076 2446	happen.	
13076-2446	Mr. Bernhardt, Our country and our planet are suffering through a crisis of	Thank you for your comment.
	climate and we must do our parts to ensure that our country and planet	
	survive. Developing the offshore wind Industry will lower pollution, protect	
	wildlife, create tens of thousands of jobs, add billions in economic growth	
	Nin coastal communities and saleguard navigation. Please approve the	
	the North Atlantic Dight Whole, and half to save the planet	
12076 2497	A new off-here wind industry will create iche and e clean energy coordination	Them Is your for your comment
150/0-248/	A new offshore wind industry will create jobs and a crean energy economy.	Thank you for your comment.
12076 2400	Just what we need today.	Thank you for your comment
13070-2490	hetter. Vou're all wasting time and time is what we haven't got	
13076-2501	New jobs get it Green energy get it Launching America into the future and	Thank you for your comment
15070 2501	making us a leader of the energy industry. Get It!	
13076-2513	This would be a win-win situation for the economy and environment.	Thank you for your comment.
13076-2545	As a physician, I find this important because of the impact clean air has on	Thank you for your comment.
	our health and longevity. In this time of Covidvirus, everything possible has	
	to be done to improve our air quality and reduce the risk of future lung, heart,	
	kidney problems. I highly encourage you to approve the Vineyard Wind	
	project!	
13076-2566	Thank you for considering this important issue that will create thousands of	Thank you for your comment.
	clean energy jobs and launch a prosperous, responsible offshore wind	
	industry for future generations.	
13076-2610	Clean energy will save our planetand create good jobs, it is a win win so	Thank you for your comment.
	please approve and support this smart step toward a better future!	
13076-2613	Unlike oil drilling, wind power does not represent an environmental disaster	Thank you for your comment.
	in the event of a mishap on the rig in the ocean. It's time to abandon bug oil	
	and move our country and the world into better energy solutions!	
13076-2617	Life during COVID-19 has revealed two things to me: firstly, I've become	Thank you for your comment.
	aware of how vulnerable and subject to change our job market is. Secondly,	
	the empty highways and visibly clearer city air has demonstrated our	
	country's potential to reduce its pollution. Implementing offshore wind	

Index	Comment Text	Response
Number		
	infrastructure will add new employment opportunities, for a good cause.	
	Such a grand development would be a precedent for future efforts.	
13076-2623	Please act promptly and help save our East Coast Communities financial	Thank you for your comment.
	future, help save our air, water and land from pollution, help save lives from	
	disease caused by such pollution, produce jobs and renewal on the East	
	Coast. Please help the Trump administration do something good for a	
	change!	
13076-2626	This could be a win-win: jobs & clean energy.	Thank you for your comment.
13076-2631	Every oceanic windmill means cleaner air for communities of color, less	Thank you for your comment.
	childhood asthma, fewer hospitalizations for acute respiratory attacks, and	
	healing for our overheating planet.	
13076-2644	It's a no-brainer: New jobs AND clean lower-cost energy. What could be	Thank you for your comment.
	easier'	
13076-2650	If we fail to develop offshore wind, we waste a resource that could provide	Thank you for your comment.
	energy and jobs for Americans. Let's not waste it.	
13076-2655	During these times when race and Covid-19 are on the fore front of	Thank you for your comment.
	everyone's minds, it is important to address our air. Black people are 1.5x	
	more likely to live in an area with polluted air and that is not fair. Every	
	person, regardless of race, deserves to live with clean air. Help us make a	
	country we are proud to be a part of that has clean air. We have to uphold our	
100-6666	title of America the beautiful.	
13076-2666	Wind and solar energy are cheap reliable sources of energy, the production of	Thank you for your comment.
	which can employ huge numbers of people. Did I mention that they also do	
12076 2602	not pollute our air and water	
13076-2683	We want clean air and water. Support wind power now!	Thank you for your comment.
13076-2690	Aside from it just being the right thing to do, reducing the use of fossil fuels.	Thank you for your comment.
	The future of the fisheries from Fall River, MA to Downeast Maine are	
	certainly in question. Especially the lobstermen. I have been a NH surfer for	
	close to 40 years and I can say without a doubt the water is getting warmer. It	
	use to be a novelty to wear surf trunks in the summer, maybe getting away	
	with it once or twice in a summer. Now the question is do I wear a wetsuit or	
	just top cover and trunks. My point is lobsters are moving north to colder	
	for isha	
12076 2705	The Vineward project will produce jobs. Jobs that will be lost are fossil fuel	Thenk you for your comment
13070-2703	headed jobs which pollute the air we breathe and contribute to global	i nank you for your comment.
	warming. This country is breaking high temperature records nearly every day.	
	and this year has broken records for the earliest named tropical storms	
	Converting to wind farms will help slow down global warming	
13076-2666 13076-2683 13076-2690 13076-2705	Wind and solar energy are cheap reliable sources of energy, the production of which can employ huge numbers of people. Did I mention that they also do not pollute our air and water' We want clean air and water. Support wind power now! Aside from it just being the right thing to do, reducing the use of fossil fuels. The future of the fisheries from Fall River, MA to Downeast Maine are certainly in question. Especially the lobstermen. I have been a NH surfer for close to 40 years and l can say without a doubt the water is getting warmer. It use to be a novelty to wear surf trunks in the summer, maybe getting away with it once or twice in a summer. Now the question is do I wear a wetsuit or just top cover and trunks. My point is lobsters are moving north to colder waters and there will be a lot of people who know how to run a boat looking for jobs. The Vineyard project will produce jobs. Jobs that will be lost are fossil fuel backed jobs which pollute the air we breathe and contribute to global warming. This country is breaking high temperature records nearly every day and this year has broken records for the earliest named tropical storms. Converting to wind farms will help slow down global warming.	Thank you for your comment. Thank you for your comment. Thank you for your comment. Thank you for your comment.

Index Number	Comment Text	Response
13076-2707	The Vineyard Wind project's developers also made significant commitments towards equity, justice, and labor most notably agreeing to pay fair wages to workers and investing in economic growth and development in	Thank you for your comment.
	communities that have been overburdened by pollution and underserved by economic opportunities.	
13076-2734	This project will improve air quality and pollution, provide good jobs and protect our wildlife. It is truly a win, win, win!! Please support it.	Thank you for your comment.
13076-2744	I care about this wind project both for its help in reducing the climate crisis but also for reducing the inequity that the fossil fuel industry has played a huge role in creating.	Thank you for your comment.
13076-2761	We need more wind energy to power a clean economy and restore a healthy environment and clean air.	Thank you for your comment.
13076-2796 13076-2810	I grew up on an Eastern US coastal island and understand dearly the impact of standard power generation methods on the environment there, as well as the micro-economies that evolve in coastal communities. Given the importance of our coasts, both in terms of environmental resources, beauty, and as population centers for our nation's citizens, I beseech you to continue pushing for EIA finalization. Our country would benefit most heavily in this critical moment from large scale investment into proven green energy infrastructure projects that both provide valuable jobs for the future and help reduce our negative impacts on the environment. We need to replace fossil fuels with renewable energy! Please include siting with birds in mind when the plans are made.	Thank you for your comment. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and
		mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures.
13076-2830	It is imperative that we create jobs in clean energy to both provide needed income and to assist the planet in healing itself for future generations.	Thank you for your comment.
13076-2851	I remember driving into Palm Springs in 1999 and seeing all the windmills. Putting them in the ocean along the east coast 21 years later would be great. JOBS CAN BE CREATED and the whole country and world will benefit from cleaner air. Please approve this project so we can really say the 21st century actions helped save our resources.	Thank you for your comment.
13076-2884	To protect our wildlife, to provide good jobs and to save our planet, please approve the Vinevard Wind Project.	Thank you for your comment.

Index	Comment Text	Response
Number	T_{1} = 11 = 11 = 4 14000 C 114 = C 1 T_{1} T = 1 = 4	
130/0-2909	1 nis could provide up to 14,000 of all types of jobs in virginia and up to	I nank you for your comment.
	the east coast. Thank you!	
13076-2071	We need a good strong offshore wind industry and this company is doing it	Thank you for your comment
15070-2971	right Please approve the Vineward Wind project. Thank you	Thank you for your comment.
13076-2977	Great for jobs, great for the environment, let's get these built!	Thank you for your comment
13076-2977	We are facing unprecedented unemployment and a climate emergency. This	Thank you for your comment
15070-2980	project is positioned to make a positive impact on both fronts!	Thank you for your comment.
13076-2000	Please approve this project for the health of our economy country children	Thank you for your comment
15070-2770	and the future	Thank you for your comment.
13076-3027	Oil industry former employees need the offshore wind jobs that the Vineyard	Thank you for your comment
15070 5027	Wind project will create. The Texas economy downturn will be significantly	Thank you for your comment.
	improved with its passage.	
13076-3053	The Vinevard Wind project will have positive environmental and economic	Thank you for your comment.
1007000000	influence where I live on the West Coast, too! It will be a big win for	
	everyone!	
13076-3055	Responsible development of wind energy is critical to this country's	Thank you for your comment.
	economic future. The US needs to be a leader in green energy, not mired in	
	an industrial and economic system dependent on fossil fuels. I strongly urge	
	you to approve this project.	
13076-3056	Fossil fuels are outdated. Please take leadership and move us into the	Thank you for your comment.
	renewable energy world of the 21st century - clean air, clean water, no	
	greenhouse gases, good jobs. It's a win-win situation!	
13076-3070	Thank you for taking the time to read this message, and I hope you grasp the	Thank you for your comment.
	importance of building up our countries green infrastructure at this critical	
	moment in history.	
13076-3080	The approval of Vineyard project can help lead the world and our nation	Thank you for your comment.
	toward a better future with a sustainable energy source that will not pollute	
100760101	the clean air we all need to breath.	
13076-3101	Please approve the Vineyard Wind Project, which will create jobs as well as	Thank you for your comment.
	add to alternative power necessary for the health of our planet.	
13076-3125	It is time to rebuild our economy by investing in clean energy infrastructure	Thank you for your comment.
12076 2127	Instead of propping up the antiquated energy industry.	
13076-3127	THIS IS A WONDERFUL PROJECT. SO GLAD TO HEAR POWER	I hank you for your comment.
	FROM WIND IS GOING TO BE UTILIZED. DON'T KILL THE BIRDS	
12076 2122	Though! Takinh 22 immediate the strength of the second	The set of the second
130/6-3132	I think it's important to strengthen the economy along with preserving the	I nank you for your comment.
	planet that everyone lives on, im signing this petition to not only benefit	
	mysell but the others that I care about.	

Number 1207/ 2145 L <thl< th=""> <thl< th=""> <thl< th=""> <t< td=""><th></th></t<></thl<></thl<></thl<>	
130/6-3145 Jobs, cleaner planet Why not 'Why not try defending our children and our Thank you for your comment.	
planet Create good paying jobs' I thought you were suppose to Make	
America Great Again, nothing you've done so far is going to do that.	
150/0-5168 I fully support this effort, because it will provide a clean energy source while I hank you for your comment.	
at the same time reading to the creation of a large number of excellent jobs.	TD Dort 595 and
As described in Section 2.1.1.5 of the FEIS, pursuant to 50 Cr	to remove or
otherwise we are helping one problem but cousing another. Diego recycled decommission all installations and clear the coubed of all obst	ruo Tennove of
Thanks. Designs Stephano	separate and
subsequent approval from POEM to retire any portion of the	Proposed
Action in place. If the COP is approved or approved with mo	lifications
Vinevard Wind would have to submit a bond that would be he	ald by the US
government to cover the cost of decommissioning the entire f	acility This
explanation has been added to Section 2.1.1.3 of the FFIS	contry. This
13076-3192 Our economy can continue to grow through projects like these. Thank you for your comment.	
13076-3194 Keep fossil fuels in the ground and jump start jobs in the renewable energy Thank you for your comment.	
sector.	
13076-3214 We need more work and clean energy is an investment that is futurebound Thank you for your comment.	
and can create work for many people. Why are we not investing in this'	
13076-3229 We need renewable energy to help our planet and create new jobs in the Thank you for your comment.	
process!	
13076-3245 We are getting the offshore wind industry going here in Virginia, so more Thank you for your comment.	
worthwhile projects like Vineyard Wind will further grow this sustainable	
and worthwhile industry.	
13076-3248 Do not delay in supporting renewable, clean energy for our nation. Approve Thank you for your comment.	
the Vineyard Wind project to keep our air clean.	
13076-3273 We need to develop all options that replace fossil fuels and that protect our Thank you for your comment.	
environment. This is where we live and if the air becomes polluted, we die.	
130/6-3304 We must invest in clean energy because it is best for the planet AND Thank you for your comment.	
growing industries. Other countries are developing these technologies and we	
are missing out on jobs and technological developments that will put us	
Infiner benind in economic development.	
[150/0-551/] we are now in the fast moment to finally take large action to nait climate [Chapter 3 of the FEIS evaluates the proposed Project's impact	s on
This project needs to be approved, for all of us and more, for the whole	
nins project needs to be approved, for an of us and more, for the whole	
planet. It is great that it also investing in communities that have been	
think it is important that you make sure that it does not harm the ecosystems	
local to it while it is great that it has built in travel corridors for North	

Index	Comment Text	Response
Number	Atlantic Dight Wholes, it is important that you also look at its affects on other	
	change below and above water. And most importantly, that if it effects them	
	species, below and above water. And most importantly, that if it effects them negatively, change the project to improve it, rather than write it off	
	completely. Thank you! This project will be very effective, for once in the	
	right direction	
13076-3320	Green energy is the only thing that's going to address the climate crisis AND	Thank you for your comment
15070 5520	covid 19 crisis by creating new jobs! Act now.	Thank you for your commone.
13076-3323	Vineyard Wind 1 will create 83.000 green jobs and, of course, generate a lot	Section 3.6 of the FEIS has been updated to provide summary projections of
	of clean energy. Lets please proceed with this project and get 83,000 people	regional and national job creation and investment from studies used in the
	working! We need these jobs and we need clean energy.	analysis for the SEIS as well as additional studies
13076-3327	Offshore wind development is absolutely vital to our ability as a country to	Thank you for your comment.
	meet our energy needs in the present and future. The environmental impacts	
	of continuing to heavily rely on fossil fuel resources far outweigh the impacts	
	of even a poorly sited wind farm, but of course, responsible development of	
	energy resources is important, and the Vineyard Wind 1 project is just that -	
	responsible and thoroughly studied. Please support a critical step in our	
	transition to clean, safe, and equitably produced energy by approving	
	Vineyard Wind 1! Thank you!	
13076-3329	Clean energy sources like wind will help with climate change and provide	Thank you for your comment.
	new jobs!	
13076-3340	I need clean air. We must get away from fossil fuels and this project will	Thank you for your comment.
	create jobs and help our economy and air quality	
13076-3344	The Vineyard Wind project promises environmental, economic and social	Thank you for your comment.
	benefits to communities all along the east coast. It's a no-brainer!	
13076-3352	We must make the advances to wind power for our planet. Vineyard Wind	Thank you for your comment.
	and other developments will be an economic boom	
13076-3363	Clean energy using wind and solar are extremely important for our future on	Thank you for your comment.
	this planet which is suffering from CO2, as you know. Off shore wind is	
	indeed an important wave of the future. Please support this technology.	
	Thanks.	
13076-3378	Move forward on offshore wind projects for the east coast, for good jobs,	Thank you for your comment.
	improved economy and what's best for climate, to lower pollution. The time	
	is NOW.	
13076-3383	Please make this happen! We need renewable energy & clean air for our	Thank you for your comment.
10056 0065	children's tuture!"	
13076-3395	Take this step in the right direction for our environment. Abandon a myopic	Thank you for your comment.
	view and vote with our children's children and wild flora and fauna in mind.	
	Please.	
13076-3455	Approve wind power. It's clean and doesn't pollute the atmosphere.	Thank you for your comment.

Index	Comment Text	Response
Number		
13076-3479	Please support this and create desperately needed jobs during these times.	Thank you for your comment.
	This will also help lower pollution in the long run, which we need to support	
	for our grandchildren.	
13076-3494	The Earth needs less CO2 with fossil fuels & more renewable energy as in	Thank you for your comment.
	wind power.	
13076-3501	It's clear to me that massive investment in renewable energy will help to	Thank you for your comment.
	solve two of our biggest problems at the same time, economy and	
	environment. This is a winner and the sooner the better. I do trust the Sierra	
	Club to carefully address the potential problems of marine animal and	
	environmental safety.	
13076-3507	Mother Earth has given us many signs that we need to do a much better job	Thank you for your comment.
	of protecting the environment. Wind power is a way to curtail air pollution.	
13076-3547	You can make a difference. Create jobs for Americans and lead us to a	Thank you for your comment.
	cleaner future!	
13076-3553	One decision could create 83,000 quality clean energy jobs and \$25 billion in	Section 3.6 of the FEIS has been updated to provide summary projections of
	economic output by 2030 while slashing climate and health-damaging	regional and national job creation and investment from studies used in the
	pollution. We need you to make it happen.	analysis for the SEIS as well as additional studies
13076-3582	This will help create jobs and will help the environment. Please support.	Thank you for your comment.
13076-3631	This will also help cleanup the air which increases the risk from Covid	Thank you for your comment.
13076-3643	New Jersey and Rhode Island are already stepping up to the wind energy	Thank you for your comment.
	market, so it's bound to become an important sector to the Northeast. Start	
	making people feel motivated to train for jobs in this sector by endorsing this	
	large employment opportunity.	
13076-3686	We need to create these jobs now and move into the clean energy future.	Thank you for your comment.
13076-3700	We must protect the wells [WHALES] we have left once they are gone they	Thank you for your comment.
	are gone for good they are magnificent mammals and we must stop pollution	
	to preserve this earth	
13076-3706	Windmills are anything but an eyesore! Not only are they an integral part of	Thank you for your comment.
	the energy solution, the design, manufacture, installation and maintenance of	
	them provide jobs. Windmills are smart, iconic and even idyllic. They	
	symbolize technological advancement, modernist thinking and responsible	
	consumption.	
13076-3717	Wind turbine environments at sea will also enhance fish populations not	Section 3.4 of the SEIS discussed the reef effect on finfish, and Sections 3.10
	unlike what we see with offshore oil rigs. Another economic incentive for	and 3.11 discussed that recreational fishing may improve near structures
	commercial and sport fisheries.	offshore. Therefore, no change to the FEIS is warranted.
13076-3720	Some say offshore wind would be unsightly, but I ask, When will we realize	Thank you for your comment.
	we are going to have to make sacrifices if we want to keep using electricity	
	without killing Mother Earth' PLEASE, make this happen in a just and	
	equitable way.	

Index	Comment Text	Response
Number		
13076-3723	Good jobs are needed to restore our economy as well as directed to saving our environment "'	Thank you for your comment.
13076-3728	Now is the time, for new job creation, and environmentally healthy, change.	Thank you for your comment.
	Please look into science data, economy data, to make the best possible	
	decisions for the future of the health of the environment, and ultimately the	
	people. Thank You!	
13076-3734	Offshore wind will create jobs and bring in billions of dollars, both things out	Thank you for your comment.
	economy desperately needs right now.	
13076-3779	This is a well planned project that makes economic sense. Please consider the	Thank you for your comment.
	benefits of making this happen.	
13076-3783	I grew up on Long Island waters & beaches, so, I know how much coastal	Thank you for your comment.
	areas would benefit from clean energy (stopping oil, tar & air pollution), as	
	well as, slowing the rate of coastline submerses, as ocean rises & expansion	
	with & without storms.	
13076-3810	Green jobs are the way of the future. Let the USA lead the way, right now we	Thank you for your comment.
	are far behind other nations.	
13076-3813	We truly need the the jobs from the Vineyard Wind Project. Please help us	Thank you for your comment.
	get them!	
13076-3814	Is the perfect time to create new, renewable energy jobs and infrastructure.	Thank you for your comment.
	So much is in flux in our world use this time! Don't waste your chance!	
13076-3864	This is a win win for the economy, job development and the environment.	Thank you for your comment.
	Please help this industry grow.	
13076-3865	Please move towards skilled American jobs and a cleaner future for our	Thank you for your comment.
	country and the world. Let's invest in green technology and surpass the likes	
	of China.	
13076-3887	Offshore wind energy projects such as Vineyard Wind creates job	Thank you for your comment.
	opportunities and makes clean energy production. It's a win win for the East	
	coast. Please support offshore wind energy initiatives.	
13076-3903	If this will help the economy and create jobs while protecting wildlife as	Thank you for your comment.
	well, then this is a no brainer!	
13076-3904	I hope you create safety measures so birds don't get obliterated by the	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and
	turbines blades turning. Maybe some sort of caging around the entire	monitoring measures that would be implemented to avoid, minimize, and
	structure would be called for.	mitigate adverse impacts on birds. These measures include, but are not
		limited to, installation of bird deterrent devices, use of ADLS, installation of
		digital VHF receivers and acoustic monitoring devices to estimate the
		exposure of ESA-listed species and other migratory birds, preparation of a
		post-construction monitoring plan, and other measures.

Index	Comment Text	Response
Number		
13076-3917	If wind energy helps avoid pollution, provides well paid jobs, helps the	Thank you for your comment.
	underserved, and is promising for the future of human, animal, all earth care,	
	then please move ahead. It's. A win- win choice.	
13076-3998	Clean renewable energy is much better than continuing to use fossil fuels!	Thank you for your comment.
	But please be sure to not interfere with marine life or Birds.	
13076-4054	fuel the economy and jobs and protect mother ear thank youth win win sir	Thank you for your comment.
13076-4055	This is a critically important project proposed by a company that has shown	Thank you for your comment.
	real responsibility and will be creating 10s of thousands of jobs. Our planet is	
	threatened by our reliance on fossil fuels: we need more of these kinds of	
	endeavors to succeed. Please, approve it for the benefit of your own children	
	and grandchildren. Doug Crouse	
13076-4076	I am glad the company is making the commitments to equity and marine life	Thank you for your comment.
	that satisfy The Sierra Club. As long as those are kept, this project should	
	begin as soon as possible. We MUST reduce our dependence on fossil fuels!!	
13076-4081	Create quality clean energy jobs to help our economy and our environment.	Thank you for your comment.
13076-4084	Wind farms will not ' spoil the view' nearly as much as an oil refinery.	Thank you for your comment.
13076-4103	I put my money where my mouth is. I support clean energy. Currently my	Thank you for your comment.
	clean energy costs a little more, but with your help, by supporting the	
	Vineyard Wind Project, it will cost less, will create tens of thousands of jobs,	
	and Our Country will Prosper.	
13076-4128	We need clean green methods of energy production to assure all future	Thank you for your comment.
	people our children, grandchildren etc. have fresh clean air to breathe.	
13076-4133	Creating clean energy jobs is the future of America. Supporting our economy	Thank you for your comment.
	through offshore wind farming is a great solution to current economic	
	stagnation during covid and will help get Americans back to work!	
13076-4135	Please improve on creating clean energy jobs.	Thank you for your comment.
13076-4138	The Vineyard Wind project is a win-win; it helps the environment while	Thank you for your comment.
	stimulating the economy and providing new jobs- all things that are	
	desperately needed right now.	
13076-4147	coal is dirty. i want clean sustainable energy. i want to be able to breathe. I	Thank you for your comment.
	have asthma. Doctor says its from pollution!	
13076-4153	We need clean energy jobs now!	Thank you for your comment.
13076-4167	Let's jumpstart the economy. Clean energy jobs will put Americans back to	Thank you for your comment.
	work.	
13076-4169	This issue matters to me because they have already helped in helping out the	Thank you for your comment.
	endangered North Atlantic right whale and I feel that a responsible and	
	prosperous offshore wind industry would help out in bringing a new form of	
	renewable energy.	

Index	Comment Text	Response
Number 13076-4175	One decision could create 83,000 quality clean energy jobs and \$25 billion in economic output by 2030 while slashing climate and health-damaging pollution.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies
13076-4185	Let's be creative, address alternative energy, and create jobs	Thank you for your comment.
13076-4242	We need to create jobs and help the environment at the same time. I am a Veteran and I vote.	Thank you for your comment.
13076-4421	I support offshore wind energy not only because it's clean but it's also safe in terms of the realities of oil spills and how prevalent oil spills are, even small ones. Even the smallest oil spill could be catastrophic to our fishing industry in addition to our tourism down here in Charleston South Carolina.	Section A.8.2.2 of the SEIS addressed the potential for accidental releases and discharges associated with the proposed Project. The SEIS stated modeling conducted by BOEM indicated a catastrophic, or maximum-case scenario, release of 128,000 gallons (484,533 liters) of oil mixture has a "Very Low" probability of occurring, meaning it could occur one time in 1,000 or more years. The modeling effort also revealed the most likely type of spill (i.e., non-routine event) to occur is from the WTGs at a volume of 90 to 440 gallons (341 to 1,666 liters), at a rate of one time in 1 to 5 years, or a diesel fuel spill of up to 2,000 gallons (7,571 liters) at a rate of one time in 20 years. Therefore, no change to the FEIS is warranted.
13076-4548	Please, Please, clean, sustainable energy that is safe for ocean life and birds.	Thank you for your comment.
13076-4598	It's about time this administration started supporting jobs by approving this project. It will certainly have Biden's approval.	Thank you for your comment.
13076-4636	I have a particular interest in the North Atlantic Right Whales. There used to be thousands. We need to stop this extinction.	Thank you for your comment.
13076-4675	Please approve employment in this fast growing industry and get people back to work	Thank you for your comment.
13076-4678	We need our goverment to create enviormently friendly jobs . We do not want more drilling. Let's move towards a cleaner & better future for all.	Thank you for your comment.
13076-4695	These renewable energy sources also creat renewable jobs and energy independence, without jeopardizing our tourism industry. Please help us!	Thank you for your comment.
13076-4739	Clean air, water and land is extremely important for our future and for generations to come. Please do the right thing and protect our resources.	Thank you for your comment.
13076-4743	Please consider green jobs will be this generation's new deal - building new infrastructure and massive opportunity	Thank you for your comment.
13076-4763	As a young adult, I really care about investing in clean energy. It will benefit everyone, in a variety of ways, for years to come!!	Thank you for your comment.
13076-4765	Please approve the Vineyard Wind project. I believe the project will provide many benefits including jobs and a positive environmental impact. What an excellent idea!	Thank you for your comment.
13076-4775	We need more sustainable jobs like these. It's time to make clean energy a phenomenon of the present. Our grandchildren will thank us for it!	Thank you for your comment.

Index	Comment Text	Response
Number		
13076-4804	My granddaughter has completed her training in electrical turbine	Thank you for your comment.
	maintenance and repair and is ready to go to work. Please make it happen!	
13076-4808	I'm passionate about this issue and we need your help! As a community	Thank you for your comment.
	health nurse I've seen the impact of poor environmental health impacts on	
	lives of everyday folks. Please help! This can generate and reduce those	
	health impacts on Americans. Thank you!	
13076-4810	Pls approve clean air using the Vineyard Wind project. Our future depends	Thank you for your comment.
	upon your wise decision. Mainly, for the future generations! Enough land,	
	water and air is not clean now so the future decision about our planet depends	
	upon you and b the President. Please make the right decision!	
13076-4840	We need more wind energy! Stop depleting our fossil fuels & vote for clean	Thank you for your comment.
	air!	
13076-4851	An awful lot of us need those clean energy jobs and offshore wind farms	Thank you for your comment.
13076-4871	We won't lose jobs while conserving or creating environmental jobs. We will	Thank you for your comment.
	create jobs. The world competition is strong. Let's be the leaders.	
13076-4874	Wind energy is the future, so much cleaner than oil wells! Please help us	Thank you for your comment.
	protect our water & air with wind energy for our children and theirs!	
13076-4881	Alternative renewable energy is the base of the economic future of our	Thank you for your comment.
	nation. Let's harness the power of the wind.	
13076-4937	We need more clean energy jobs and sooner the better.	Thank you for your comment.
13076-4949	Approve the Vineyard Wind project. This is one way to help reduce	Thank you for your comment.
	greenhouse gases	
13076-4956	We need this. For our economy and to protect this planet from oil spills due	Thank you for your comment.
	to our dependence on oil and gas.	
13076-4977	This can help reduce polluting fossil fuels and help improve air quality.	Thank you for your comment.
13076-4988	This issue matters to me because I grew up close to the Atlantic and relatives	Thank you for your comment.
	earned part of their livelihood by fishing. Growing up I enjoyed fishing	
	outings with my parents who loved the ocean and being in nature. My father	
	died of illness that he acquired working in the coke industry. I became	
	disabled from petrochemical exposures. As a country we need to care about	
	climate change and the harm it has down to our planet and health. We have	
	much to gain by switching to cleaner energy for ourselves, the environment	
	and for good jobs that don't make people sick. It is time!	
13076-4999	Our country needs these jobs, our planet needs these non fossil fuels	Thank you for your comment.
	solutions!	
13076-5000	We need to create jobs and start combatting energy pollutants yesterday. This	Thank you for your comment.
	is a great renewable choice. Help save our air and climate.	
13076-5002	We need good-paying clean energy jobs and we need more clean energy.	Thank you for your comment.
	This is a win-win.	

Index	Comment Text	Response
Number		
130/6-5019	This is an amazing opportunity at a time when the nation needs a real	I hank you for your comment.
	wind	
12076 5032	Wind: Important to the environment and economy Approve the Vineward Wind	Thank you for your comment
15070-5052	project and launch a prosperous responsible offshore wind industry	
13076-5042	We want clean efficient methods in order to secure our water and air	Thank you for your comment
13076-5142	This technology has beautiful potential for increasing health and quality of	Thank you for your comment
15070-5142	life for all humanity - we all share the same air. We need to move forward	Thank you for your comment.
	away from old gas and combustion based energy forms	
13076-5155	This is vitally important to our economy and our Earth!	Thank you for your comment.
13076-5169	Today more than ever we must partner with nature ! Must take the gift ' and	Thank you for your comment.
	create more GREEN jobs at the same time. As a result of past ' rat race	
	strategy we are out of balance. Please let's fallow nature laws promoting	
	harmony in this spinning planet '	
13076-5234	During this crisis, it's still important to focus on the environment and make	Thank you for your comment.
	sure that wind farms become a reality. This will create jobs of the future that	
	our economy so desperately needs in this crucial time in history. I truly	
	believe this will be one of America's most important projects of the twenty-	
	first century.	
13076-5236	Renewable energy is important to me not just because of environmental	Thank you for your comment.
	protection, but because it is the industry of the future.	
13076-5240	It's [p]ast time for America to invest in our future by embracing and	Thank you for your comment.
	expanding clean energy. The fossil fuel industry is dirty and workers are	
	being replaced with machines. Clean energy has millions of high paying jobs	
	that will help save the world from climate change. In the entire world only	
	the Republican Party denies climate change. I rump's Party is destroying our	
	the Forth grows poorer and botter. Depublicans need to get onboard with	
	climate change and ston supporting an industry that is killing our planet	
13076-5242	It is important to protect our environment with clean solutions	Thank you for your comment
13076-5282	Not a good idea! The amount of concrete and devastation to our coastal area	Thank you for your comment
100,000000	is not worth it. Nuclear is a better safer choice with the right safety features	
	installed and Bill Gates system for utilizing the nuclear waste.	
13076-5298	We need these jobs and get serious about alternative energy sources. This is a	Thank you for your comment.
	win-win situation.Please help.	
13076-5320	I count on you to promote sustainable growth so that our and future	Thank you for your comment.
	generations have and will have opportunities to live in a healthy	
	environment.	

Index Number	Comment Text	Response
13076-5346	It's so important that every chance we have to promote jobs in the new clean energy Sector we must take that chance. For our futures. For our grand babies	Thank you for your comment.
13076-5362	Jobs, jobs, jobs. That's what this can mean Mr. Trump. Do something good for the environment	Thank you for your comment.
13076-5363	We need more jobs and less pollution. Please approve this.	Thank you for your comment.
13076-5368	It's not worth having a job if it means creating greenhouse gases!! The jobs we need are more clean energy jobs!	Thank you for your comment.
13076-5515	Approve the Vineyard Wind project & launch a prosperous, responsible offshore wind industry!	Thank you for your comment.
13076-5530	This will be a positive economic development opportunity for a recovering economy.	Thank you for your comment.
13076-5534	Creating over 80,000 jobs and slashing pollution is a win-win. Now that you've analyzed the project, make it a reality!	Thank you for your comment.
13076-5553	Offshore wind is so great for oceanic wildlife (and fishermen!) and is really not a nuisanceplus it's so much cleaner for our local air and global environmental footprint. Let's do it!!	Thank you for your comment.
13076-5560	The future of energy is clean resourceswind, solar, and water. Let's move America forward with other countries looking to improve the environment and our air and water quality.	Thank you for your comment.
13076-5592	It is time to stop putting carbon dioxide into the atmosphere.	Thank you for your comment.
13076-5603	Approve the Vineyard Wind project and launch a prosperous, responsible offshore wind industry	Thank you for your comment.
13076-5616	Let's get clean air jobs which will benefit our environment with the impact of the Vineyard Wind. Tom	Thank you for your comment.
13076-5618	Off-shore wind projects are a win-win-win for reducing greenhouse gases, providing good jobs for local economies, and reducing dependence on imported energy products.	Thank you for your comment.
13076-5623	I live in aa rural town that could benefit from the Vineyard Wind project because clean energy initiatives like these will preserve the natural beauty of communities like ours. This, in turn, enhances tourism and the quality of life in towns like ours.	Thank you for your comment.
13076-5673	We need this project to help generate many new jobs while helping to generate clean new energy.	Thank you for your comment.
13076-5780	The wind is free to us - and if harnessing it's power will help rid the air of carbon emissions, does it not seem ridiculous NOT to harness that source of carbon- free power'	Thank you for your comment.

Index	Comment Text	Response
Number 13076-5788	This would make a difference in so many ways - creating jobs, putting Billings [billions] into the economy, as well as environmental conservation. Win-win!	Thank you for your comment.
13076-5794	Wind and solar power are the future jobs in America.	Thank you for your comment.
13076-5798	There is so much potential for good jobs and clean energy that will supplement solar. We need offshore wind here in Georgia, but leaders appear to be waiting for proven projects here in the U.S. Let's get started on this transition to offshore wind!	Thank you for your comment.
13076-5817	As you know, the United States' chief economic sector is services. With appropriate support, renewable energy will be a major part of our country's essential infrastructure and one that produces passive ROI.	Thank you for your comment.
13076-5823	It will s terribly important at this time that this country turns its attention to clean energy economies. It's an opportunity to invest in these jobs for the present and	Thank you for your comment.
13076-5909	Create jobs for stimulus instead of just sending out money. We need green jobs and infrastructure. Saving coal is like saving blacksmiths - their time for mainstream is over.	Thank you for your comment.
13076-5961	This is so important for the future of our country and environment, and will provide good jobs at a time when we really need them!	Thank you for your comment.
13076-6010	I urge you to approve Vineyard Wind 1 for a prosperous and responsible offshore wind industry.	Thank you for your comment.
13076-6070	You have the opportunity to create jobs for the people out of work by authorizing this wind energy project while also helping out the global warming and clean air situation at the same time. You might even win the votes of Americans who otherwise would not vote for you by putting going forward with this. Thanks for listening.	Thank you for your comment.
13076-6086	This is a win for the economy and the environment. Please show the American citizens that you care about both and approve of the Vineyard Wind Project. It's time for America to show the world we are intelligent once again	Thank you for your comment.
13076-6104	This decision is of great importance to me! I will be following this issue & your actions to see if you truly care about the fate of our planet, economic opportunities & helping communities that have been over-burdened with pollution!	Thank you for your comment.
13076-6120	I am an epidemiologist who clearly sees the dire path our public health is on due not only to covid19 but also due to increased levels of carbon in our atmosphere. We can't wait - we must act now to switch to alternative energy for the health of our population.	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.

Index	Comment Text	Response
Number		
13076-6126	It appears that Vineyard Wind has done a good job of protecting the	Thank you for your comment.
	environment while developing decent paying jobs and keeping shipping lines	
	safe. It is time to approve the project.	
13076-6131	PLEASE PRIORITIZE VINEYARD WIND 1 POJECT and help get the jobs	Thank you for your comment.
	we need and the inexpensive WIND POWER THAT VINEYARD WIND 1	
	WOULD BRING TO THE EASTCOAST.	
13076-6153	It is so essential for ourselves and our children that we take the environment	Thank you for your comment.
	into account in creating jobs that will help us on the road to a sustainable	
10076 6101	future!	
13076-6184	This will help reduce our dependence on fossil fuel and support members of	Thank you for your comment.
10000	my family who work in the alternative energy industry!	
13076-6185	We need more jobs in the renewable energy industry!!!	Thank you for your comment.
13076-6189	Please note the word 'Prosperous'. This is not a losing proposition. Done	Thank you for your comment.
	properly, it should be a win- win proposition for industry AND the citizens	
10056 6006	who will ultimately pay for the blooming thing.	
13076-6206	This is important because it not only provides jobs but also can ensure we all	Thank you for your comment.
12056 (200	can enjoy the ocean safely.	
130/6-6208	We need fair wage jobs and a future that offers safe renewable energy in a	Thank you for your comment.
10056 6014	way that minimizes people and wildlife impact. This is a great place to start.	
13076-6214	We need your help Secretary Burnhardt to start the offshore offshore wind	Thank you for your comment.
	industry it's could create /3, 000 clean jobs could potentially power the east	
	coast from Maine to Georgia. Would you consider to please approve the	
12076 (222	Vineyard wind I initiative.	The set of the second
130/0-0223	Please approve the vineyard wind Project and help American job market. It	I nank you for your comment.
	will open several thousand jobs. Clean energy and environmentally sale. No	
12076 6227	Contamination like nuclear. Go for it:	Them to your comment
130/0-022/	thing for our mutual planet	i nank you for your comment.
12076 6274	Global warming is killing the planet! Every step we take to reduce CO2	Thenk you for your comment
150/0-02/4	levels will reduce the destruction	i nank you for your comment.
12076 6330	One decision could create \$2,000 quality clean energy jobs and \$25 hillion in	Section 3.6 of the FEIS has been undeted to provide summary projections of
13070-0330	economic output by 2020 while sloshing climate and health domaging	regional and national job creation and investment from studies used in the
	nollution. We need you to make it happen	analysis for the SEIS as well as additional studies
13076-6366	The economics are clear, fossil fuels are an albetross on the US economy	Thank you for your comment
15070-0500	Create economic growth with off shore wind turbines that would provide job	i hank you for your comment.
	growth at the same time	
13076-6381	We all deserve green energy and breathing with clean air	Thank you for your comment.

Index	Comment Text	Response
Number		
13076-6399	This is a great opportunity with so many benefits. It is a win win situation.	Thank you for your comment.
	The Vinyard Wind project will create many jobs, help save the environment,	
	and the turbines will be offshore rather than on land.	
13076-6401	Not only would approval of this clean energy solution be great for our	Thank you for your comment.
	environment & future of our planet but it'd supply well paying jobs to help	
	our economy at a time We desperately need it.	
13076-6419	There is no denying that 2020 has not been an easy year in our country's	Thank you for your comment.
	history. Covid-19 has devastated our workforce as climate change becomes	
	ever more pressing - we need large scale clean energy jobs now more than	
	ever. I strongly urge you to take action in securing our climate and economy	
	by supporting the Vineyard Wind Project.	
13076-6432	With green energy this will help our Earth and my patients in pediatrics and	Thank you for your comment.
	public health	
13076-6434	The air quality is very important to me. I have allergies and mild COPD	Thank you for your comment.
13076-6442	Clean energy is necessary to reduce CO2 emissions that cause climate	Thank you for your comment.
	change. We need it now .	
13076-6445	Please approve Vineyard Wind 1. It is a responsible & beneficial offshore	Thank you for your comment.
	wind development project.	
13076-6452	This project will create jobs and help the environment!	Thank you for your comment.
13076-6474	Time is running out for humans to make the necessary changes to our carbon	Thank you for your comment.
	emissions and to get carbon free energy systems up and running! These wind	
	projects need to go forward now!	
13076-6484	We've lost so many jobs as a result of the Coronavirus, these projects will	Thank you for your comment.
	help to refuel the economy and reduce use of fossil fuels.	
13076-6494	This information is so exciting for us in America. Being able to create energy	Thank you for your comment.
	by using Vineyard Wind. There is hope that we not only will create jobs, this	
	has the ability to protect our health from toxic impurities that come the bi-	
	products of the oil industry that we are currently suffering from. You can	
	help change the direction by approving the Vineyard Wind project from main	
	to Georgia. Thank you.	
13076-6497	This project will clean air pollution, increase employment, while protecting	Thank you for your comment.
	wild life.	
13076-6508	This project would creat much needed jobs and help the environment. I have	Thank you for your comment.
	three beautiful, young grandkids and I want to do everything I can to leave	
	them a livable planet.	
13076-6530	The greatest growth in our economy will come from climate mitigation and	Thank you for your comment.
	resilience! Invest in America, invest in our planet.	

Index	Comment Text	Response
Number		
13076-6539	Make America great by make the world better Create jobs put Americans	Thank you for your comment.
	back on the leaderboards by bringing us into protecting life better stronger	
	and faster than any other country	
13076-6546	It's time to clean up our air and water. We need jobs in industries that don't	Thank you for your comment.
	pollute.	
13076-6554	I live near the off shore wind turbines around Block Island, Rhode Island &	Thank you for your comment.
	have heard how the community has benefited from new jobs and lower	
	electric rates since. Yes some fishermen were worried their livelihoods were	
	at risk, it turns out the turbine bases had created fishing habitat. So I'm all in	
	favor of harnessing the winds that blow off our shorelines!	
13076-6556	Do those are concerned I am for this industry going forward as long as it does	Thank you for your comment.
	not harm the Earth and any means shape form or fashion. Including this	
	industry in industry we as a United States of America or moving forward and	
	showing our good stewardship for the land I believe. We speak and believe	
	that we are the leader inall areas in the world. So therefore we must be	
	innovative, responsible, and dreamers. This new industry will also employ	
	hundreds of thousands of people as it is deployed throughout our nation. Do	
	the right thing. Thank you for your time and consideration.	
13076-6568	This sounds like a win-win situation gives people jobs, protects the	Thank you for your comment.
	environment, and ensures safety	
13076-6586	Act now please & thank u ! We must stop pollution and protect our wildlife	Thank you for your comment.
	plus the added jobs benefit'	
13076-6617	please approve this project. You can make a difference by giving people jobs	Thank you for your comment.
	and a cleaner, healthier world.	
13076-6659	This is a great opportunity to start improving the economy while making the	Thank you for your comment.
	necessary change to renewable energy: a REAL WIN-WIN!!	
13076-6663	It's time for our president to cut ties with big oil and gas producers and	Thank you for your comment.
	support clean energy. It is sustainable and carbon neutraltwo elements that	
	can vastly reduce greenhouse gases. Our future human viability is at stake!	
13076-6670	Please approve Vineyard Wind One. Not only will it help to move us forward	Thank you for your comment.
	in reducing carbon emmisions, it will produce much needed jobs and an	
	economic boost to the local economy.	
13076-6715	I'm concerned about what these blades would do to our flocks of fowl that	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and
	might be destroyed by them, I'd suggest Bladless Turbines.	monitoring measures that would be implemented to avoid, minimize, and
		mitigate adverse impacts on birds. These measures include, but are not
		limited to, installation of bird deterrent devices, use of ADLS, installation of
		digital VHF receivers and acoustic monitoring devices to estimate the
		exposure of ESA-listed species and other migratory birds, preparation of a
		nost-construction monitoring plan and other measures

Index	Comment Text	Response
Number		
13076-6738	We need jobs to jump start our economy and clean energy to protect our environment and health.	Thank you for your comment.
13076-6740	Green jobs will help the economy and the environment! Let's go with some healthy proactive work not just roll backs!	Thank you for your comment.
13076-6757	With assistance from The Audubon Society as to popular flyways, damage to birds and other waterfowl can be minimized. Denmark and Norway lessons learned should be used for guidance. It is foolish not to use wind and solar energy.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures.
13076-6759	While it is painful to close dirty power kinds of industries, wind farms will bring new jobs and hopes to workers.	Thank you for your comment.
13076-6789	More jobs and environmental stewardship. I dont think Mr President would give you any grief over this project!	Thank you for your comment.
13076-6794	We want clean energy jobs. I want end energy development. Thanks for caring! C Wynn	Thank you for your comment.
13076-6805	Begin a legacy of ocean energy that doesn't risk damage to our oceans and fish but provides energy for our needs.	Thank you for your comment.
13076-6824	We need more jobs on the East coast, and this is a way to provide them and benefit the community with clean energy at the same time. People losing jobs at the huge incinerators and coal mines need an industry to step into.	Thank you for your comment.
13076-6846	As a Registered Nurse and mother I implore you to help the world economy and ecology by supporting this big wind power project! Fossil fuel- fouled air has caused millions of people's respiratory problems. Generate clean energy from natural wind to improve air quality while employing many.	Thank you for your comment.
13076-6857	We need government to make policy for clean energy jobs.	Thank you for your comment.
13076-6859	it makes more sense economically to invest in long term solutions such as renewable energy, rather than the short term harming fossil fuels.	Thank you for your comment.
13076-6863	I want to breathe in CLEAN AIR & become a clean planet for generations to come.	Thank you for your comment.
13076-6864	We desperately need to lower carbon emissions. Going to wind energy would bring more good jobs to South Carolina and other coastal states.	Thank you for your comment.
13076-6867	This is a forward looking plan that's not only good for the environment and climate but also for job creation. A win-win for our planet.	Thank you for your comment.
13076-6881	We have to work as quickly as possible to stop polluting the air we breathe. If not, the green house affect will continue to cause weather damage coastal flooding	Thank you for your comment.

Index Number	Comment Text	Response
13076-6885	I believe in a healthy environment where industry is clean and supports many equitable, jobs. That is why I'm asking you to finalize the environmental	Thank you for your comment.
	impact analysis and approve the Vineyard Wind project. The Vineyard Wind	
	project would support over 80 thousand good, well-paying jobs, is committed	
	to protecting endangered North Atlantic right whales and other species, while	
	by the US Coast Guard. This proposal is win, win, all around it's good for	
	American workers and coastal communities, right wholes and other species	
	and shinning, while it would create clean energy as we work to reduce	
	emissions Thank you	
13076-6891	I live on the east coast and my community will benefit from added jobs and	Thank you for your comment
15070 0051	our health will be better with cleaner air.	
13076-6893	Offshore wind sounds like a safer & more energy efficient source away from	Thank you for your comment.
	the slaughtering of birds that happens from wind turbines on shore	
13076-6901	This is an opportunity to give people jobs much needed in this economy.	Thank you for your comment.
	Also save the environment and oceans wildlife. You have the power to make	
	change please use it wisely and for our future world.	
13076-6937	Let's get the American economy back on track and start producing major	Thank you for your comment.
	environmentally friendly infrastructure Projects. We need good American	
	jobs that look to innovation and environmental conservation.	
13076-6942	This creates jobs working outside (advantage due to COVID), reduces our	Thank you for your comment.
	costs of energy and lessens our dependence on foreign oil. This is a no	
12076 (045	brainer.	The set of the second
130/6-6945	Let's do all we can to create jobs and provide clean energy pronto!	I hank you for your comment.
130/6-/099	Clean energy is so important for our country's economic future and	I nank you for your comment.
12076 7101	I controve the Vineward Wind project and our East Coast needs on offshore	Thenk you for your comment
130/0-/101	wind industry	i nank you for your comment.
13076-7105	Please approve the Vineward Wind project and launch a new offshore wind	Thank you for your comment
15070 7105	industry that can create jobs and provide a thriving clean energy economy.	Thank you for your comment.
13078-001	We are not opposed to developing alternative energy sources here in the U.S.,	Thank you for your comment.
	with U.S. capital and within the same legal structure that we are required to	
	adhere to, including vessel-construction projects supporting U.S. jobs.	
	However, BOEM's offshore wind energy program has failed to include the	
	region's fishing industry as a full partner in ensuring that offshore wind	
	energy development in the Atlantic can coexist with our centuries-old	
	seafood industry. This needs to occur long before a Construction and	
	Operations Plan (COP) has nearly been completed.	
Index	Comment Text	Response
-----------	--	---
Number	We are adding the Eastern Communication in America DOEM to a stabilish a 5	Describe and the FEIC is held an and with the second sub-
13078-002	year moratorium on offshore wind development in the U.S. Exclusive Economic Zone. Areas that have already been leased should be moved unless the concerns of the commercial fishing industry are addressed. During the moratorium, the BOEM process should be changed to allow existing users of the ocean equal	and Appendix D of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be
	or greater influence in the process than the European developers committed to playing by their own rules.	considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13078-003	The maritime wind industry should not be treated differently than the fishing industry, under the Jones Act	The proposed action does not include any changes to the Jones Act.
13078-004	Accurate and complete fishing effort and economic data must be used when considering the long-term impacts of displacing mobile gear fisheries within offshore wind projects, from the Gulf of Maine to Florida. This is not the case today.	Section 3.10 of the FEIS explains the methods used to estimate fishing revenue exposure and the methods used to set the value of the voluntary compensation funds. SEIS Table 3.11-3 shows a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Therefore, no change to the FEIS is warranted.
13078-005	Even 'Clean Energy' environmental impacts need to be fully investigated and evaluated well before the approval of a COP. Research is essential prior to build-out occurring and is incomplete to date.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13078-006	We need a more complete, regional process for planning the location and monitoring of transmission lines, including requiring sufficient burial depths of a minimum of 3 meters or 10 feet in all areas.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.

Index	Comment Text	Response
13078-007	We are not considering it possible to fish our vessels within proposed wind arrays due to spatial operational considerations and safety; BOEM has indicated fishing would be permitted, although there has been no evaluation of the maritime insurance industry's willingness to cover operational losses within these extensive areas.	BOEM's proposed action would not include any regulatory prohibition against fishing within the WDA or anywhere else. Thus, BOEM's proposed action itself would not result in changes to areas that may or may not be insured. Insurance companies are private companies that may adjust rates based on many factors that are not able to be predicted with any certainty. The proposed voluntary gear loss and revenue compensation plan in place for the proposed action is also a consideration in understanding how insurance may, or may not be used, for claims associated with the proposed action. BOEM has used the best available information to inform the impact rating from the proposed action to commercial fishing.
13078-008	Safe, 2-way dedicated transit corridors, through each area proposed to be developed, are essential. Today, however, the design process is chaotic with industry meeting individually with several independent developers all proposing different solutions or simply, eliminating those proposed by the fishing industry. The VW1 SEIS, considering just 84 turbines, sets up a conflict with the fishing industry on this critical issue while BOEM tells us to prepare for 2000 turbines in the future. Transit is about coexistence for us, not about opposition to wind development.	Section 3.11.2 and 3.13.2 of the SEIS evaluates impacts from alternatives with different spacing of turbines and transit corridors (Alternatives D1, D2, and F) on commercial fisheries and navigation. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments. The FEIS addresses this comment in Section 3.10.1.1 and 3.11.2 and was updated to include the Final MARIPARS (USCG 2020), which states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additional rationale is provided in the Final MARIPARS (USCG 2020).
13078-009	A compensatory mitigation plan, considering direct and indirect economic impacts to fishermen and fishing companies from permanent displacement from wind farms, needs to become a condition of permitting and should not discriminate between states.	Section 3.10.2 and Appendix D of the FEIS has been updated to discuss the voluntary revenue compensation funds established by Vineyard Wind, which includes an Other States Compensation Fund where Vineyard Wind has voluntarily set aside \$3.3 million and establish a fund for claims of direct compensation from other affected states vessels and fishing interests. BOEM is open to working with state partners and the commercial and recreational fishing industries to investigate alternative strategies to negotiate compensatory mitigation agreements.
130/8-010	No Action Alternative	alternative.
13078-011	Evaluation of the Totality of Impact Across the Mid-Atlantic Region "This issue is exemplified by the absence at the Mid-Atlantic scale of an evaluation of the basic siting plan for wind turbine field development. One does not know if the present profile is optimal in the sense of minimizing ecological and economic damage relative to cost and energy production potential. As a consequence, evaluation of the present plan must	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of

Response
ns of approval. Section 2.2.1 of the FEIS
formation.
the cold pool and potential effects of
efore, no change to the FEIS is warranted.
are dominated by factors other than the
e FEIS considers impacts of reasonably
and planned actions, including the
ed range shifts as a result of climate change
es. Species-specific analyses are beyond the
hange to the FEIS is warranted.
le and reflect the state of the science at the
erefore, no change to the FEIS is warranted.
o address concerns raised in public
) This is a Project specific EIS not a
1). This is a Project-specific E15, not a
induced to include the sources of Lafsible at
upuated to include the sources of Letable et
ations and to distinguish epifouna from

Index	Comment Text	Response
Number	be from wind farms, the SEIS references only 2 studies that focus on the epibenthic community, not true benthic fauna, or are from ecosystems very different that the U.S. continental shelf."	infauna. This is a Project-specific EIS, not a Programmatic EIS or assessment.
13078-016	Adequacy of the Database on Finfish and Benthic Invertebrates"In addition to the seriously limited information on the community composition in the areas in question, the referenced simulations are all European. The European continental shelf is utterly different from the U.S. shelf, particularly in the relative abundance of very long-lived biomass dominants. A cold pool does not exist there. Such simulations are uninformative."	Section 3.4.2 of the SEIS discussed the likely effects on finfish, invertebrates, and EFH. A stock-specific analysis is beyond the scope of this EIS and is not essential to a reasoned choice among alternatives. The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). This is a Project-specific EIS, not a Programmatic EIS or assessment.
13078-017	Adequacy of the Database on Finfish and Benthic Invertebrates"Given that the SEIS bases its conclusions about potential impacts of wind energy installations on larval dispersal on one single report from a study that was not designed to evaluate larval dispersal impacts, the conclusions reached in the SEIS in this respect must be tentative at best. The issue is the degree of influence of these structures and flows on larval transport and setting potential, which would ultimately result in a proportional increase or decrease of community component species, leading to unknown consequences beyond the turbine arrays."	The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments, including larval transport modelling at a regional scale (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). This is a Project-specific EIS, not a Programmatic EIS or assessment.
13078-018	Long-lived Biota The SEIS provides little evaluation concerning the potential permanence, in normal human life span scales of time, of the impact of wind energy development. Centuries long impacts may be anticipated in some regions. Long-lived sedentary or sessile biota are not biomass dominants everywhere and a thorough review of benthic inhabitants in the Mid-Atlantic would be illuminating. Given these permanent impacts, every effort should be made to develop areas that do not now and are not expected in the future to support biomass dominants with vicennial or greater life spans. Such siting evaluations are not available."	These data are the best available sources for assessing impacts. The FEIS also was updated to discuss the large mollusks that are not represented well in grab samples. Sections 3.3 and 3.10 of the FEIS were updated to discuss additional information and analysis of commercially important species, including scallop, ocean quahog, and surfclam, using additional data sources, including fishing effort. The locations of outer continental shelf Wind Lease Areas were determined in 2010-2016, and the overlap of these areas with the areas of highest fishing activity was minimized during that process. This is a Project-specific EIS, not a Programmatic EIS or assessment.
13078-019	Fishing, Surveys and Stock Assessments "In summary, the SEIS discusses impacts of wind energy areas to managed fisheries and notes these impacts will be among the greatest impacts of the project. The SEIS correctly indicates that impacts owing to inability of federal fisheries management agencies to conduct annual stock surveys with the wind area footprint will be major. However, the SEIS does not address the scale and scope of these impacts. Given the size and location of these wind leases, which overlap with important portions of many economically and culturally important stocks, the effect on scientific advice to inform management resulting from an inability	The SEIS addresses these issues throughout Section 3.14 (Other Uses, Scientific Research and Surveys), and Section 3.14.2 addresses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no change to the FEIS is warranted. BOEM is actively working with NMFS on a process to adapt survey methodologies to the

Index Number	Comment Text	Response
	to survey may be one of the biggest anticipated impacts of the wind project – but the scale of the consequences is not known."	presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07).
13078-020	Marine Mammals "To summarize, the uniqueness of the proposed wind energy development, unprecedent in terms of the large spatio-temporal footprint and the exceptionally large number of protected MM stocks affected (~ 15), requires further evaluation of impacts on individual MM stocks, especially regarding individual fitness and population-level impacts, to establish whether a delay in recovery or a decline to levels that would warrant a downgrade in stock statues in probable for any of the stocks."	NMFS is a cooperating agency for the development of the FEIS and as a cooperating agency, NMFS is making determinations relative to the MMPA and ESA based upon this information contained in this FEIS. As discussed in the Section 3.4.2 of the FEIS and in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, as discussed in the Biological Opinion, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals is expected to occur as a result of the project. Future offshore wind projects will require separate ESA Section 7 consultation, and a cumulative effects analysis will be completed based on the best available information and will include a discussion of all IPFs that could result in impacts to marine mammals.
13078-021	Economics "Commercial fisheries rely on a variety of shore-based supporting and value-added industries. Fishing ports are home to ancillary services such as vessel and gear maintenance as well as seafood product processing, sales, and distribution. In Massachusetts and Rhode Island, total economic impacts arising from direct, indirect, and induced impacts associated with over \$600M in commercial fishery landings are ~\$2.6B, including ~\$1.3B in value-added impacts. Including all states considered as potentially affected by future offshore wind activities (Maine to North Carolina), total economic impacts associated with the nearly \$2B in commercial landings during 2016 were estimated at ~\$7.9B, with ~\$3.9B in value added impacts (NMFS 2018; estimates do not include impacts associated with imports)."	Section 3.6.2 of the FEIS has been updated to conclude that a moderate beneficial impact on employment and economic activity would result from offshore wind development in the RI and MA Lease Areas. It also notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind.
13079-001	The SEIS has been thorough and forward thinking in looking at the impacts of the pipeline of projects BOEM has already leased. Thank you for the opportunity to provide these comments.	Thank you for your comment.
13079-002	We urge approvals be as expeditious as possible to unlock tens of thousands of good paying jobs in a time where we are in dire need of economic stimulus and investment in large infrastructure projects that are environmentally sustainable such as offshore wind.	Thank you for your comment.
13079-003	The decisions you make here set the tone for and have serious consequences for offshore wind power plants up and down the East Coast. BOEM's actions have a direct impact on investment and other decision-making of the industry, as well as those that support the industry, such as the educators and training providers.	Thank you for your comment.

Index Number	Comment Text	Response
13079-006	As the SEIS points out there are 22 GWs of projects in the pipeline. Without clear actions and the adherence to predictable timetables it becomes difficult to prepare the U.S. workforce for the industry and obtain the full economic benefits of OSW. Those who work in workforce development know all too well that one of the worst things we can do is train people for jobs that do not exist. In terms of preparing for the offshore wind industry, we know that these jobs exist, however the timing for the jobs is unpredictable because there is a lack of regulatory certainty.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13079-007	The SEIS understates the economic benefits of offshore wind in stating that development will result only in minor net economic benefits to the region. With the study's recognition of significant new investment in ports and harbors, manufacturing and other supply chain activities, and workforce development it is hard to understand how those benefits were deemed minor. The SEIS should reflect a more favorable rating of offshore wind as a domestic economic development engine consistent with ongoing and planned investments.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13079-008	UMass Dartmouth's Public Policy Center conducted a study examining the contribution to employment and economic development to be made by the 800-MW Vineyard Wind project.	Section 3.6.2 of the FEIS uses the UMass Dartmouth's projections for the Vineyard Wind 1 Project in estimating job creation, economic output, and first year tax revenues within Massachusetts. These data were also used in the DEIS.
13079-009	The SEIS fails to fully recognize the environmental benefits of this and other projects. The SEIS states on page 3-98: "Overall, it is anticipated that there will be no impact on climate change as a result of offshore wind projects alone, though they may beneficially contribute to a broader combination of actions to reduce future impacts from climate change." The SEIS considers approximately 22 GWs of U.S. Atlantic OSW capacity to be reasonably foreseeable. These OSW GWs will be injected into the onshore electricity systems operated by ISO New England, NYISO, and PJM. Based on the annual CO2 emissions and net generation for these three grid operators, the interconnection of 22 GWs of OSW would result in an estimated 8% reduction in carbon emissions in those regions. On a planetary scale, the total emissions reductions from these projects might be considered small, but the reduction is quite significant in terms of decarbonizing the electricity supply of the Eastern Seaboard. Offshore wind is an important component of East Coast states' plans to reduce greenhouse gases and to reduce air pollution. Approving the Vineyard Wind project sends the right signal: America is open for business and ready to take a leadership role in this global clean energy industry.	Additional health benefits of the proposed Project have been added to Section A.8.1 of the FEIS.

Index	Comment Text	Response
Number		
13079-010	BOEM should reject Alternative F and approve D2.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13079-012	Given the uniform 1x1 NM Joint Developer Agreement Layout, the US Coast Guard has made a final determination that transit lanes are unnecessary. In fact, the inclusion of transit lanes will directly constrain the U.S. OSW industry's ability to mitigate climate change.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13079-013	The SEIS considers approximately 22 GWs of U.S. Atlantic OSW capacity as reasonably foreseeable. A recent study by the American Wind Energy Association ("AWEA") states U.S. OSW will support up to 83,000 jobs and \$25 billion per year in economic output by 2030, while also delivering investment in critical coastal infrastructure. This pipeline of projects is considered sufficient to trigger large manufacturing investments; however, reducing the area with transit lanes will reduce the overall economic benefit that can be realized.	Section 3.6.4 of the FEIS has been updated to note that the transit corridor (Alternative F) could result in lower economic investment and employment due to the lower capacity for offshore wind development in the RI and MA Lease Areas that could result from this alternative.
13079-014	A reduction in the wind energy area (WEA) jeopardizes the project's economic potential and undermines public sector investment. BOEM has entered long-term lease contracts with developers and received lease payments in return for material use of the defined areas in the ocean. Reducing the WEA in a substantial manner results in unstable public policy and creates market uncertainty. A substantial material change in the WEA could lead to re-evaluation of the private sector infrastructure investments. This could ultimately affect the United States or any State's (with an offshore wind policy commitment) ability to secure the supply chain and facilities required to create jobs and develop the offshore wind industry.	Section 3.6.4 of the FEIS has been updated to note that the transit corridor (Alternative F) could result in lower economic investment and employment due to the lower capacity for offshore wind development in the RI and MA Lease Areas that could result from this alternative.
13081-001	The Commission has reviewed the action alternatives and does not have any recommendations regarding a preferred alternative, because each of those alternatives would have similar potential impacts on marine mammals. Potential impacts on marine mammals are discussed in Chapter 3.5 of the supplement and include accidental releases of fuel, fluids, hazardous materials, and/or trash and debris; changes in the geomagnetic field caused by power cable electromagnetic fields; elevated turbidity from cable-laying activities; sound emitted during geophysical surveys, cable laying, and construction-associated pile driving; increased vessel traffic and associated disturbance; the presence of wind energy structures in marine mammal habitat. BOEM indicated that it considered impacts from climate change in more depth in the supplement than in the DEIS.	Thank you for your comment.
13081-002	Impacts resulting from the construction or operations of wind energy facilities could pose a potential risk to the NARW population, especially combined with impacts of fishery-related entanglements and vessel strikes.	Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. A detailed analysis of impacts to ESA listed species is provided in the revised BA and further

Index	Comment Text	Response
Number	The population of NARWs is declining at an alarming rate and faces an increasing risk of extinction. As such, the Commission continues to be very concerned about the status of right whales, particularly in light of recent deaths and low recruitment to the population. The population has fallen from approximately 500 to 400 whales in less than a decade and fewer than 100 reproductive-age females remain (Pace et al. 2017, Pettis et al. 2020). Recent studies have shown that right whale distribution patterns have been in flux over the last decade, with increasing evidence of year-round presence in migratory corridors along the mid-Atlantic and southern New England, including Vineyard Wind's proposed project area (Davis et al. 2017).	considered in the final BO issued by NMFS on September 11, 2020. Additionally, Section 3.4.2 and Appendix D of the FEIS include comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to, avoidance of peak NARW presence. At other times of the year, enhanced NARW conditions and other mitigation and monitoring measures that would be required include increased detection and avoidance measures during the Month or May and any other time of year a DMA or Slow Down Zone is designated, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shutdown procedures, and other measures specifically developed to avoid and minimize any potential impacts to
13081-003	BOEM's projections for the construction of more than 2,000 wind energy turbines in the right whale migratory corridor in the next 6 – 12 years could significantly increase disturbance of right whales. Although BOEM has attempted to conduct a thorough cumulative impacts analysis in its supplement to the DEIS, a quantitative assessment of the long-term impacts on right whales and other marine mammals is challenging and currently may not be possible. Regardless, BOEM will need to consider how a changing climate will impact marine mammal populations as well as potential unforeseen consequences of construction and operations of wind energy projects and the unintended consequences of efforts to mitigate adverse impacts to other ocean ecosystem services.	NARWs. Section 3.5.1 of the SEIS discussed the potential impacts that could result from the full offshore wind buildout using the best available data. Additionally, Additionally, Section 3.4.2 and Appendix D of the FEIS include comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to, avoidance of peak NARW presence, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13081-004	BOEM has funded a number of studies to assess the abundance and distribution of right whales, including the Atlantic Marine Assessment Program for Protected Species and passive acoustic monitoring studies BOEM's Office of Renewable Energy Programs has proposed a pilot program to conduct aerial surveys, passive acoustic monitoring, and prey sampling in the various wind energy project sites. The Commission commends BOEM for supporting these and other projects to better understand the short- and long-term impacts of wind energy development and other human activities on right whales and other marine mammals.	Thank you for your comment.
13081-005	In light of recent deaths and low recruitment to the population, all potential impacts on right whales are of concern, and adaptive strategies for reducing or preventing long-term, cumulative impacts must be explored.	Section 3.4.2 and Appendix D of the FEIS include comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to, avoidance of peak NARW presence,

Index	Comment Text	Response
Number		
		use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. A real-time adaptive approach, as specified in the September 11, 2020 BO, requires enhanced detection and mitigation measures when DMAs or NARW Slow Zone is designated in the lease area. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process. Additionally, PSO data collected during pile driving and post- construction monitoring could result in new information that can be used to assess impacts and improve mitigation and monitoring requirements that may be required in the future.
13081-006	The Commission recommends that BOEM continue to work with Vineyard Wind, other wind energy developers, states, and stakeholder groups to support collaborative research focused on long-term, area-wide studies to determine the cumulative impacts of wind energy development on marine mammals—especially right whales—and their habitat. In the event that wind energy development is shown to have significant adverse impacts on marine mammal populations, it is unclear from the supplement or other BOEM documents what actions would be necessary to mitigate those impacts. To address those concerns, the Commission recommends that BOEM specify in the final environmental impact statement for Vineyard Wind what actions would be necessary to minimize impacts to right whales and other marine mammals in the event that studies indicate adverse impacts to marine mammal populations as a result of wind energy development.	Section 3.4.2 and Appendix D of the FEIS include comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals from the Vineyard Wind 1 Project. These measures include, but are not limited to, avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. A real-time adaptive approach, as specified in the September 11, 2020 BO, requires enhanced detection and mitigation measures when DMAs or NARW Slow Zone is designated in the lease area. Should adverse impact to NARW, or other marine mammals, be identified in the future, there are regulatory mechanisms, such as re-initiation of interagency consultation under Section 7 of the ESA, that could be used to develop additional mitigation and monitoring requirements. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Project- specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13081-007	The supplement includes general mitigation measures that would be used by Vineyard Wind to reduce potential impacts on individual marine mammals. Some are stipulated in lease agreements with BOEM, while others would be required through Marine Mammal Protection Act (MMPA) incidental take authorizations to ensure that determinations can be made under section 101(a)(5) of the MMPA regarding negligible impact, small numbers, and least practicable adverse impact. As noted in section 3.5.2.1 of the	Section 3.5.1.1 and 3.5.2.1 of the SEIS provided a discussion of acoustic impacts on marine mammal species, including the NARW. Further details regarding acoustic effects to these species are provided in Appendix F of the DEIS, the BA submitted to NOAA which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/ and in the final BO issued by NMFS on September 11, 2020. Additionally, Section 3.4.2 and Appendix D of the FEIS include comprehensive mitigation and

Index	Comment Text	Response
Number		
	supplement and other studies (Best and Halpin 2019), one of the primary concerns [to marine mammals] during construction and operations of Vineyard Wind's proposed wind energy project would be the potential for auditory injury and adverse behavioral responses to sound generated during pile-driving.	monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if
13081-008	Vineyard Wind's proposed pile-driving activities would not occur between January and early May during the peak season of NARW occurrence in the project area. Vineyard Wind stated in its COP that it would develop mitigation measures to minimize and avoid impacts on marine mammals from pile-driving sound, in accordance with the Best Management Practices identified by BOEM in its Information Guidelines for a Renewable Energy Construction and Operations Plan. Vineyard Wind stated, for example, in Table 4.2-2 of its COP, that current best practice sound attenuation methods, such as bubble curtains, will be considered. It also plans to evaluate new and currently available monitoring technologies as part of the permitting process.	the required sound reduction is not met. Section 3.4.2 and Appendix D of the FEIS discuss updated comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW, that includes enhanced measures during the entire month of May, sound reduction methods, and field measurements of the underwater sound levels during pile driving. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met Sound measurements are required at the beginning of pile driving to ensure the impact distances are in agreement with the minimum 6 dB reduction in sound levels required.
13081-009	The Commission is concerned that BOEM's analysis of impacts [to marine mammals] in the supplement, which is based on modeling discussed in Vineyard Wind's COP, assumes an optimistic and unverified, 12-dB sound reduction in sound levels. The COP indicates that the 12-dB sound reduction would be achieved using various "proven" technologies (identified as Hydrosound Damper, AdBm "encapsulated bubble sleeves" (i.e., resonators) and/or bubble curtains) deployed both near the pile and farther from the source. The effectiveness of sound attenuation devices varies greatly, depending on pile diameter, water depth, sediment type, hammer energy, and how effectively the sound attenuation equipment is deployed.	Section 3.3.7.3 of the DEIS and Section 3.5.2 of the SEIS discussed the potential acoustic impacts to marine mammals during pile driving activities and has already addressed this issue by acknowledging variable levels of effectiveness may occur depending on the system and circumstances in the field. Thus, BOEM assumed only a lower level of 6 dB sound reduction in its assessment. Greater reduction sound may be achieved, but underwater sound levels would be required to verify the actual sound levels produced during construction. As such, a conservative approach to identifying impacts and mitigation and monitoring measures has been taken by assuming only a 6 dB sound reduction even though 12 dB or higher sound reduction levels may be achieved. Further details regarding acoustic effects and potential consequences to these species are provided in Appendix F of the DEIS, SEIS, and FEIS, in the BA submitted to NOAA which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation- Documents/, and in the final Opinion issued by NMFS on September 11, 2020. Section 3.4.2 and Appendix D of the FEIS include comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on marine mammals and includes monitoring the effectiveness of sound attenuation methods and would require

Index	Comment Text	Response
Numper		secondary measures if the required sound levels upon which the assessment has been complete are not met.
13081-010	The Commission is concerned that BOEM's analysis of impacts [to marine mammals] in the supplement, which is based on modeling discussed in Vineyard Wind's COP, assumes an optimistic and unverified, 12-dB sound reduction in sound levels Some of the sound generated by impact pile driving radiates through the ground and emerges in the water column at some distance from the pile, unattenuated by bubble curtains or other sound attenuation devices that rely on near-source, pile-surrounding barriers (Dahl and Reinhall 2013). Recent guidelines emphasize the importance of deploying both a primary and secondary sound mitigation measure during pile driving (Koschinski and Lüdemann 2020). Studies of the effectiveness of various sound attenuation devices are summarized in Koschinski and Lüdemann (2020) and discussed in more detail in numerous other reports and papers (Weyres-Offshore 2013, Bellman 2014, Elmer and Savery 2014, Reinhall et al. 2015 and 2016, Andersson et al. 2016, Wochner et al. 2016, Dahne et al. 2017, and Verfuss et al. 2019).	Section 3.3.7.3 of the DEIS discussed the potential acoustic impacts to marine mammals during pile driving activities and assumed only a 6 dB sound reduction. Further details regarding acoustic effects to these species are provided in Appendix F of the DEIS, in the BA submitted to NOAA which can be found at the following link: https://www.boem.gov/Vineyard- Wind-Consultation-Documents/, and in the final BO issued by NMFS on September 11, 2020. Section 3.5.1 of the SEIS provided an updated discussion of potential acoustic impacts on marine mammals as a result of pile driving. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met.
13081-011	The Commission reviewed the National Marine Fisheries Service's (NMFS) proposed incidental harassment authorization (IHA) for Vineyard Wind's construction activities (84 Fed. Reg. 18346) and submitted comments and recommendations in its 3 June 2019 letter to NMFS. In that letter, the Commission recommended that NMFS require Vineyard Wind to conduct and report sound source and sound propagation measurements during all piledriving activities (impact and vibratory), assess impacts during vibratory pile driving, and reassess and revise the take estimates associated with Level A and B harassment of marine mammals.	Section 3.4.2 and Appendix D of the FEIS include all required mitigation and monitoring required for compliance with the Project-specific NMFS IHA. These measures include, but are not limited to, avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met.
13081-012	The Commission noted that NMFS would require Vineyard Wind to achieve at least a 6-dB reduction in sound levels during pile-driving activities from the use of one or more of the sound attenuation devices noted previously. The Commission raised concerns about the assumptions used by NMFS regarding the efficacy of bubble curtains in achieving a 6-dB sound reduction during pile driving. The Commission noted in one of its previous letters to NMFS that performance testing conducted by the California Department of Transportation (CalTrans 2015) indicated that bubble curtains provide the greatest reduction in sound pressure levels (SPLs) in the near field (within 100 m); however, SPLs at distances of 400–500 m were reduced by only 1 to 2 dB. Based on uncertainties associated with Vineyard Wind's proposed sound attenuation devices, the Commission recommended that NMFS require	Section 3.4.2 of the FEIS discusses the potential acoustic impacts to marine mammals during pile driving activities and assumes only a 6 dB sound reduction. Vineyard Wind would be required to measure sound levels at different distances from the first piles installed. If monitored sound levels are greater than the levels predicted by modeling, an additional sound reduction system would be deployed in addition to the first. BOEM recently measured sound levels with and without a bubble curtain at the Commercial Virginia Offshore Wind Demonstration Project. The results suggest at least a 6 dB reduction in sound can be achieved at all distances. The type of pile driving, hammer energies, and hard substrate type offshore California may not provide a comparable scenario to offshore wind development in the Atlantic and are not consistent with BOEM measurements of the effectiveness of

Index	Comment Text	Response
Number		
	Vineyard Wind to assess the efficacy of its proposed sound attenuation devices during installation of the first monopile and monitor sound levels associated with pile driving at least monthly to ensure that the sound attenuation device continues to provide at least a 6-dB reduction in sound levels.	sound reduction systems on the Atlantic OCS. Additionally, a thorough review of other sound reduction systems has been provided in the COP, BOEM's BA for ESA consultation, and the application for the Incidental Harassment of marine mammals submitted to NMFS by Vineyard Wind. This review of sound reduction effectiveness has also been accepted by NMFS and a minimum 6 dB reduction has been assumed in the FEIS, the proposed IHA, and the September 11, 2020 Opinion. BOEM continues to apply the best available information and work with NMFS to apply that information in its assessments. Details regarding acoustic effects to these species are provided in Appendix F of the FEIS, in the revised BA submitted to NOAA which can be found at the following link: https://www.boem.gov/Vineyard- Wind-Consultation-Documents/ and in the final Opinion issued by NMFS on September 11, 2020. Additionally, Section 3.4.2 and Appendix D of the FEIS include comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on marine mammals and includes monitoring the effectiveness of sound attenuation methods and would require secondary measures if the required sound reduction is not met
13081-013	There are a wide variety of sound attenuation devices available and a limited number of studies have been conducted in U.S. waters to measure sound propagation of the large monopiles proposed for installation by Vineyard Wind and other wind energy developers. Testing to verify sound attenuation effectiveness for these large monopiles will be key. The Commission commends BOEM for its ongoing efforts to measure sound generated by wind energy construction projects through its Real-time Opportunity for Development Environmental Observations (RODEO) program and other environmental studies noted herein. Such studies are providing a better understanding of the effects of wind energy development in U.S. waters, where wind energy development is still in its early stages. They are especially critical for evaluating potential effects on right whales and other low-frequency cetaceans that are sensitive to the sound generated by pile driving (Finneran 2016). The Commission recommends that BOEM continue to work with NMFS to evaluate sound levels associated with pile driving, including measurements with and without sound attenuation devices, to determine the effectiveness of such devices at reducing marine mammal exposure to harmful sound levels.	Section 3.4.2 and Appendix D of the FEIS discuss comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on marine mammals, and includes monitoring the underwater sound levels for the each pile type when the first piles are driven. Should sound levels be measured to be above the predicted levels predicted by modeling, an additional sound reduction system would be deployed in addition to the first. BOEM recently measured sound levels with and without a bubble curtain at the Commercial Virginia Offshore Wind Demonstration Project through its Real-time Opportunity for Development Environmental Observations (RODEO) program and other environmental studies. Although the final report is not yet available, the initial results show at least a 6 dB reduction in sound can reasonably be achieved at all distances. Additionally, a thorough review of other sound reduction systems has been provided in the COP, BOEM's Biological Assessment, and the application for the Incidental Harassment of marine mammals submitted to NMFS by Vineyard Wind. This review of sound reduction has been assumed in the FEIS, the proposed IHA, and the September 11, 2020 Biological Opinion. BOEM continues to apply the best available information and work with NMFS to apply that information in its assessments. Details regarding acoustic effects to these species are provided in Appendix F of the FEIS, in the revised BA submitted to NOA A, which can be found at the following link:

Index	Comment Text	Response
Number		•
		https://www.boem.gov/Vineyard-Wind-Consultation-Documents/, and the final Biological Opinion issued by NMFS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on marine mammals and includes monitoring the effectiveness of sound attenuation methods and would require secondary measures if the required sound reduction is not met. Measurements will be taken to verify the mitigation measures based on a minimum 6 dB in sound reduction is achieved. Since NARWs may be present when the first piles are driven, optional measurements of a pile without sound attenuation may occur, but are not required, at times of year NARWs are least likely to occur and not detected in the area. As such, target noise levels and the determination if additional sound attenuation levels may be required will be determined on the measured sound levels with the sound attenuation system compared to the modeled levels. If necessary, the mitigation and monitoring distances could also be increased. The September 11, 2020 Biological Opinion issued by NMFS has determined that with implementation of these and other conditions the proposed Vineyard Wind 1 Project may adversely affect but is
		not likely to jeopardize the continued existence of NARWs.
13081-014	Even with effective sound attenuation devices deployed, the sound generated by pile driving is estimated to exceed the threshold for Level A harassment of NARWs and other low-frequency cetaceans at significant distances. For Vineyard Wind, assuming a 6-dB sound reduction would be achieved through the use of effective sound attenuation devices, the Level A harassment zone for low-frequency cetaceans is estimated to be 3.2 km for monopile installations and 7.2 km for jacket pile installations.	Section 3.4.2 and Appendix D of the FEIS discuss comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on marine mammals and includes monitoring the underwater sound levels for the each pile type when the first piles are driven. Measurements will be taken to verify the mitigation measures are effective that were based on a minimum 6 dB in sound reduction are achieved. Secondary sound reduction methods would be required if the measured distances are greater than predicted. The target sound levels and the determination if additional sound attenuation levels may be required will be determined on the measured sound levels with the sound attenuation system compared to the modeled levels. If necessary, the mitigation and monitoring distances could also be increased. The September 11, 2020 Opinion issued by NMFS has determined that with implementation of these and other conditions, the proposed Vineyard Wind 1 Project may adversely affect but is not likely to jeopardize the continued existence of NARWs.
13081-015	NMFS typically requires monitoring of the Level A and B harassment zones to implement mitigation measures to minimize impacts on marine mammals (such as clearance of an area before pile driving can begin, or shutdown of	Section 3.4.2 and Appendix D of the FEIS discuss comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These
	operations if a marine mammal is detected approaching or entering the zone). The Level A harassment zones expected to result from Vineyard Wind's pile- driving activities are clearly too large for monitoring by visual means alone.	measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. The use of PAM

Index	Comment Text	Response
Number		
	Vineyard Wind has proposed to conduct passive acoustic monitoring during spring and fall to supplement visual observations. However, passive acoustic monitoring was not proposed to be conducted from 15 May to 31 October. NARWs have been detected year-round by passive acoustic monitoring throughout the species' range (including the Vineyard Wind project site; Davis et al. 2017). The use of passive acoustic monitoring during all proposed pile-driving activities would enhance the detection of right whales at distances that cannot be effectively monitored visually, provided that the animals are vocalizing.	technologies will allow Vineyard Wind to monitor the large Level A and B harassment zones. During the entire month of May, and when a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31, implementation of enhanced monitoring/mitigation measures for NARW would be required.
13081-016	Vineyard Wind has proposed to continue limited pile driving during nighttime hours. Passive acoustic monitoring is also the most effective way to ensure detection of right whales and other marine mammals during nighttime operations. For these reasons, the Commission recommends that BOEM include, as part of its Best Management Practices, the requirement that passive acoustic monitoring be conducted at all times that pile-driving activities occur to enhance the detection of right whales and other marine mammals and implement appropriate mitigation measures.	Section 3.4.2 and Appendix D of the FEIS discuss comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW, including an updated time-of-day visibility restriction during pile driving activities. Passive acoustic monitoring is proposed to be used as a marine mammal detection method throughout construction, however nightime pile driving will be very limited, if it occurs at all. As indicated in the RPMs and implementing Terms and Conditions of the September 11, 2020 BO, and updated in FEIS, Vineyard Wind intends to carry out all pile driving (hammering) during daylight hours. In order to maintain the required exclusion zones it is important that the required pre-clearance periods occur only in good visibility conditions. The proposed action includes measures designed to meet this requirement including a requirement that pile driving shall not be initiated at night or when the clearance zone cannot be visually monitored, as determined by the lead PSO on duty. Pile driving may continue after dark only if the action began during the day and must proceed for human safety or installation feasibility reasons. Sun glare can impair visibility around sunset and sunrise; therefore, we are requiring measures that ensure that the pre-clearance period for pile driving activities does not occur when sun glare would impair visibility. This will minimize take of whales and sea turtles by minimizing the potential for insufficient clearance of the exclusion zones due to poor visibility. Further, it limits the extent of pile driving that could occur after sunset when the ability to visually monitor for marine mammals is limited. Once installation, as such, given that conditions can rapidly change in the marine environment (i.e., fog or low clouds could unexpectedly arise) and that conditions could unexpectedly reduced and pile driving plan to be implemented when visibility in unexpectedly reduced and pile driving

Index	Comment Text	Response
Number		
13081-017	I o assist in evaluating the effectiveness of mitigation and monitoring	Thank you for your comment.
	measures in reducing impacts on marine mammals, and to improve the	
	usefulness of information being collected by protected species observers	
	(PSOs), the Commission has advocated in various fora for a comprehensive	
	analysis of the data collected by PSOs, including the circumstances under	
	which mitigation measures were implemented. As part of its Fiscal Year	
	2020 call for proposals, the Commission is funding a study to evaluate the	
	utility of PSO data to address cetacean management and conservation The	
	objectives are to summarize the PSO data available for the Massachusetts and	
	Rhode Island wind energy areas and to compare those data to aerial survey	
	data collected by the New England Aquarium The final report will be	
	available in mid-2021 on the Commission's website (www.mmc.gov).	
13082-001	As chair of the Lowell Sustainability Council, I know first hand how	Thank you for your comment.
	important wind power is and how difficult it is to develop. I urge the swift	
	passage of required regulations and that all permits, etc. be approved as soon	
	as possible for this vital and necessary project.	
13083-001	Mass Audubon supports the rapid, responsible development of offshore wind,	Thank you for your comment.
	including the Vineyard Wind project. Offshore wind resources along the	
	Eastern Seaboard provide an enormous, untapped potential to supply energy	
	to densely populated areas. This project will provide 800 MW of clean,	
	renewable wind power capacity, playing an important role toward meeting	
	the Massachusetts and regional goals for transitioning away from fossil fuels.	
13083-002	As the first commercial-scale offshore wind project in the U.S., the project	Chapter 1 of the FEIS has been updated to specify that approval of the first
	will set important precedents in several respects – both in terms of getting	commercial-scale offshore wind facility in the US could lead to increased
	this important new industry off the ground, and in regard to the approach to	developer confidence and a mature supply stream, which would translate to
	environmental impact assessment, monitoring and mitigation.	additional economic and employment opportunities in the region.
13083-003	Mass Audubon's strong support for the project is predicated on BOEM, the	Thank you for your comment.
	U.S. Fish and Wildlife Service, other permitting agencies, and the proponent	
	agreeing to a robust and transparent environmental monitoring and mitigation	
	program, along with a commitment to adjustments as may be necessary based	
	on monitoring results and actual impacts.	
13083-004	The industry and BOEM need to establish a monitoring and mitigation	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation that
	program that is scalable, with data across projects gathered in a manner that	would be implemented to avoid, minimize, and mitigate adverse impacts on
	ensures cumulative impacts can be assessed and addressed, applying adaptive	bats as well as monitoring measures, including deployment of acoustic bat
	management principles. We note that there are significant gaps in baseline	detectors on a subset of WTGs and/or ESP, to refine our understanding of bat
	data on avian and bat use of the project site and the other lease areas, as well	use of the OCS and WDA. Deployment configuration and number of
	as serious weaknesses in the cumulative avian analysis in the Supplemental	detectors would be determined in consultation with applicable stakeholders.
	Environmental Impact Statement (SEIS). The monitoring and mitigation	Additional mitigation and monitoring measures may arise from consultations
	plans for avian and bat life need to be significantly expanded.	and coordination with Federal and State resource agencies. These additional

Index	Comment Text	Response
Number		
		mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision. The monitoring that is being proposed for the Vineyard Wind 1 Project will provide the necessary data to better assess avoidance and minimization measures for future offshore wind development.
13083-005	Offshore wind energy will play an important role in helping Massachusetts achieve its goal of Net Zero by 2050 in the Roadmap to Decarbonization developed pursuant to the Massachusetts Global Warming Solutions Act (Chapter 298 of the Acts of 2008). The Vineyard Wind project is proposed pursuant to An Act to Promote Energy Diversity (Chapter 188 of the Acts of 2016), which included a mandate for electric distribution companies to solicit offshore wind generation capacity of 1,600 MW. This project would feed into the grid on Cape Cod, supplying energy to a region where increased capacity is needed. It would help reduce the need for gas- and oil-fired generation during the winter season.	Thank you for your comment.
13083-006	Mass Audubon's review of offshore wind energy projects is conducted within the context of the threat of rapid climate warming, oil spills, strip mining, air pollution, and the push for nuclear power as a clean energy source. There is scientific consensus that the burning of fossil fuels, such as natural gas and oil, releases heat-trapping gases like carbon dioxide and methane that rapidly heat the earth.	Thank you for your comment.
13083-007	Burning of fossil fuels also results in the release of mercury that bioaccumulates in the environment, causing health problems for humans, especially pregnant women and children.	Thank you for your comment.
13083-008	The impacts of climate change on natural systems, people and wildlife are numerous and far reaching. Already climate change is not only altering temperature and precipitation patterns but also causing shifts in habitat conditions across myriad ecosystems; shifts in populations of plants and animals in both terrestrial and marine environments; ocean acidification and alteration of fisheries and other marine life; and threats to people, property, infrastructure, and economies across the globe. These impacts are accelerating and the window of opportunity available to address them is rapidly closing.	Thank you for your comment.
13083-009	To reduce the worst effects of climate change, Mass Audubon supports increased energy conservation and efficiency as a first priority. Production of electricity from clean energy sources also needs to grow quickly. However, the growth of renewable energy must be done responsibly to minimize	Thank you for your comment.

Index Number	Comment Text	Response
Tumber	adverse environmental impacts. Of the renewable energy technologies	
	available today wind energy is the most cost-effective and reliable	
13083-010	As the first of many planned offshore wind projects along the Eastern	Thank you for your comment
15005 010	Seaboard, the environmental review and permitting for the Vinevard Wind	Thank you for your comment.
	project sets the stage for many other future projects that will cumulatively	
	provide approximately 22GW of capacity. The SEIS was prepared by BOEM	
	to evaluate the cumulative effects of all of these planned leases	
13083-011	Climate change presents threats to both people and wildlife. Mass Audubon's	Thank you for your comment.
	comments in this letter focus on birds and bats.	
13083-012	The greatest threat to birds today is climate change. Of Massachusetts' 143	Climate change was addressed in the SEIS as an Impact Producing Factor
	breeding bird species evaluated by Mass Audubon, 43 percent are "highly	and potential impacts to bird species was discussed in Sections A.8.3.1 and
	vulnerable" to its effects. Climate change produces warmer temperatures that	A.8.3.2. As such no change to the FEIS is warranted.
	alter the length of seasons, interrupting traditional migration patterns.	
13083-013	It [climate change] also causes accelerated sea level rise and stronger ocean	Climate change was addressed in the SEIS as an Impact Producing Factor
	storms which wreak havoc on coastal bird habitats, drowning out the nesting	and potential impacts to bird species was discussed in Sections A.8.3.1 and
	and foraging areas for species such as the federally-protected roseate tern and	A.8.3.2. As such no change to the FEIS is warranted.
	piping plover and the state-listed saltmarsh sparrow.	
13083-014	Both coastal and inland birds are also impacted by changes in temperature,	Climate change was addressed in the SEIS as an Impact Producing Factor
	precipitation, and availability of food, including desynchronization of timing	and potential impacts to bird species was discussed in Sections A.8.3.1 and
	of food availability in relation to critical breeding times.	A.8.3.2. As such no change to the FEIS is warranted.
13083-015	Vineyard Wind aims to build America's first industrial-scale wind farm 35	Thank you for your comment.
	miles south of Cape Cod. Its 800MW capacity is enough to power 400,000	
	homes, removing 2 million tons per year of heat-trapping carbon dioxide, in	
	addition to thousands of tons of poisonous nitrogen and sulfur oxides. We	
12002 016	view that as good for people, birds, and wildlife.	
13083-016	For Vineyard Wind and offshore wind in general to be viable, however, there	Resource sections of the FEIS include proposed mitigation, where applicable,
	needs to be adequate monitoring and mitigation to ensure that it will not pose	and Appendix D of the FEIS, which is a summary of all proposed mitigation
	a significant threat to the marine life and environment in and around the	considered, has also been updated to include modifications and/or additional
	project area. Any development of any type of energy resource will entail	mitigation and monitoring measures. Additional mitigation and monitoring
	some level of impact. However, offshore wind must be designed and	measures may arise from consultations and coordination with Federal and
	operated to avoid significant environmental damages that exceed the benefits,	State resource agencies. These additional mutgation measures will be
	and anticipated impacts need to be minimized and mitigated.	Decision and required as conditions of approval. Section 2.2.1 of the FEIS
		has been undeted to reflect this information
13083-017	And while Mass Audubon supports the deployment of clean renewable wind	Thank you for your comment
15005 017	energy projects off our shores that commitment cannot and will not be at any	Thank you for your comment.
	cost With appropriate design siting and mitigation the industry can grow	
	and prosper as the Commonwealth does its part to combat the devastating	
	impacts of global climate change.	

Index	Comment Text	Response
Number		
13083-018	Mass Audubon supports the current proposal for an 800MW wind farm at lease OCS-A501, known as Vineyard Wind 1.	Thank you for your comment.
13083-019	We support the turbine layout scheme of a 1 nautical mile grid.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13083-020	We oppose Alternative F, which would create much larger transit lanes that the U.S. Coast Guard determined are neither necessary nor optimal. This alternative also threatens the ability of this and other offshore wind projects to be viable and to meet the state and regional goals for transitioning to clean, renewable power.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13083-021	We support the project moving forward with an assessment that includes all migratory and resident birds, in keeping with the Migratory Bird Treaty Act's original interpretation of incidental take. And it is imperative that a robust and transparent wildlife impact monitoring and mitigation program be established for this project and the entire industry.	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13083-022	While offshore wind has been an important contributor to the energy portfolio in Europe, it is important to note that there has not been adequate post-construction monitoring at European offshore wind farms to inform US regulators, wildlife managers, and the industry about the risks to birds and bats.	Thank you for your comment.
13083-023	Nor is sufficient data available to estimate collision risk for a robust suite of bird species that will occur in the leased area of the Atlantic.	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS

Index	Comment Text	Response
Number		
		generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures that can refine our understanding of impacts arising from the presence of WTGs on the Atlantic OCS. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Devicing
13083-024	BOEM's SEIS for Vineyard Wind only includes collision risk models for 10 species (page A-70), while BOEM's estimate of the number of species to potentially have conflicts with the turbines is 177 species. That gap exists because the data are not available to populate the models, and therefore risk cannot be calculated.	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. As discussed, 177 species of birds may be present on the OCS from the Gulf of Maine to Florida. However, not all of these species would be expected to encounter operating WTGs. As discussed, there are only 55 species of birds that are expected be exposed to WTGs. Further, as shown by Viet et al. (2016) only 25 species have been identified in the MA WDAs during the course of surveys conducted during all seasons between November 2011 and January 2015. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated

Index	Comment Text	Response
Number		
		mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13083-025	Major gaps also exist in understanding of the use of the lease areas by bats, and risks to bats from collision or displacement.	While there is little current literature regarding bat use of the OCS, the best available information, including Hatch et al. (2013), Pelletier et al. (2013), Stantec (2016), and Dowling et al. (2017) was used in the analysis. Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision. The monitoring that is being proposed for the Vineyard Wind 1 Project will provide the necessary data to better assess avoidance and minimization measures for future offshore wind development.
13083-026	Technology is not presently available to monitor actual collisions or to validate the collision risk models after the turbines are deployed. Due to these major data gaps, it is not possible at this time to estimate the effect of this project, or the cumulative effects of all of the planned projects, on birds or bats. Also unknown are how those effects may change over time, or by species and season. Rough estimates informed by collision risk modeling are available for a few bird species, but the overall assessment is weak.	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the

Index	Comment Text	Response
Number		
		use of collision risk modeling. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures that can refine our understanding of impacts arising from the presence of WTGs on the Atlantic OCS. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. As additional monitoring methods and technologies become available, BOEM could require their use in subsequent approval processes for future offshore development. Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation and monitoring measures inplaces and incorporated into the Record of Decision. As additional monitoring measures and incorporated into the Record of Decision as additional monitoring measures includes updated mitigation and monitoring measures that would be implemented t
		makers and incorporated into the Record of Decision.
13083-027	Effective collision monitoring, while under development, is only in the testing phase, and is not commercially available or fully vetted.	Thank you for your comment.
13083-028	Additionally, displacement or barrier effects on individuals or populations are also unknown. BOEM asserts in the SEIS that: "The addition of WTGs to the offshore environment may result in increased functional loss of habitat for those species with higher displacement sensitivity. However, as described in the Draft EIS, substantial foraging habitat for resident birds would remain available outside of the proposed offshore lease areas, and no individual fitness or population-level impacts would be expected to occur" (pg. A-71) This is an unsupported qualitative statement that repeats mistakes made in the	Section A.8.3.2 was updated with additional clarification that there is little overlap with the proposed Vineyard Wind 1 Project area and those species of birds with high displacement sensitivity. As depicted in Figure A.8.3-2 in the SEIS, total avian abundance for species with high displacement sensitivity are low in the proposed Vineyard Wind 1 Project area, as well as within all of the offshore wind lease areas on the Atlantic OCS. As such, displacement impacts are expected to be low. Therefore, no change to the FEIS is warranted.

Index Number	Comment Text	Response
Tumber	European market. Displacement and barrier effects are of critical concern across the cumulative analysis, and must be rigorously investigated.	
13083-029	Collision risk modeling, collision monitoring, and understanding the effects of displacement and barrier effects are the three key areas of research that must be addressed with a real commitment from the federal government and from industry to meet the goal of responsibly developing offshore wind. This can only be met with rigorous post-construction monitoring and research.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13083-030	Data from collision modeling and monitoring projects in Europe is collected on turbines that are typically much smaller than those that will be deployed in the US, and that have substantially different hub heights and rotor swept zone area. This reduces the value of data in attempts to crosswalk data from Europe to the US. Further, in the European market, much post-construction monitoring data are not made public, and if they are, are often in report form, not raw data.	As pointed out by the commenter, there are differences in WTG characteristics between operating WTGs in Europe and those contemplated for use by the Vineyard Wind 1 Project and the anticipated development of offshore wind on the Atlantic OCS in the United States. However, this data represents the best available science to use in the FEIS analysis and its inclusion is appropriate as there no data relative to interactions with North American birds and offshore wind development. Additionally, Section A.8.3.1 of the FEIS provides an updated discussion of the potential for collision mortality. The modeled estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures that can refine our understanding of impacts arising from the presence of WTGs on the Atlantic OCS. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring measures the presence of WTGs on the Atlantic OCS.

Index	Comment Text	Response
Index Number	These data gaps are significant, and add uncertainty as we prepare for an industry that may add 2,000+ 10-14MW turbines along the eastern seaboard. It is irresponsible to not acknowledge those data gaps, and to not include plans to close them. It is irresponsible to repeat the mistakes that were made when the European offshore wind projects were constructed.	Response the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. BOEM intends to make the results of the post-construction monitoring available to the public, either by posting monitoring reports on Project-specific websites or making them available upon request. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures that can refine our understanding of impacts arising from the presence of WTGs on the Atlantic OCS. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. Separate from the Vineyard Wind 1 Project, BOEM funds scientific studies and partners with USFWS to better understand how migratory birds use the Atlantic OCS and to refine the understanding of the risks from development to migratory species (https://www.boem.gov/environment/environmental- studies/renewable-energy-research). BOEM uses information from these
		studies, coordination with USFWS, and the scientific literature to avoid leasing areas with high concentrations of migratory birds that are most vulnerable to offshore wind development.
13083-032	Real collision monitoring, a functional understanding of the effects of displacement and barrier effects, and thorough monitoring and compensatory mitigation planning must accompany the growth of this industry.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with

Index	Comment Text	Response
Number		
		Federal and State resource agencies. These additional mitigation measures
		Decision
13083-033	In the absence of an outcomes-based monitoring and research program	Section A 8 3 2 and Appendix D of the FEIS include undated mitigation and
10000 000	projects will be built without adequate monitoring, adaptive management, or	monitoring measures that would be implemented to avoid, minimize, and
	compensatory mitigation.	mitigate adverse impacts on birds. These measures include, but are not
		limited to, installation of bird deterrent devices, use of ADLS, installation of
		digital VHF receivers and acoustic monitoring devices to estimate the
		exposure of ESA-listed species and other migratory birds, preparation of a
		post-construction monitoring plan, and other measures. Post-construction
		monitoring will be developed in coordination with applicable stakeholders.
		Additionally, annual monitoring reports will be used to assess the need for
		reasonable revisions to the monitoring plan. Additional mitigation and
		Federal and State resource agencies. These additional mitigation measures
		could be considered by decision makers and incorporated into the Record of
		Decision.
13083-034	We support the project moving forward with an assessment that includes all	Section A.8.3.1 of the FEIS has been updated with a discussion of the MBTA
	migratory and resident birds, in keeping with the Migratory Bird Treaty Act's	and includes discussions of measures and Standard Operating Conditions that
	original interpretation of incidental take.	will be used to ensure that impacts to migratory birds are minimized. Section
		A.8.3.1 includes and updated discussion regarding the species that have some
		potential to encounter operating WTGs associated with the anticipated
		development of offshore wind facilities on the Atlantic OCS generally, and
12082 025	We reject DOEM's analysis of collision risk modeling, and refer you to our	Section A 8.2.1 includes and undeted discussion recording the species that
13085-055	ioint letter with other groups as an alternative estimation of the potential risk	have some notential to encounter operating WTGs associated with the
	to birds.	anticipated development of offshore wind facilities on the Atlantic OCS
		generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.1 of the
		FEIS also includes an updated discussion of collision risk modeling. The
		estimates of potential collision mortality provided in the FEIS are not relied
		upon to reach an impact level determination, but were provided to explore the
		potential for collision mortality associated with the anticipated development
		on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project,
		specifically. The FEIS has been updated to include additional context on the
12082 026	We reject's POEM's interpretation of Winshin's predicted distribution of	use of contision fisk modeling.
15065-050	seabirds offshore and refer you to the discussion in our joint letter for	spatial information" that can be used to inform marine spatial planning on the
	clarification.	Atlantic OCS, and represents spatial distributions of birds averaged over
		time. Further, the project was specifically not designed to predict the actual

Index	Comment Text	Response
Number		
		number of a particular species in a specific location and time, but rather a relative abundance. The DEIS and SEIS used the Winship data as such. Table A.8.3-7 is provided to illustrate that the expected overall low percentage of a particular species that have been historically observed, or would be expected to occur in the Vineyard Wind 1 WDA. BOEM used this data to help avoid areas where there are large numbers of birds. Further, BOEM did not fully rely on Winship models, but also used survey data of the MA WDAs. As shown by Viet et al. (2016) only 25 species have been identified in the MA WDAs during the course of surveys conducted during all seasons between November 2011 and January 2015. Additionally, the mean densities of the 15 most commonly observed species were relatively low (Veit et al. 2016).
13083-037	This landmark project should move forward with a robust post-construction monitoring plan that includes: A collision and displacement monitoring plan that must be designed, implemented, and improved over time so we can close critical data gaps in our understanding of the effects of large-scale WTG fields.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13083-038	This landmark project should move forward with a robust post-construction monitoring plan that includes: Industry frequently decries projects that are data rich and information poor. We agree that should be avoided.	Thank you for your comment.
13083-039	However, the lack of collision monitoring technologies from the European industry is a cautionary note. In the absence of actual data, analysis is dependent upon models that estimate collisions. There is no commercially available way to detect and evaluate collisions or the models. This is an unacceptable outcome for the US market, and is the most significant technologic gap that must be closed.	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA- listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be

Index	Comment Text	Response
Number		
		developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures, including thermal imaging or similar technologies to monitor collisions, may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. As additional monitoring methods and technologies become available, BOEM could require their use in subsequent approval processes for future offshore development.
13083-040	The monitoring plan must also address the scale of displacement by species and season, as well as the individual and population effects of barrier effects or displacement	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures to refine our understanding of bird use of the OCS as well as our understanding actual displacement or barrier effects. As shown in Figure A.8.3-3, very few birds with displacement sensitivity would be expected to encounter operating WTGs not the Atlantic OCS. Vineyard Wind has drafted a framework for their Bird Monitoring Plan which is included in Appendix F of the FEIS. Population level effects and barrier effects due to displacement are extremely difficult to measure (if at all) for most species especially if they are large and widely distributed. For example, long-tailed ducks are a single very large population that has a circumpolar distribution; gannets and most loons breed in Canada
13083-041	This landmark project should move forward with a robust post-construction monitoring plan that includes: Monitoring the occurrence, exposure to the rotor swept zone, collision risk, and actual collisions of all bird and bat species, through the life of the project, at an appropriate scale to close information gaps, and inform adaptive management plans, as well as compensatory mitigation plans, and future cumulative effects in EIS reports	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures that can refine our understanding of impacts arising from the presence of WTGs on the Atlantic OCS. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. At this time, the full suite of mitigation and monitoring measures that will be required as part of the proposed Project are not finalized. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered

Index	Comment Text	Response
Number		
12092 042	This monitoring plan must be designed to detect wildlife divelopment over	by decision makers and may be incorporated into the Record of Decision. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process. Additionally, cumulative impact analyses will be completed for each future development project, and updated information will be used. As additional monitoring methods and technologies become available, BOEM could require their use in subsequent approval processes for future offshore development.
13083-042	This monitoring plan must be designed to detect wildlife displacement over the life of the turbines, and the individual and population level consequences of displacement and barrier effects.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13083-043	The monitoring plan should be designed in consultation with industry, state, and e-NGO experts, and academics to ensure that the data are able to be used to inform future development of this important industry.	As described in Section A.8.3.2 and Appendix D of the FEIS, post- construction monitoring will be developed in coordination with applicable stakeholders, including BOEM and the USFWS. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. BOEM intends to make the results of the post-construction monitoring available to the public, either by posting monitoring reports on Project-specific websites or making them available upon request.
13083-044	All monitoring data should be publicly available and have a regular annual reporting schedule.	As described in the BA, Section A.8.3.2 and Appendix D of the FEIS, Vineyard Wind will provide quarterly progress reports and annual reports relative to avian monitoring. BOEM intends to make the results of the post- construction monitoring available to the public, either by posting monitoring reports on Project-specific websites or making them available upon request.

Index	Comment Text	Response
Number		
13083-045	 A monitoring plan should include, but not be limited to, technologies such as: acoustic monitoring for bats and birds, radar, or other technologies, deployed to quantify time of year, weather covariates, species composition, area exposure, and effects of lighting. This information is needed to inform collision modeling and monitoring, adaptive management and compensatory mitigation for nocturnal migrant landbirds, passage of waterbirds, and other species not included in high definition aerial surveys, high definition aerial surveys of sufficient frequency to detect seasonal and yearly changes, including refined species identification and QA/QC procedures to ensure correct species identification, MOTUS monitoring (or an acceptable alternative) of species with a high collision risk or state, federal, or other watch list species of concern, collision monitoring technologies must be tested and improved to bring an acceptable product to commercial development. This was not a contingency in Europe, and consequently there is no adequate system for monitoring collisions with wind turbines in the offshore space. This deficiency must be corrected. 	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13083-046	A monitoring plan must include monitoring land-based local populations of roseate tern, piping plover, and other at-risk species, to ensure stable or increasing populations until there is adequate data from a collision monitoring system that will inform the actual take levels of those species.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures, including the deployment thermal imaging cameras or similar technology to monitor bird collisions, may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. There are currently ongoing, extensive monitoring program for ESA-listed species that will continue outside of the construction of the Vineyard Wind 1 project.
13083-047	There will be a level of take that will be permitted by USFWS, yet there will be no way to monitor that take in the turbine field. Monitoring land-based populations can be a surrogate for those critical data until collision monitoring is improved.	A detailed analysis of impacts to ESA-listed species (including roseate tern, piping plover, and Rufa red knot) is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. In all cases BOEM determined that the Vineyard Wind 1 Project "may affect, but is not likely to adversely affect" any of the ESA-listed species that may occur in

Index	Comment Text	Response
Number		-
		the Project Area and no take of these species is anticipated. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. There are currently ongoing, extensive monitoring program for ESA-listed species that will continue outside of the construction of the
13083-048	Populations of terns and plovers are dynamic, and monitoring this resource is critical to understanding the sustainability of our breeding populations. Federal, state and e-NGO partners have worked for decades and spent millions of dollars to recover these species, and their continued recovery must be documented as we add this new stressor in the offshore space.	Vineyard Wind 1 project. There are currently ongoing, extensive monitoring program for ESA-listed species that will continue outside of the construction of the Vineyard Wind 1 Project.
13083-049	Of particular importance is the fact that a new nesting colony of roseate, common, and least terns has developed on Muskeget Island, Nantucket, within approximately 15 miles of the Vineyard Wind lease. This is likely to change the biological assessment, and increase use of the focal area by this federally endangered species, and demonstrates the importance of land-based monitoring.	A revised discussion of the new roseate tern colony on Muskeget Island is provided in the updated BA that was submitted to the USFWS in September 2020. As discussed in the BA, Muskeget Island is in area frequented by foraging and staging roseate terns (for the first time in many decades, 40-50 pairs of roseate terns nested on Muskeget Island. However, those nests failed to produce chicks due to egg predation (S. vonOettingen, Pers. Comm., July 23, 2020). Although roseate terns may attempt to nest on the island in the coming years, "the duration of occupation for 'small' and 'medium' size colonies is short in the majority of cases (the median and mode are 10 and 4 years respectively)" (García-Quismondo et al., 2018). BOEM is currently coordinating with USFWS to monitor the colony site during the 2021 breeding season.
13083-050	Over the life of this project and the other leases, changes can be expected in the location of colonies, foraging areas, and foraging and migration flights. This will require land-based monitoring of colonies, composition of colonies, interactions with the wind developments, and estimates of productivity for the life of the projects.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction

Index	Comment Text	Response
Number		
		monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. There are currently ongoing, extensive monitoring program for ESA-listed species that will continue outside of the construction of the Vineyard Wind 1 project.
13083-051	The dynamic nature of seabird colonies will lead to changes in the use of offshore areas over time. The formation of the Muskeget colony is a living example of that phenomenon, and points to the importance of onshore monitoring of species at risk, as well as continuing and improving aerial surveys through the life of the project.	A revised discussion of the new roseate tern colony on Muskeget Island is provided in the updated BA that was submitted to the USFWS in September 2020. As discussed in the BA, Muskeget Island is in area frequented by foraging and staging roseate terns and for the first time in many decades, 40- 50 pairs of roseate terns nested on Muskeget Island. However, those nests failed to produce chicks due to egg predation (S. vonOettingen, Pers. Comm., July 23, 2020). Although roseate terns may attempt to nest on the island in the coming years, "the duration of occupation for 'small' and 'medium' size colonies is short in the majority of cases (the median and mode are 10 and 4 years respectively)" (García-Quismondo et al., 2018). BOEM is currently coordinating with USFWS to monitor the colony site during the 2021 breeding season.
13083-052	In summary, industry, BOEM, USFWS, e-NGOs, academics, and state governments need to work collaboratively together to develop robust and adaptive management and compensatory mitigation plans that will protect bird and bat populations along the Eastern Seaboard.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. There are currently ongoing, extensive monitoring program for ESA-listed species that will continue outside of the construction of the Vinevard Wind 1 project.
13083-053	This is not limited to the Vineyard Wind project, but it is the responsibility of this new industry to protect the natural resources we have spent decades and millions of dollars to restore.	Thank you for your comment.

Index	Comment Text	Response
Number		
13083-054	In the meantime, permits for this project need to recognize the existing gaps in data and monitoring technology, and provide for adaptive management approaches to project operations and mitigation as the monitoring program is developed and produces information.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. There are currently ongoing, extensive monitoring program for ESA-listed species that will continue outside of the construction of the Vinevard Wind 1 project.
13083-055	The gravity and urgency of the climate crisis and its impacts on both people	Thank you for your comment.
	and wildlife make the rapid advancement of offshore wind a priority. This in	
	no way diminishes the need to address the wildlife impact assessment,	
	monitoring, and mitigation gaps. Both must proceed quickly and in parallel.	
13086-001	As a current college student in Massachusetts who will be living in Boston	Thank you for your comment.
	post-grad, I support the Vineyard Wind project because it will help limit the	
	effects of climate change. This project will help protect current and future	
	generations from the economic, environmental, and health impacts of climate	
	change (which often disproportionately affect low-income areas and people	
	of color). Not only does the project make me hopeful for a safer future, it will	
10005 001	also create over 3,000 local jobs in Massachusetts.	
13087-001	Previously in the DEIS, BOEM had included a cumulative analysis scope	Since the same approach of the characterizing effects in the SEIS was used in
	which analyzed a potential for 902 megawatts (MW) of additional wind	the FEIS, not changes to the FEIS are warranted.
	energy beyond the proposed Vineyard Wind I project. In the SEIS, the	
	geographic and temporal scope of the cumulative analysis was expanded to	
	encompass 22 GW of assumed 12-MW turbines over a 10-year time period	
	from Massachusetts to North Carolina, for a total of 2,066 structures on the	
	Outer Continental Shelf. CZM believes that this is an appropriate	
	geographical and temporal scope that provides a comprehensive framework	
	to assess potential cumulative impacts associated with reasonably foreseeable	
12097.002	The additional federate data among the Atlantic Coast.	
1308/-002	enumerate the value of the fisheries industry within the project area. its	i nank you for your comment.

Index	Comment Text	Response
Number		
	importance to various ports in the northeast, and the ports exposure to	
	offshore wind energy development. These data were important in helping to	
	establish miligation lunds for Rhode Island and Massachusetts vessels (\$4.2	
	million and \$19.2 million, respectively) to compensate for claims of direct or	
	indirect impacts of vessels in the vineyard wind i Project area. These data	
	also supported the creation of the Knode Island Fisherman's Future viability	
	(\$1.75 million) to symmetry common the lity of offeners wind and common interval	
	(\$1.75 minion) to support compatibility of offshore wind and commercial	
	profitable fishing	
13087-003	A preferred project alternative should avoid or minimize disruption to 1)	Section 2.5 of the FEIS has been added which includes the agency-preferred
10007 000	existing and future water dependent industry including commercial and	alternative.
	recreational fishing: 2) traditional navigation routes: and 3) natural processes.	
	resources, and biological activities. As described in the SEIS, there is no	
	single alternative that meets these goals. An alternative that meets Vinevard	
	Wind's goal of developing an 800 MW offshore wind project and meets the	
	Commonwealth's goals of avoiding and minimizing impacts to coastal and	
	ocean resources and uses would: minimize the project footprint, by using the	
	largest available wind turbine generators (WTGs), as in Alternative E (as few	
	as 57 14-MW WTGs); use Covell's Beach in Barnstable as a landing point	
	for the offshore export cables, as in Alternative B; and preserve existing	
	transit corridors and fishing practices using a 1 nautical mile (nm) by 1 nm	
	spacing in an east-west direction thereby reducing potential conflicts with	
	existing water-dependent uses, as in Alternative D2.	
13087-004	The SEIS presents a new alternative, Alternative F, with a transit lane of	Section 2.5 of the FEIS has been added which includes the agency-preferred
	either two nautical miles or four nautical miles oriented northwest/southeast	alternative. The FEIS includes BOEM's Preferred Alternative as well as an
	through the proposed wind farm in which there would be no surface	assessment of potential impacts and mitigation measures.
	occupancy (wind turbines or service platforms). As proposed, the alternative	
	could theoretically facilitate the transit of vessels from southern New	
	England ports to Georges Bank. The wind turbine locations displaced in this	
	alternative would be shifted south into the Vineyard Wind lease area. The	
	SEIS reports that this alternative would result in: longer offshore export cable	
	routes, an increase in acreage of the project area by up to 61%, an increase in	
	inter-array cable length of 37%, additional survey work, additional	
	transmission loss, and the requirement of factory joints which would increase	
	the risk of failure and may not be technically possible. For these reasons,	
	CZM does not support Alternative F and supports the conclusions of the U.S.	
	Coast Guard MARIPARS study that a 1 nm by 1 nm spacing of wind	
	[turbines (as reflected in Alternative D2) is adequate and appropriate to ensure	

Index	Comment Text	Response
Number		
	safe navigation through, and search and rescue efforts within, the future Vinevard Wind - Wind Development Area (WDA).	
13087-005	To further the commitment to navigational safety by Vinevard Wind, the	Sections 3.11.2 and 3.11.2.1 of the FEIS includes a discussion of measures to
	Final Environmental Impact Statement (FEIS) should describe the use of	be used for the proposed Project.
	sound signals, AIS transponders, a uniform numbering and lighting plan,	1 I J
	coordination with other wind farm developers, and/or other design	
	improvements to aid in navigation.	
13087-006	Field data including sediment grabs and cores, seafloor photos and videos,	The raw data, while not publically available, were used to develop the habitat
	and biological samples were not presented in the DEIS or SEIS. However,	classifications that are publicly available. The raw data were available to
	this information is necessary to evaluate alternatives and inform the	BOEM and Cooperating Agencies for their review.
	permitting process. These data should be presented in the FEIS in a way that	
	allows agencies to ensure the avoidance, minimization, and mitigation for	
	impacts to biogenic and/or hard/complex habitats in the siting and subsequent	
	construction of the various elements of the Vineyard Wind project.	
13087-007	Discussions with the Massachusetts Division of Marine Fisheries to find an	Appendix D of the FEIS has been updated to include time-of-year restrictions
	appropriate marine construction window to avoid impacts to various	Vineyard Wind has voluntarily committed to as well as additional measures
	resources and water dependent uses (including the squid, whelk, and flounder	by BOEM. Sections 3.3 and 3.10 discusses the cable installation timing in
	fisheries) have identified the July/August timeframe as a preferred time for	order to minimize impacts to fishing activities and spawning and egg laying.
	marine cable installation. Vineyard Wind has stated that it may be possible to	
	begin laying the energy export cables in the nearshore in one year, bury the	
	partial cable segments, and then splice and continue laying the remaining	
	cable lengths in the offshore portion of the project in the following year. To	
	this end, Vineyard Wind states that it has been working with cable vendors	
	for delivery earlier than originally proposed and is re-evaluating weather	
	modeling to evaluate weather-related risk and begin dredging and cable	
	installation earlier in the spring. The FEIS should clearly describe how the	
	proposed construction activities will be timed, staged, and sequenced to	
12007 000	minimize impacts to the Commonwealth's coastal resources and uses.	
13087-008	Table 3.3.5-2 in the DEIS described the potential hard cover necessary to	Section 3.2 of the FEIS has been updated to discuss minimization of cable
	before considering bard cover. Vinevard Wind assess other ontions	to discuss mitigation in the form of nature inclusive designs for cable
	including: performing a second pass or using mechanical jetting to ensure	protection and minimizing scour protection among others
	appropriate depth of cover using a combination of sand bags and gravel to	protection, and minimizing scour protection, among others.
	cover exposed cable sections, minimizing the extent of hard cover placed	
	around wind turbine foundations, and/or using foundations that do not require	
	scour protection. CZM's recommendations to utilize sandbags and gravel	
	diverge from the currently proposed cable protection methods that suggested	
	using concrete mattresses or rock placement. Through careful inspection of	

Index	Comment Text	Response
Number		
	field data by technical engineers, anticipated hard cover may be reduced as	
12007.000	was the case for anticipated cable protection within state waters.	
13087-009	The FEIS should describe efforts to minimize anticipated hard cover through	Section 3.2 of the FEIS was updated to discuss the potential impacts to hard-
	detailed site analysis or installation techniques. Additionally, any proposed	bottom habitats and efforts to minimize impacts, as well as the potential
	hard cover anticipated in the project should be quantified, mapped, and	impacts of cable protection measures.
12005 010	presented in the FEIS.	
13087-010	According to 30 CFR Part 385 and other BOEM requirements, Vineyard	Decommissioning plans and timelines were discussed in Section 2.1.1.3 of
	Wind must remove all installations and clear the seabed of all obstructions	the DEIS. The decommissioning approach and timeline are unchanged from
	created by the project within two years of termination of its lease. Chapter 3	the DEIS; therefore, no changes to the FEIS are warranted. Further,
	of the DEIS mentioned that decommissioning would include leaving onshore	additional NEPA analysis will be conducted prior to making a determination
	facilities in place, while removing the offshore export cable, scour protection	on the decommissioning application that needs to be submitted for purposes
	and hard protection atop cables (pp. 3-54, 55). In addition, W IG and ESP	of authorizing decommissioning activities, including the methods to be used.
	structures would be removed to 15 feet below the mudline and shipped to	
	ports for disposal (p. 3-185). The FEIS should more fully describe this	
	process and Vineyard Wind's financial commitment to decommissioning and	
12007 011	appropriate landside disposal.	
13087-011	CZM reiterates its support for the regional monitoring program proposed in	Appendix D of the FEIS has also been updated to account for the SMAST
	the DEIS that will be performed by the University of Massachusetts	information.
	Dartmouth School of Marine Science and Technology (SMAST) with input	
	from various state and federal agencies. This program will evaluate the	
	potential long-term effects of the WDA on fisheries and may prove useful in	
12007-012	the review and permitting of future offshore wind projects.	
13087-012	The FEIS should describe a framework for beninic monitoring to verify	The current beninic monitoring plan (COP volume III, Appendix D; Epsilon
	modeling predictions associated with the full project: during construction,	additional mitigation and manifering related to ashle burial, as discussed in
	be sufficient to describe changes in betweeter, sodiment grain size, and	Annendiv D of the EEIS
	bioto (a.g. and and block see bass) within the full project featurint associated	Appendix D of the FEIS.
	with dradging cable installation foundation installation and installation of	
	any necessary cable/foundation protection. Monitoring of the cable route to	
	any necessary cable foundation protection. Monitoring of the cable found to ansure sufficient cable buried will be critical over the life of the project. The	
	EFIS should describe cable monitoring plans including frequency of	
	monitoring and protocols for responding to conditions where cables become	
	uncovered	
13087-013	Over the last few years BOEM in conjunction with the U.S. Fish and	Section A 8 3.2 and Annendix D of the FEIS include undated mitigation and
15087-015	Wildlife Service and research institutions, has supported studies to help better	monitoring measures that would be implemented to avoid minimize and
	define the foraging and migration behavior of various coastal birds in and	mitigate adverse impacts on birds. These measures include, but are not
	adjacent to offshore wind lease areas. It is important for bird migration	limited to installation of hird deterrent devices use of ADIS installation of
	studies to continue to assist in the careful siting of WTGs to minimize	digital VHF receivers and acoustic monitoring devices to estimate the
	overlap with migration routes and to provide data for adaptive management	exposure of ESA-listed species and other migratory birds, preparation of a

Index	Comment Text	Response
Number	in the operations and maintenance of WTGs throughout the region. The FEIS	nost construction monitoring plan and other measures. Post construction
	should describe Vineyard Wind's plans to mitigate unavoidable impacts to avifauna, including monitoring efforts and habitat enhancement.	monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. There are currently ongoing, extensive monitoring program for ESA-listed species that will continue outside of the construction of the Vineyard Wind 1 project.
13088-001	To that end, the Department strongly encourages BOEM to continue its use of site-specific evaluations for determining the layout of projects and vessel transits for areas outside the Northeast OCSThe Department concurs; a state- or region-focused approach is preferred over the application of standards for offshore energy project spacing and vessel transit lanes developed for the Northeast.	As noted in Section 1.7.1.1 of the SEIS, it is difficult to predict turbine capacity and spacing or other future engineering for planned but currently unscheduled offshore wind awards. Therefore, BOEM used reasonably foreseeable assumptions for the analysis and no change to the FEIS is warranted.
13090-001	SCeMFiS has access to experts in all fields of oceanography, fisheries and marine ecology which were drawn upon to review the Supplement to the Draft Environmental Impact Statement for Vineyard Wind LLC's Proposed Wind Energy Facility Offshore Massachusetts (SEIS). The result of that review titled Review of "Vineyard Wind 1 Offshore Wind Energy Project Supplement to the Draft Environmental Impact Statement" can be found at https://scemfis.org/wp-content/uploads/2020/07/wind_report_final-1.pdf and this expert review provides much of the rational for my comments.	Thank you for your comment.
13090-002	The Bureau of Ocean Energy Management (BOEM) has chosen lease areas in the mid- Atlantic bight by considering the geographic sensitivity of demand in the mid-Atlantic/New England regions, the wind energy resource and the fewest apparent environmental and use conflicts. This process has deconflicted most all other ocean uses while the impacts of the areas chosen for wind energy leases falls heavily on the fishing industry and fisheries resources. This has been a multi-year exercise and BOEM must now consider the adverse environmental impacts and use conflicts to decide if the benefits of the project justify the cumulative adverse impacts. For the reasons I will detail herein, BOEM must review the environmental impacts data, the potential consequences of the action and now disapprove of the Vineyard Wind 1 Project Construction and Operations Plan (COP) for construction, operation, and eventual decommissioning of the proposed Project within Lease Area OCS-A 0501.	Thank you for your comment.

Index	Comment Text	Response
Number		
13090-003	The weakening of the cold pool supports the potential of generating the most catastrophic ecological event on the continental shelf the world has ever seen. Given the gravity of a catastrophic shift in cold pool dynamics, great care should be taken to show at high probability that the chance of an impact is vanishingly small. Adequate science leading to that evaluation is not presented in the SEIS and is probably not yet available. This science need is critical. Without definitive science showing the probability of a catastrophic ecological event on the continental shelf as a direct result of wind energy extraction is extremely low, BOEM must disapprove of the Vineyard Wind 1 Project. As the Review of "Vineyard Wind 1 Offshore Wind Energy Project Supplement to the Draft Environmental Impact Statement" demonstrates, the analysis in the SEIS has not shown turbines can be placed in the water and wind extracted from the atmospheric layer above the ocean, at scale, without causing a catastrophic ecological event on the continental shelf.	Cold pool dynamics and potential impacts are addressed in Section 3.3.1 of the FEIS. This information was also presented in the SEIS.
13090-004	The harvesting of ocean wind energy has the potential to become a huge new industry in the United States very quickly. A lesson learned by the fishing industry is that the resources of the ocean are not limitlessThe cold pool is so unique to this planet and so important to the ecosystem of the mid-Atlantic bight we simply cannot proceed without the thorough evaluation of the adverse impacts of the removal of wind energy from the ecosystem over the cold pool. The field surveys, empirical studies, and ecosystem modeling has not been conducted as is needed to address these concerns.	Cold pool dynamics and potential impacts are addressed in Section 3.3.1 of the FEIS. This information was also presented in the SEIS.
13090-005	In order to provide an example of use conflict, an analysis was performed by Azavea, a Philadelphia PA firm specializing in geospatial analysis and visualization for environmental impact. The report of the resulting analysis looked at the spatial operational needs of Atlantic surfclam vessels; The report is attached and is to be considered as part of this submission. Azavea was given access to the vessel monitoring system (VMS) data of the five Atlantic surfclam vessels of LaMonica Fine Foods and Azavea performed a conflict analysis for NJ Lease OCS-A 0499, one of the lease areas considered for cumulative impacts of the SEIS. The analysis of the VMS data determined that the median size of a polygon representative of fishing trips was 10.6 sq. nm. Half of the trips were smaller than 10 sq. nm and 47 trips or 32.6% were smaller than 5 sq. nm. The minimum operability thresholds for the operation of a surfclam vessel is much greater than that which is provided by a 1 nm x 1 nm grid turbine spacing with interarray cabling.	Section 3.10.2 of the FEIS was updated to include the analysis by Azavea. Section 3.10.1.1 of the FEIS states that Clam industry representatives state that their operations require a minimum distance greater than one nautical mile between WTGs, in alignment with the bottom contours, for safe operations and this reference was cited.
13090-006	Fishing isn't allowed within any European wind energy areas outside of England because of the dangers of catching an interarray cable carrying $66,000$ volts. Although these interarray cables will be buried between $5 - 8$ ' deep, surfclam and ocean quahog vessels that fluidize the high energy sand of	BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature
Index	Comment Text	Response
-----------	---	---
Number		
	the OCS to harvest clams will not be able to fish where these cables are buried due to the extremely high risk to life and property if a cable is exposed and caught. The underwater turbine linkage maps show a poorly constructed	System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable
	plan if facilitation of fishing vessel operations is desired. Figure ES-1 (DEIS)	installation report that will include location and burial depth. See the updated
	is an example. Mobile gear fishermen in Europe report that the frequency of	Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for details.
	cable exposure makes the cables even more restrictive to fishing than	
	turbines. Between the turbine spacing and the interarray cables, wind energy	
	areas will essentially become no fishing zones once construction starts for the	
	life of the wind farm and potentially forever.	
13090-007	The lack of information and requirements in the SEIS about	Decommissioning plans and timelines were discussed in Section 2.1.1.3 of
	decommissioning means this action will likely cause a permanent alteration	the DEIS. The decommissioning approach and timeline are unchanged from
	of the marine environment and permanent zones that some fisheries find too	the DEIS; therefore, no changes to the FEIS are warranted. Further,
	risky to harvest within. Even if there is no regulatory restrictions from	additional NEPA analysis will be conducted prior to making a determination
	keeping a surfclam or ocean quahog vessel from fishing within a wind array	on the decommissioning application that needs to be submitted for purposes
	the minimum operability thresholds for these vessel, along with the risk of	of authorizing decommissioning activities, including the methods to be used.
12000 009	calching a high voltage cable will prevent narvests within the arrays.	
13090-008	the most important accomming impact. An important issue is the degree to	section 5.14 of the SETS addressed potential project-related and cumulative
	which adverse impacts would accrue to the science conducted by NMFS and	lawar quotas. The discussion of impacts on scientific research and surveys
	the various states. This would include fisheries independent surveys, but also	was developed through collaboration with NMES and BOEM will continue to
	other science activities conducted by NMFS such as endangered species	collaborate on survey protocols. It has been acknowledged that additional
	monitoring and other physical and biological assessments including essential	studies are needed and discussions are ongoing to assess uncertainties in
	fish habitat assessments in the region. The SEIS broadly lists what these	scientific data collection and implement any changes to surveys. Therefore,
	effects are likely to be and categorizes them as major. The logic used in the	no change to the FEIS is warranted. BOEM is funding a process to begin to
	SEIS for major impact is that surveys will be impaired, uncertainty will	understand the options available to mitigate potential impacts on scientific
	increase, and quotas will be lowered (or eliminated). The SEIS notes that	research and surveys. Regardless of such actions, long-standing NMFS
	surveys within the turbine field are unlikely and that this will increase	surveys would not be able to continue as currently designed and extensive
	uncertainty in assessments, but without any estimates of effect. For some	costs and efforts will be required to adjust survey approaches. Therefore,
	species, the actual impact would begin with a contraction of the total stock.	potential impacts on scientific surveys and research is anticipated to be
	Simply put, the only recourse in the assessment would be to assume that no	major. Please refer to the following link:
	stock exists in unsurveyed areas. The example of the region east of Nantucket	https://www.boem.gov/environment/environmental-studies/20-x07
	and the clam survey is a good example. Here, the fishery has caught clams	
	for many years, yet the region is not surveyed and those clams are not,	
	therefore, included in the stock estimate. The wind turbine field would also	
	be debited from the stock footprint. Consequently, estimated stock carrying	
	capacity would be reduced. As the target and threshold reference points are	
	directly related to carrying capacity, these also would be reduced. This would	
	reduce the Overfishing Limit (OFL) and ultimately the Allowable Biological	
	(ABC). Consequently, the possibility of an overfished state or that	

Index	Comment Text	Response
Number	overfishing occurred would increase. Quota reductions would be a likely result.	
13090-009	It is important to realize that any unknown generates additional uncertainty that ultimately favors a quota reduction. It is important to realize that this impact is perpetual. That is, the economic damage is realized each year that the turbine field exists and restricts survey completeness. Thus a single year compensation package cannot mitigate the adverse economic impact.	The SEIS discusses these issues throughout Section 3.14 (Other Uses, Scientific Research and Surveys), and Section 3.14.2.5 addresses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07). Existing voluntary compensation packages details are in Appendix D, including voluntary compensation packages that Vineyard Wind proposes for the life of the project. Therefore, no change to the FEIS is warranted.
13090-010	It is important to realize that long-term recovery after decommissioning might result in decadal and longer impacts on fishing of long-lived species, a timeline and effect level not contemplated in the current SEIS. Importantly, the SEIS does not show any estimates of effect of reductions in spatial footprint of monitoring on uncertainty in governance (quota calculations considering risk policy), even though simulations using Management Strategy Evaluation (MSE) technology are readily possible with today's software that would enable one to quantify the potential damage. As yet, then, we do not know how assessment models may respond to changing survey (and landings) inputs relative to defined reference points. It is important to note that under the MAFMC risk policy, increases in uncertainty in estimates of stock status and factors affecting population and ecosystem dynamics result in more precautionary advice when deriving ABCs.	Section 3.14 (Other Uses, Scientific Research and Surveys) and Section 3.14.2 of the SEIS discusses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no changes to the FEIS are warranted. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07).
13090-011	In summary, the SEIS discusses impacts of wind energy areas to managed fisheries and notes these impacts will be among the greatest impacts of the project. The SEIS correctly indicates that impacts owing to inability of federal fisheries management agencies to conduct annual stock surveys within the wind area footprint will be major. However, the SEIS does not address the scale and scope of these impacts. Given the size and location of these wind leases, which overlap with important portions of many economically and culturally important stocks, the effect on scientific advice to inform management resulting from an inability to survey may be one of the biggest anticipated impacts of the wind project - but the scale of the consequences is not known. It is likely that the magnitude of the effect will vary by species, and that this uncertainty will be further compounded for	The SEIS addresses these issues throughout Section 3.14 (Other Uses, Scientific Research and Surveys), and Section 3.14.2 addresses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no change to the FEIS is warranted. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07).

Index	Comment Text	Response
Tumber	fished species that are experiencing distribution shifts (both among and	
	within years) due to climate change as the proportions of stocks being	
	available/unavailable to monitoring will change as the spatial footprint of	
	wind farm development changes (increases) over time during regional	
	deployment, also exacerbating dynamic changes to biological reference	
	points.	
13090-012	Also discovered in the Azavea report is that looking at the years between	Section 3.11.1.1 and 3.11.2 of the SEIS discusses how development in a
	2007 and 2018 as little as 1.1%, but as much as 30.0% of the fleets fishing	Wind Lease Area could cause fishing vessel relocation, increased conflict,
	time, according to the VMS data, was spent in this one wind energy lease	increased operating costs, and lower revenue; therefore, no change to the
	area (NJ Lease OCS-A 0499) during a given year. Fishery biomass shifts	FEIS is warranted.
	over time due to environmental factors. If we are to take thousands of square	
	miles of historic fishing grounds and virtually make them off-limits to large	
	mobile tending bottom fishing vessels in the mid-Atlantic bight, some of the	
	United States' most productive fishing grounds, we risk making off limits	
	grounds that will be vital to the survival of many fishing businesses.	
13090-013	Allowing such expansive areas to be operated by wind energy companies w/	Section 3.11 and 3.14 of the SEIS discusses the needs of some fishing
	1 nm x 1 nm turbine spacing such as is being considered, preventing fisheries	operations for greater than 1 nautical mile clearance, the potential of practical
	to operate these historic fishing grounds, by not accommodating the spatial	exclusion of some fishing operations from Wind Development Areas, the
	operational needs of the fisheries, by causing the removal of portions of the	restrictions on NMFS survey vessels and the resulting increased uncertainty,
	fishery quota due to inaccessibility of NMFS survey vessels and the resulting	the potential to impact the financial outcomes of fishing, and the voluntary
	increased uncertainty this will cause, the fishing industry is sure to contract	financial compensation programs offered by Vineyard Wind. Table 3.10-11
	significantly and some businesses to will not survive the addition of wind	of the FEIS shows a cumulative assessment of projected revenue exposure
	energy as a user group or our waters at this scale. This is not consistent with	from all potential offshore wind lease areas if a harvester opts to no longer
	the national need for food security, the national need to enable our fisheries	fish in the area and cannot recapture that income in a different location.
	to operate. For these considerations of existing use of the OCS and national	Therefore, no change to the FEIS is warranted.
	needs, BOEM must disapprove of the Vineyard Wind 1 Project.	
13090-014	In conclusion, now that it is known that the environmental impacts of	Cold pool dynamics and potential impacts are addressed in Section 3.3.1 of
	building over the cold pool, cannot be determined with the degree of	the FEIS. This information was also presented in the SEIS.
	certainty necessary to proceed, BOEM must disapprove of the Vineyard	
	Wind I Project.	
13090-015	Now that it is know that the impacts to fisheries due to loss of access to	Section 3.10 and 3.10.2 (Table 3.10-4b) of the FEIS demonstrates that less
	historical fishing grounds could easily account for 30% of a fleet's annual	than 2 percent of landings from any given fishery are annually sourced from
	effort, BOEM must disapprove of the Vineyard Wind 1 Project.	the Wind Development Area of the proposed Vineyard Wind 1 Project.
13090-016	Now that it is known all impacted fisheries will likely lose quota to	Section 3.11 and 3.14 of the SEIS discusses that impacts on fisheries
	sustainable fishery biomass BOEM must disapprove of the Vineyard Wind 1	scientific surveys may result in more conservative quota and effort
	Project.	management measures; therefore, no change to the FEIS is warranted.
13090-017	Now that it is known that fisheries could potentially lose access to	Section 3.11 of the SEIS discusses how development in a Wind Lease Area
	historically productive fishing grounds for 30 years, or even indefinitely	could cause fishing vessel relocation, increased conflict, increased operating
1	BOEM must disapprove of the Vinevard Wind 1 Project.	costs, and lower revenue; therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
13090-018	Last Tow, LLC report "Fishing Route Analytics Report"	Thank you for your comment.
13091-001	Massachusetts has committed to cost-effective offshore wind energy in two	Thank you for your comment.
	landmark pieces of legislation: the 2016 Energy Diversity Act and the 2018	
	Act to Advance Clean Energy. Already we have met the first legislative	
	mandate requiring the procurement of 1,600 MW of offshore wind energy by	
	2027 and we are advancing efforts to meet the next goal requiring	
	procurement of an additional 1,600 MW of offshore wind energy by 2035.	
	The advancement of the 800 MW VW1 project is a critical component of the	
	Commonwealth's offshore wind energy future and meeting our greenhouse	
	gas emission reduction targets, including Governor Baker's commitment to	
	reach net-zero emissions by 2050 announced in January.	
13091-002	We would like to thank BOEM for releasing the SEIS on the timeframe	Thank you for your comment.
	previously put forward. Given the far-reaching and deep impacts of	
	COVID19, BOEM's efforts to deliver such a comprehensive document, with	
	the appurtenant information and analysis, and to hold five highly engaged	
	and productive virtual public meetings on the SEIS is truly commendable.	
13091-003	Since the DEIS, the United States Coast Guard (USCG) has released the final	Section 2.1.3 and Section 3.11 of the FEIS incorporate, where appropriate,
	recommendations of the Massachusetts Rhode Island Port Access Route	the Final MARIPARS. Section 2.5 of the FEIS has been added which
	Study (MARIPARS) The final study recommends that wind turbines in the	includes the agency-preferred alternative.
	Massachusetts and Rhode Island Wind Energy Areas (MARIWEA) be	
	developed along a consistent and uniform grid pattern with at least three lines	
	of orientation and spacing to accommodate vessel transit, traditional fishing,	
	and emergency safety operations.	
13091-004	Massachusetts strongly supports the proposed VW1 project. More	Vineyard Wind has announced they will be using the Covell's Beach landfall
	specifically, we support the Covell's Beach cable landfall route (Alternative	and all state and local permits have been obtained. Section 2.5 of the FEIS
	B) and the 1 nm x 1 nm spacing with E/W orientation (Alternative D2). The	has been added which includes the agency-preferred alternative. The FEIS
	1nm x 1nm E/W turbine layout and spacing alternative meets the	includes BOEM's Preferred alternative.
	recommendations of the MARIPARS. This layout and spacing has also been	
	adopted by the five offshore wind developers with active leases in the	
	MARIWEA. A consistent and uniform grid pattern will reduce potential	
	impacts on existing ocean uses including commercial and recreational fishing	
	and other maritime traffic As the authority on maritime safety and	
	navigation, we recommend that BOEM with input from USCG adopt and	
	apply these recommendations into the review of the VW1 project as well as	
	future offshore projects.	
13091-005	We request that BOEM reject the new transit lane alternative (Alternative F)	Section 2.5 of the FEIS has been added which includes the agency-preferred
	as it is not supported by the MARIPARS and would result in a significant	alternative. Both the SEIS and the FEIS provide a detailed analysis of the
	reduction in total offshore wind energy produced within the active wind	potential effects that could result if Alternative F were implemented.
	lenergy lease area, making it difficult for the Commonwealth to meet our	

Index Number	Comment Text	Response
Number	offshore wind energy goals. Additionally, the transit lane Alternative F could have broader and more far reaching impacts on future offshore wind projects and other state offshore wind energy goals associated with projects planned within the MARIWEA. As the authority on maritime safety and navigation, we recommend that BOEM with input from USCG adopt and apply these recommendations into the review of the VW1 project as well as future offshore projects. In parallel to BOEM's review of the Construction and Operations Plan for the VW1 project, the project was reviewed by Commonwealth agencies for conformance with a number of applicable state laws and regulations. The review by these Massachusetts offices and departments is complete, and all	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring
	licenses and permits have been issued. Coordination between Vineyard Wind, LLC and these agencies will continue through the implementation of specific monitoring plans for avifauna, benthic habitats, water quality, and cable burial to ensure the minimization and mitigation of impacts to critical coastal species and habitats throughout project construction, operation, and decommissioning.	measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13091-007	As part of the state review process, EEA and Vineyard Wind, LLC formally agreed to the Massachusetts Fisheries Compensatory Mitigation Plan. With this agreement, funds were established to compensate the Massachusetts fishing industry for potential impacts associated with the VW1 project that cannot otherwise be avoided or mitigated. Pursuant to the plan, Vineyard Wind agreed to establish two funds totaling \$20,935,016 over the life of the project: the Compensatory Mitigation Fund and the Fisheries Innovation Fund. The Compensatory Mitigation Fund (\$19,185,016) will offset potential direct, indirect, and cumulative economic impacts to Massachusetts fishing businesses and the Fisheries Innovation Fund (\$1,750,000) will facilitate innovation that supports the co-existence of the fishing and wind sectors in the offshore environment.	Section 3.10.2 and Appendix D of the FEIS discusses these mitigation funds related to the proposed Project; therefore, no change to the FEIS is warranted.
13091-008	I want to reiterate the Commonwealth's commitment to the responsible development of cost-effective offshore wind energy to meet our greenhouse gas reduction commitments while ensuring its long-term coexistence with our commercial and recreational fishing industries and the protection of our marine ecosystems. We urge BOEM to continue its comprehensive and timely work on the VW1 project, finalizing the NEPA analysis and COP review, with an issuance of an affirmative Record of Decision in December 2020.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect BOEM's anticipated date for a decision on the COP.
13095-001	As compared with Alternative F or any hybrid alternative that incorporates transit lanes, Alternative D.2 provides a superior basis for supporting	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number	multiple uses safely while further developing the offshore resource as	
	Congress intended	
13095-002	Specifically Alternative D 2 strikes the best balance in meeting the intended	Section 2.5 of the FEIS has been added which includes the agency-preferred
15075 002	purpose of the Vinevard Wind project and addressing the U.S. Coast	alternative
	Guard's ("Coast Guard") recommendations for navigational safety	
	inclusion of transit lanes—where no turbines could be erected—in offshore	
	leases would stymie the ability of states to meet their renewable energy	
	procurement goals by limiting the amount of offshore lease area for siting	
	wind turbines. Against this need, Alternative D.2 strikes a reasonable balance	
	with the navigation and safety concerns raised by stakeholders and promotes	
	the safe coexistence of multiple waterway uses.	
13095-003	Coast Guard's final MARIPARS report, issued on May 27, 2020, clearly	Section 2.5 of the FEIS has been added which includes the agency-preferred
	supports the selection of Alternative D.2Coast Guard concluded that there	alternative.
	is no need to establish routing measures through the NE WEA considering all	
	vessel traffic patterns and a standard and uniform grid pattern. Coast Guard,	
	however, recommended several mitigation measures and strongly	
	recommended that BOEM require a standard array throughout the NE WEA	
	that would allow for multiple, straight-line navigation safety corridorsIn	
	sum, Coast Guard's MARIPARS report provides robust support for	
	Alternative D.2.	
13095-004	Equinor Wind also is concerned that a transit lane, as described in Alternative	The FEIS addresses this comment in Section 3.11.5.
	F, would not guarantee that vessels would use the lane and would therefore	
	create additional navigation complications or negate the purported purpose of	
	the lane, meaning that significant swaths of the NE WEA would be restricted	
	from wind turbine placement without any commensurate improvement to	
	navigation safety. Further, transit lanes also may funnel more vessel traffic	
	into the corridor and increase vessel density in an area with limited sea room.	
	This funneling effect also may increase navigation risks, as Coast Guard	
12005 005	recognized.	The Einel MARIDARS study (USCC 2020) considered modily a modern for
13093-005	Finally, a transit lane of port access route does not establish a two-way traffic nettern senarating in bound and out bound traffic flow. Should such a transit	neesible application to the MA/DI WEA
	lane he established Coast Guard may find it necessary to impose yet more	possible application to the MA/KI wEA.
	navigational safeguards that could further limit or restrict fishing activities in	
	the designated lanes altogether	
13005 006	As a matter of law BOEM may rely on the expertise of Coast Guard in the	Thank you for your comment
15095-000	NEPA process and in fact NEPA policy encourages BOEM to do so 16 This	Thank you for your comment.
	reliance is routine and expected	
13095-007	BOEM's guidance materials also expressly state that it will rely on the Coast	The FEIS incorporates, where appropriate, the Final MARIPARS
15075 007	Guard to review an applicant's Navigation Safety Risk Assessment	The reason incorporated, where appropriate, the r marint matrix rates.

Index	Comment Text	Response
Number	("NSRA") and to advise BOEM on its adequacy and the adequacy of any	
	adopt Coast Guard's analysis but, rather, should apply its independent	
	judgment based on Coast Guard's expert analysis. However, should BOEM	
	disregard or supersede the Coast Guard's recommendations in the NEPA	
	process, BOEM may not benefit from deference in a court's review of	
	BOEM to closely consider Coast Guard's expertise and advice as reflected	
	in the MARIPARS report.	
13095-008	The SDEIS takes the opposite approach of the DEIS. Instead of starting the	Thank you for your comment.
	analysis by identifying which projects are sufficiently defined for their	
	impacts to be reasonably foreseeable, the SDEIS considers all potential	
	development of the Atlantic seaboard, limited only by the technical resource	
	ush areas the DEIS determined 026 MW of offshare wind energy. As a result,	
	reasonably foreseeable, the SDEIS concluded that approximately 22 000 MW	
	is reasonably foreseeable. The SDEIS does not adequately explain how in the	
	intervening 18 months such a drastic change in foreseeability is possible	
	when only incremental progress had been made on the offshore projects	
	themselves. While it may be within BOEM's prerogative to expand its	
	analysis beyond the requirements of NEPA for a given project, BOEM	
	should clarify that the unusual approach and breadth of analysis reflected in	
	the SDEIS is not universally required by NEPA for cumulative impacts	
	review and that other projects will continue to be evaluated on a case-by-case	
10005000	basis.	
13095-009	The broad assumptions and generalities underlying the SDEIS cumulative	Thank you for your comment.
	impacts analysis highlight the challenges with including undefined and	
	speculative projects in a cumulative impacts analysis and why NEPA bounds the analysis to projects that have more definite peremeters. For instance, the	
	SDEIS assumes that all projects will be constructed with 12 MW	
	turbines BOEM's reluctance to take larger turbine sizes into account even	
	for entirely hypothetical future projects on the Atlantic coast does not justify	
	using 12 MW as a uniform base assumption; rather, it highlights the degree	
	to which the SDEIS steps beyond NEPA's requirements in order to blend	
	known, likely, speculative, and even highly unlikely parameters. In doing so,	
	BOEM departs from NEPA's aversion to speculation, which does not	
	meaningfully inform current decision-making.	
13095-010	BOEM also assumes in the SDEIS that most offshore wind projects will use	Thank you for your comment.
	the 1 nautical mile spacing proposed within the NE WEA The	
	assumptions for the spacing of turbines in offshore wind projects in other	

Index	Comment Text	Response
Number	states is without explanation or basis in the record. The assumptions are not tied to a specific project, particular offtake obligations of the project, or the navigational or safety concerns for that unique project. This turbine spacing information and Coast Guard's input on a specific project's NSRA, for example, is the type of information presented with a COP, again highlighting the relevance of including projects in a cumulative impact analysis only when they are sufficiently advanced for their impacts to be reasonably foreseeable—typically at the COP stage But renewable energy goals of other states may similarly require spacing less than one nautical mile, which	
13095-011	Equinor Wind urges BOEM not to pre-ordain turbine spacing requirements for other offshore wind projects. These projects will be subject to individual and specific review by BOEM, with Coast Guard's input as a cooperating agency.	Thank you for your comment.
13095-012	Offshore wind developers are likely to include various mitigation measures to avoid, minimize and offset potentially detrimental impacts However, the SDEIS largely omits mitigation measures that developers may employ, and as a result, the SDEIS presents impacts that are almost certainly substantially larger than will be the case as individual projects mature. Equinor Wind urges BOEM to directly state that, on a project basis, mitigation measures would be expected and could reduce the anticipated impacts below significance.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13095-013	The SDEIS underestimates the potential beneficial economic impacts with developing an entirely new industry in the United States with the finding of "minor or minor beneficial impact." While the foregoing categories may catalogue beneficial or detrimental impacts, Equinor Wind believes that the magnitude and extent of the beneficial impacts is short-changed when juxtaposed with BOEM's exceptionally broad—essentially industry-wide—scope of impacts analysis for offshore wind off the Atlantic coast.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13095-014	The efforts to develop offshore wind projects will result in significant economic development in many forms, such as increased tax revenues and thousands of jobs, as well as intangible benefits such as increased energy security. The SDEIS mentions little of the considerable contributions offshore wind development is expected to make. For instance, the SDEIS does not address the significant direct and indirect jobs offshore wind development is expected to generate, nor does it appear to account for the	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.

Index	Comment Text	Response
Number	domestic supply chain that will be developed to support the burgeoning industry.	
13095-015	Numerous entities, including American Wind Energy Association ("AWEA"), have conducted studies estimating the net positive impacts associated with states' efforts to foster offshore wind development While the SDEIS mentions the foregoing AWEA study, the SDEIS does not explain why these significant benefits reduce the expected economic impact to "minor or minor beneficial."	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13095-016	In addition, BOEM narrows the economic benefits anticipated from the Atlantic offshore wind development by cabining it only to investment in New England. Yet BOEM canvasses nearly the entire Atlantic seaboard to cast for potentially negative impacts to the fishing industry. Moreover, balanced against this immense development benefit, BOEM adduces a relatively small risk of vessel allision or collision. BOEM itself had concluded that the navigation safety risk from the cumulative development is only moderate for Alternative D.2.	The geographic analysis area for economics is based upon the economic impact specific to the Vineyard Wind 1 Project. Section 3.6.1.1 of the FEIS notes the recent studies identifying nationwide anticipated investment in Atlantic coast offshore wind; however, the conclusions in the FEIS are limited to the geographic analysis area.
13095-017	In sum, to balance the exceptional, nearly industry-wide breadth of its cumulative impacts analysis, Equinor Wind believes BOEM should give greater consideration and weight to the beneficial impacts from offshore wind development writ large off the Atlantic Coast and should appropriately compare the full scope of the expected economic benefits, not just those from New England, to the potentially adverse impacts.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.7.2.1), and the FEIS provides additional detail and analysis.
13095-018	The SDEIS incorrectly concludes that Alternative F would have the same impact as Alternative D.2. The SDEIS explains that Alternative F has a similar cumulative impact than the proposed action based on a conclusion that the revised layout reduces impact on marine business related to the presence of offshore wind structures, short-term air emissions, cable emplacement, and vessel traffic. However, the impact to marine business, principally arising from navigation risk concerns, is lower with Alternate D.2 than with Alternative F. In other words, in relation to cumulative impacts from navigation and vessel traffic, BOEM finds Alternative D.2 to be safer than Alternative F, yet undermines this conclusion in the Environmental Justice discussion by omitting this difference between the two alternatives.	Section 3.7.4 of the FEIS has been revised to note that Alternative D2 in combination with Alternative F would result in increased risk of allision and collision.
13095-019	Equinor Wind encourages BOEM to reconsider the Environmental Justice finding for Alternative F and also consider the consequences of fewer	Sections 2.2.2 and the discussion of Alternative F for multiple resource areas have been revised to note that Alternative F may reduce the capacity of

Index	Comment Text	Response
Number		
	turbines and the inability for states to meet their renewable energy procurement goals. This also will likely result in fewer construction and maintenance jobs, which could be filled by newly trained workers from the environmental justice communities that presently support the commercial fishing industry. Equinor Wind believes that offshore wind development could bring significant economic benefits to the environmental justice communities and that Alternative F may diminish this opportunity by reducing offshore wind development.	offshore wind power generation in the RI and MA Lease Areas. In addition, the FEIS concludes in Section 3.6.4 that Alternative F would have "incrementally smaller beneficial impacts due to potentially lower levels of job creation and economic investment in offshore wind." Section 3.7.4 of the FEIS notes that the reduced power generation capacity of Alternative F could reduce the displacement of fossil fuel power generation with the associated air quality benefits.
13095-020	The SDEIS concludes that the cumulative impacts on the military and national security uses of the NE WEA will be "major." Equinor Wind urges BOEM to provide greater explanation and justification for this finding. The "major" impact finding appears to be largely driven by a perceived impact to search and rescue operations. However, this finding is at odds with the MARIPAR study, discussed above, that concluded uniform, one nautical mile spacing with three axis corridors would present only a minor impact to search and rescue operations. BOEM should explain why the same finding does not accrue to military and national security uses, especially given that the US Navy found only minor but acceptable impacts.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The Final MARIPARS report did not classify impacts to SAR operations as "minor" but rather was intended to determine navigational safety concerns, to evaluate the need for changes to enhance navigational safety, and to evaluate the need for establishing vessel routing measures in and around the RI and MA Lease Areas. Following the layout recommendations in the Final MARIPARS would improve safety, but it would not remove the risk of allisions or collisions with WTGs during SAR operations particularly in challenging weather or visibility conditions (USCG 2020).
13095-021	The SDEIS identifies paleolandforms and paleolandscapes, features that are contributing elements to a National Register-eligible Tribal Cultural Property, as being potentially impacted by offshore wind development. However, not all paleolandscapes will necessarily be eligible for the National Register. Equinor Wind believes it is premature to draw an impact conclusion pertaining to paleolandscapes while studies are pending or have yet to be initiated. The nature of cultural and historic impacts is highly specific to the location and requires project-specific studies, not broad assumptions.	BOEM utilized all information provided in the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. The description of impacts is located in Sections 3.8.2-3.8.5, and when considered against the criteria determining the intensity of impacts (i.e., whether they are minor, moderate, etc.), located in Section 3.8.6, the impacts are of a moderate nature.
13095-022	Additionally, re Homeland security, ROTHR type radar facilities like the ARSR-4 which are considered the first line of site protection from 240 km out could be greatly affected by Offshore Wind especially as the turbine heights get larger and larger.	Section 3.12 of the FEIS has been updated with additional details regarding radar systems and concludes that the Proposed Action alone would have minor impacts to radar systems, but moderate impacts in the context of reasonably foreseeable environmental trends and planned actions. As described in Section 7.9.2.1.2 of the COP, Vineyard Wind conducted a basic radar line-of-sight analysis for the North Truro ARSR-4 and Riverhead ARSR-4 radar systems, and determined that the Proposed Action WTGs would not be visible or interfere with either system. The DoD Clearinghouse would coordinate with military and national security agencies for each

Index	Comment Text	Response
Number		offshore wind project proposed in the RI and MA Lease Areas to de-conflict
		potential impacts to radar systems on a project-by-project basis.
13101-001	The SEIS developed for the Vineyard Wind project, along with the original	Thank you for your comment.
	Environmental Impact Statement (EIS), fulfill these requirements, and given	
	the benefit of experience, science, and evolving technologies, it is likely that	
	subsequent offshore wind projects will similarly be able to meet these	
	criteria.	
13101-002	The SEIS contains a cumulative impact analysis under the National	Thank you for your comment.
	Environmental Policy Act (NEPA) that is unparalleled in its expansive scope	
	and atypical for NEPA reviews conducted by the U.S. Department of the	
	InteriorDuring this same time frame, the Council of Environmental	
	Quality (CEQ) was revising the NEPA regulations as part of the	
	Administration's efforts to streamline environmental reviews, including a	
	revision that would eliminate the consideration of cumulative	
	impactsThus, arguably BOEM will not need to conduct or apply its	
	cumulative impact analysis for offshore wind projects after September 14,	
	2020.	
13101-003	Under its significantly broader SEIS analysis, BOEM assumed a large	Thank you for your comment.
	amount of new, offshore wind projects in the Atlantic, namely the	
	development of 22 gigawatts of offshore wind energy produced by	
	approximately 17 lease areas involving the installation of 2,000 turbines over	
	a ten year period Thus, the inclusion of this many projects in such a short	
	time frame overloads the cumulative impacts analysis, with the silver lining	
	that this approach ensures there are no deficiencies in the NEPA analysis.	
13101-004	The SEIS' cumulative impact analysis also does not account for the fact that	Thank you for your comment.
	many of the identified impacts will be addressed in each project by the	
	project developers. Specifically, the analysis does not consider that individual	
	wind project developers will implement significant mitigation measures	
	during construction, throughout the design and installation phase, and with	
12101 005	regard to navigational safety.	
13101-005	Furthermore, the SEIS analysis does not include the proposed mitigation	I hank you for your comment.
12101.000	measures discussed in the drait EIS.	The set of the second
13101-006	Lastly, the SEIS greatly expanded its geographic reach to include hearly the	I hank you for your comment.
	entire Atlantic coastline southward to Cape Hatteras, North Carolina,	
12101 007	providing a massive level of review beyond the affected region.	
13101-00/	As a result, the SEIS is unparalleled in its comprehensive scope and	i nank you ior your comment.
	considers the maximum level of impacts. Despite this front-loading, the SEIS	
	and not find major impacts that are unmanageable I hus, while there are	
	impacts associated with the Project, they are manageable, mostly temporary,	

Index	Comment Text	Response
Number	and will be addressed by the developen as will be the ease with other	
	and will be addressed by the developer, as will be the case with other	
12101 008	DOEM has developed a NEDA analysis that symposite the selection of	Section 2.5 of the EEIS has been added which includes the according to a fame d
13101-008	Alternative D2, which may idea for a one mantical mile turbing analing layout	alternative
	Alternative D2, which provides for a one natureal infle turbline spacing fayout	
	to anow for both navigational safety and accommodation of fishing routes	
	(MADIDADS) and heat heat heat heat heat heat heat heat	
	(MARIPARS) conducted by the US Coast Guard, the agency responsible for	
	safe vessel navigation, supported the one natureal fine turbine spacing	
	approach and did not recommend new transit corridors in the New England	
	in the maximum and the data adapting Alternative D2. Thus, there is a	
	in the region are committed to adopting Alternative D2 Thus, there is a	
12101 000	strong and rational basis for BOEM to adopt Alternative D2.	
13101-009	In light of the foregoing, BOEM should reject Alternative F, which was a fate	Section 2.5 of the FEIS has been added which includes the agency-preferred
	proposal from the Responsible Offshore Development Association (RODA)	alternative.
	on January 5, 2020Furthermore, while Alternative F has a lower level of	
	cumulative impacts (moderate to major as opposed to major) compared to	
	some of the other alternatives, it has greater cumulative impacts than	
12101.010	Alternative D2, which has only a moderate cumulative impact.	
13101-010	Alternative F's transit lanes do not significantly improve navigational safety,	Section 2.5 of the FEIS has been added which includes the agency-preferred
	as suggested by the fact the U.S. Coast Guard did not recommend transit lane	alternative.
	changes, and there is no indication that there was a need for this alternative	
	given that the other alternatives were determined to have only negligible to	
	moderate direct and indirect impacts to navigationFurthermore, to adopt an	
	approach that would jeopardize the viability of multiple wind projects and	
	renewable energy generation is not justified under these circumstances. As	
12101 011	Such, BOEM should not adopt Alternative F.	Thealt you for your comment
13101-011	It is important to emphasize that the SEIS was developed for the purpose of	Thank you for your comment.
	assessing cumulative impacts for the vineyard wind project, but it is not an	
	Each offshore wind project should be evaluated on its own facts, geographic	
	location and site-specific conditions under the BOEM COP review and	
	approval process. Of course, the SEIS provides helpful information to BOEM	
	in its evaluation of future projects, such as the valuable knowledge gained	
	from evaluating navigational safety routes and the development of the	
	collaborative Alternative D2 approach. Certainly, lessons learned here will	
	streamline and support future wind development moving ahead. But it will be	
	important for BOEM to properly evaluate each project on its own merits.	
13101-012	This approach will not circumvent important environmental considerations.	Thank you for your comment.
	given that most offshore wind developers are proceeding under a design	

Index	Comment Text	Response
Number		
	envelope approach, which assumes a "maximum design scenario," resulting	
	in an assumption of greater impacts than what may actually occur, given that	
	adjustments will be made by the developer in the final design and installation	
	phase of the project to avoid, minimize, or mitigate impacts. Thus, there is an	
	overinclusion of potential impacts in the NEPA evaluation even without this	
	overly comprehensive cumulative impact analysis.	
13101-013	BOEM is also poised to propose new regulations on the facility design and	Thank you for your comment.
	installation phase of the approval process, which is expected to better	
	facilitate the inclusion of important geophysical and geotechnical survey data	
	into the design and fabrication and installation process. See BOEM	
	Deregulating and Streamlining Renewable Energy Regulations (RIN 1010-	
	AE04). These refined regulatory changes will ensure that the NEPA review is	
	structured to enable developers to make well-informed, final decisions about	
	the layout of their projects with the most recent and specific information	
	about site conditions and marine uses.	
13101-014	Lastly, BOEM also requires developers to include a navigational safety risk	A navigational safety risk assessment was included in the COP submittal
	assessment in their COP submittals. These measures, combined with	(COP Volume III, Appendix III-I, Epsilon 2020a).
	compliance with other, applicable federal laws that are protective of natural	
	resources, marine uses, and wildlife, will ensure that adequate NEPA reviews	
	will occur for each offshore wind project.	
13102-001	[Seafreeze's] pre-existing federally permitted activities, use of the sea and	Section 1.1 of the DEIS contained, as well as the FEIS, information on the
	seabed for a commercial fishery, and associated navigation, per the Energy	background of the process and the proposed Project. Appendix C (formerly
	Policy Act, are in conflict with existing BOEM leases [in the OCS and	Chapter 4) of the FEIS has been updated with information on the
	USEEZ]. Although in many instances, these conflicts were raised early in the	coordination and consultation process to date for the proposed Project. The
	BOEM process, leases proceeded without regard for these impacts.	wind energy area offshore Massachusetts was reduced by approximately 50%
		through the removal of the Nantucket Lightship Habitat Closure Area based
		on comments from the fishing industry and fisheries managers. This occurred
		as part of the official public notice and comment period for the Request for
		Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area
		south of Cox Ledge was removed from leasing consideration by BOEM
		during the Area Identification process. Through this process, high value
		fishing areas were identified by the Rhode Island Fisheries Advisory Board
		and removed prior to leasing.
13102-002	Regarding the Vineyard Wind Project, we repeatedly raised similar fishery	The FEIS considers all substantive comments, including public testimony,
	and navigational concerns with both the project developer and BOEM over	received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F,
	several years, via in person meetings, and both verbal and written public	were a direct result of commercial fishing industry comments.
	comments. Agency response over this timeframe has included dismissal of	
	concerns, termination of stakeholder phone calls mid call while we waited to	
	make comments, and statements that our fishing and navigational concerns re	

Index	Comment Text	Response
Number		
	the Energy Policy Act would be addressed at the end of the BOEM process	
12102 002	during consideration of the COP	
13102-003	neither BOEM nor Vineyard Wind have included Rhode Island Department	The Section 3.10.1 of the FEIS has been updated to utilize the cited RI DEM
	of Environmental Management's Division of Marine Fisheries analysis of the	analysis.
	value of Rhode Island fisheries in the Vineyard Wind lease area into their	
	decision-making process As a result, the impacts to the commercial	
	Tisning industry from the Proposed Action alone have been severely	
12102 004		
13102-004	these impacts to our vessels and businesses will be evaluated pursuant to the $\frac{1}{2}$	The potential effects of commercial wind lease issuance and site assessment
	Tinal NEPA analysis currently ongoing, at the final decision on	activities offshore Rhode Island and Massachusetts had notice and comment
	formular generation was the Engineer Dalian Act should be considered at the	opportunities that resulted in the removal areas from consideration because of
	Institution of the manages to eliminate immortant fishery areas from lasse	Rhown fishing activity (e.g., Massachuseus [Nantucket Lightship], and
	approved and the process, to enhimate important fishery areas from lease	and presented in an Environmental Assessment in 2012. A link to that
	until the very and it retains considerable leavery in approval or disapproval at	document can be found here:
	this late stage a fact also made clear to project developers early in the leasing	https://www.hoem.gov/sites/default/files/uploadedEiles/BOEM/Renewable_E
	nrocess	nergy Program/State Activities/BOEM%20RI MA Revised%20FA 22Ma
		v2013 ndf
		That process included and accounted for public input. In addition to project
		specific meetings as part of the NEPA process BOEM also regularly briefs
		and solicits comments from the New England, Mid-Atlantic, and South
		Atlantic Fishery Management Councils, as well as the Atlantic States Marine
		Fisheries Commission. These briefings are an important avenue for BOEM to
		make sure the fishing community is aware of the status of projects, when
		there is opportunity to comment on a project and for BOEM to receive
		important information from the fishing community regarding its leasing
		activities. BOEM has continued to engage with commercial fishing industry
		and interested stakeholders throughout the NEPA process for the proposed
		Project; BOEM engages with the public and stakeholders in each step of the
		process and takes public input into consideration when making any decision.
		BOEM has considered all comments throughout the Vineyard Wind 1 Project
		NEPA process. In addition, Appendix C of the FEIS provides information
		related to BOEM's consultation and coordination efforts.
13102-005	We also draw attention to Table ES-1, Changes to the Limits of the PDE, on	The SEIS and FEIS take into account the changes in the proposed Project's
	page ES-3 of the SEIS, which proposes to increase the limit of turbine size	design envelope and assess the potential impacts of larger turbines. As
	from 10 MW and associated parameters to 14 MW and associated	evaluated in the SEIS and in Chapter 3 and Appendix A of this FEIS,
	parameters. We are unaware of any other construction project where such a	implementation of fewer, larger turbines could be less impactful to many
	significant change, or any change at all, is permissible at such a late	resources, such as benthic, marine mammals, and sea turtles due to decreased
	stageAllowing such tremendous last-minute changes to a PDE is not only	pile driving activities. However, utilizing larger turbines could have greater
	inconsistent with established public policy at many levels, but it also	visual impacts, and the magnitude of positive economic effects would be less

Index	Comment Text	Response
Number		
	significantly changes the levels of impacts. These impacts range from magnitude of pile driving and operational noise to benthic footprint to radar and national security footprints. To assume the same level of impact from a smaller structure with related impacts as from a larger structure with related impacts is unreasonable.	with fewer turbines when compared to utilizing a greater number of smaller turbines.
13102-006	While the SEIS states that changes to the proposed Project have been analyzed to the "extent they are applicable" this is clearly not the case. For example, Table A-4, Offshore Wind Leasing Activities in the U.S. East Coast: Projects and Assumptions" all future projects estimated to begin construction after the Proposed Project are in the 8-12 MW turbine range, i.e. smaller than the 14 MW turbines being currently proposed in the changes to the limits of Vineyard Wind's PDE. It is not reasonable to assume that if larger turbines are available for projects at this time, future projects will use smaller and outdated turbines. Therefore, all the cumulative impacts from future projects assumed in the SEIS have actually been underestimated.	As noted in Section 1.7.1.1 of the SEIS, it is difficult to predict turbine capacity and spacing or other future engineering for planned but currently unscheduled offshore wind awards. Therefore, BOEM used reasonably foreseeable assumptions for the analysis and no change to the FEIS is warranted.
13102-007	If project developers are able to update PDEs throughout the application process and right up until final decision, it is reasonable to assume that they will do so with larger and larger turbines as these technologies become available. Therefore, cumulative impacts should include impacts from 15-20 MW and potentially larger turbines for coastwide leases.	As noted in the SEIS, and within the FEIS, BOEM has included a list of assumptions for the analysis for those planned actions that were considered reasonably foreseeable. As noted, for those projects with announced WTG sizes, BOEM assumed an 8 or 12 MW WTG. BOEM understands that turbine capacity may exceed 12 MW in the future. However, for future procurements and projects under this analysis, BOEM evaluated potential impacts assuming that 12 MW WTGs will be used—since it is the largest turbine now commercially available. In addition, each of these future projects will have a NEPA analysis, which will evaluate the appropriate turbine capacity assumption at that time. Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts. As noted in Section 1.7.1.1 of SEIS, it is difficult to predict turbine capacity and spacing or other future engineering for planned but currently unscheduled offshore wind awards. Therefore, BOEM used reasonably foreseeable assumptions for the analysis and no changes to the FEIS are warranted.
13102-008	An ever-changing target is nearly impossible to assess, and undoubtedly will lead to poor public policy and planning, as well as lack of timely assessments of conflicts with existing uses managed by multiple bureaucratic agencies. Such changes to PDEs not only make accurate impacts assessments nearly impossible, but it is also inconsistent with other federally permitted entity processesPotential impacts from proposed wind projects, such as irreversible habitat alteration/destruction and continual operational noise, to fish stocks are much greater than those of commercial fisheries, which are restricted and transient in nature. Two different standards should not be	The development of the DEIS, SEIS, and FEIS has been based on Vineyard Wind's utilization of the PDE. The SEIS as well as Section 2.1.1 of the FEIS specify Vineyard Wind's recent changes to the PDE, particularly related to the potential use of up to 14 MW WTGs. The FEIS states that implementation of fewer, larger turbines could be less impactful to many resources, such as benthic, marine mammals, and sea turtles due to decreased pile-driving activities. However, utilizing larger turbines could have greater visual impacts, and the magnitude of positive economic effects would be less with fewer turbines when compared to utilizing a greater number of smaller

Index	Comment Text	Response
Number		
	maintained by federal regulators for competing uses of the same federal waters, impacting the same natural resources.	turbines. The FEIS assesses the impacts of the reasonable range of Project designs that are described in the Vineyard Wind COP and presented in Appendix G by using the "maximum-case scenario" process. Additionally, once BOEM makes a decision on whether to approve the COP, approve it with conditions, or disapprove it, any changes to the PDE or activities that do not fit within the PDE would require BOEM's approval. Certain variations to a proposal are allowable under NEPA without the need to prepare a supplemental analysis.
13102-009	In weighing the net benefit to the nation on whether to approve the Proposed Action or any of the Action Alternatives, major adverse impacts cannot be outweighed by negligible or potential minor impacts if placed on an objective scale. Mitigation of climate change is purportedly the driving force behind all offshore wind projects. However, if the SEIS determines that "construction of offshore wind facilities are not expected to impact climate change" but will have major negative impacts on the U.S. seafood industry and related jobs, cause loss of life due to major adverse impacts on marine navigation, and cause major adverse impacts to U.S. national security, a rational conclusion is that the Proposed Action and all other anticipated future projects should not go forward unless all these issues can be fully resolved.	The quoted text in the comment is related to the adverse impacts to climate change as a result of construction activities of the proposed Project. The SEIS and FEIS specify that the proposed Project would offset emissions related to its development and eventual decommissioning within 8 years of operation, and from that point would offset emissions that would be generated otherwise were the electricity being generated from another source.
13102-010	The major impacts to commercial fisheries and fishing communities highlighted in the SEIS as a result of the Proposed Action would be at odds with the President's May 7, 2020 Executive Order "Promoting American Seafood Competitiveness and Economic Growth"As noted in our comments below, U.S. commercial fisheries and particularly the squid/calamari fishery, which produces a sustainable product that cannot be farmed via aquaculture methods, will be even more negatively affected by the Proposed Action then assumed in the SEISTherefore, we can only support Alternative G- No Action Alternative.	The Secretary of the Interior will work with the Secretary of the Army, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Homeland Security, the Administrator of the Environmental Protection Agency, other appropriate Federal officials, and appropriate State officials to implement the Executive Order as described in the Order. Section 3.10 of the FEIS considers the squid fishery's reliance on the Vineyard Wind lease area and other nearby lease areas in regards to landings and revenue.
13102-011	"The Proposed Action would cause sediment deposition on up to 2,594 acres, which would result in minor impacts. [from SEIS]" We do not believe this is a minor impact. Should year classes of longfin squid eggs and larvae be smothered by sediment, there would be far-reaching impacts for both the resource and the fishery. Furthermore, suspended sediment through the water column for a 10-mile radius will also impact this stock, particularly when vibrating with underwater sound (discussed below in regards to longfin squid).	Section 3.4 of the SEIS discussed potential impacts of sediment deposition on squid, among other organisms. Stock-specific assessments are beyond the scope of this EIS. Such analyses are not essential to a reasoned choice among alternatives. Therefore, no change to the FEIS is warranted.
13102-012	[Regarding scour] Appendix K references the COP Volume II Section 2.2.4, which is also redacted despite both of these data sources being public. Without knowing which section of the RI Ocean SAMP was quoted, it is	The COP (Volume II and Appendix III-A) contain modeled predictions and sonar-based measurements of scour in the WDA and OECC, as well as estimates of sediment transport. These sources consider the increased

Index	Comment Text	Response
	difficult to comment on that source directly. However, the RI Ocean SAMP data primarily focused on the Block Island Wind Farm area, which is very differently hydrodynamically than the Proposed Project area and surrounding areas, and with much slower tidal currentsThese tidal current speeds in and around the Vineyard Wind project area and MA/RI leases are equal to or greater than those causing sediment plumes in European projects. Therefore, we believe the SEIS underestimates the impacts of sedimentation, scour from the Proposed Project area, and also the need for cable matting and scour protection and adjacent/cumulative impacts lease sites and/or levels of exposed cables, which increases the overall footprint of structure/exposure on the seabed and sediment impacts to commercial fisheries and fisheries resources	hydrodynamic forces in the Vineyard Wind lease area and OECC compared to the Block Island Wind Farm. The Section 3.4 and 3.11 of the SEIS consider the potential impacts of scour, sedimentation, and scour/cable protection; therefore, no change to the FEIS is warranted.
13102-013	Based on the tidal speeds and sediment type in the project area, it is reasonable to assume that cables will become unburied over time, as is the case in many wind farms in Europe Impacts from EMF to benthic resources "would be permanent as long as the cables are in operation". These negative impacts will be higher than anticipated should cables become exposed, as is likely given strong tides in the vicinity.	Section 3.2 of the FEIS was updated to note that if cables are not sufficiently buried this may lead to stronger EMF; however, the cables would be contained in grounded metallic shielding to prevent detectable direct electric fields and routine monitoring would be performed by Vineyard Wind to make sure cables are buried.
13102-014	these assumptions [for scour protection and operating footprints] regarding 12 MW turbines are incorrect, and based on information we have verbally received, the footprint of scour protection estimated per foundation for projects other than Vineyard Wind is far too small. Additionally, it is reasonable to assume the need for more cable matting than estimated by the SEIS, both inside and outside of leases (in export cable corridors). This impacts not only benthic habitat, benthic resources and habitat conversion, but also removes more fishable area from trawl gear.	The development of the DEIS, SEIS, and FEIS has been based on Vineyard Wind's utilization of the PDE. Each Applicant for a lease area is required to submit their own COP which triggers an NEPA analysis. BOEM believes that the information provided by Vineyard Wind in their COP is accurate.
13102-015	The SEIS mentions many times that "Structures, including tower foundations, scour protection around foundations, and various means of hard protection atop cables create uncommon relief in a mostly sandy seascape." We do not understand how BOEM has reached this conclusion. Hard structure is not the preferred habitat type of many species, including longfin squidwe disagree that structure is "uncommon relief", as the SEIS repeatedly assumes and which habitat conversion it asserts will be "moderate beneficial," even for commercial fishing. This assumption fails to recognize the fact that the largest fishery in the area, the longfin squid fishery, is entirely a trawl fishery, which cannot operate on or around structure bases, scour protection, or cable covering. In fact, the majority of all commercial fishing in the WDA is trawl fishing, so "moderate beneficial" impacts to commercial fishing could not be further from the truth.	Sections 3.3 and 3.10 of the FEIS have been updated to clarify that adding hard structure would provide "uncommon vertical relief." Regarding permanent habitat alteration and impacts to commercial fisheries, Section 3.10.2 of the FEIS states "Permanent habitat alteration in the form of scour and cable protection would reduce the habitat for species such as winter flounder and displace species that prefer soft-bottom habitat (e.g., squid) from the area immediately surrounding the foundation footprint. The creation of hard-bottom habitat would, however, benefit species such as American lobster, striped bass, black sea bass, scup and Atlantic cod—and potentially increase their habitat."

Index	Comment Text	Response
Number		
13102-016	For example, the summer longfin squid fishery that occurs in the MA/RI area and Project area is not only the major economic driver for many Southern New England and Rhode Island trawl vessels, but is managed without daily trip limits The alternative "hard bottom" habitat fish primarily harvested in the area is black sea bass. In the summer months in the state of Rhode Island, this species is currently subject to a 100 lb trip limit. This is simply not a financially viable alternative for a 60-100 foot squid trawl vessel, the primary fishery vessel typically working in and around the WDA. Therefore, a "moderate beneficial" impact assessment for commercial fisheries as a result of habitat conversion is ludicrous.	Regarding permanent habitat alteration and impacts to commercial fisheries, the Section 3.10.2 of the FEIS states "Permanent habitat alteration in the form of scour and cable protection would reduce the habitat for species such as winter flounder and displace species that prefer soft-bottom habitat (e.g., squid) from the area immediately surrounding the foundation footprint. The creation of hard-bottom habitat would, however, benefit species such as American lobster, striped bass, black sea bass, scup and Atlantic cod—and potentially increase their habitat."
13102-017	We also fail to see how pile driving on and essentially paving over benthic species living in or on the sand will provide uncommon relief for those species. Neither will the increased EMF exposure to unburied cables provide "uncommon relief" for such species.	"Relief" in this context means three-dimensional vertical relief. The FEIS was updated to use the term "vertical relief," and not simply "relief." Section 3.2 of the FEIS considers the consequences of pile driving, placing materials on the seafloor, and EMF on benthic resources.
13102-018	The SEIS assumes that cables will remain buried and therefore impacts [to longfin squid would be] minimal, but this would not be a valid assumption given the experiences both in Block Island and Europe [where cables became exposed shortly after installation].	Section 3.3.2 of the FEIS has been updated to discuss that the cables will be buried to a minimum target burial depth of 5 feet (1.5 meters), that routine monitoring would be performed by Vineyard Wind to make sure cables are and remain buried, and that, in cases where cables become unburied, additional cable protection measures would be installed.
13102-019	it is reasonable to assume that longfin squid eggs at the very least will be exposed directly to EMF, and most likely the adult squid themselves if they attempt to maintain their natural daytime habits near the seafloor. The EMF impacts on squid are not analyzed by the BOEM EMF study, because it labels them "pelagic" while at the same time acknowledging that longfin squid stay near the seafloor and attach their eggs to the seafloor. In fact, despite being the most significant and impacted fishery/commercial species in the Project area, lomgfin squid is not even mentioned in the EMF study's Table ES-1 This is a glaring omission considering the overlap of longfin squid habitat and fishing activity with the Vineyard Wind lease and cumulative impacts analysis leases, as is the fact that bottom dwelling shellfish such as scallops and clams are also absent from the EMF analysis yet also most likely to experience impacts.	The data used are the best available and reflect the state of the science at the time of publication of the EIS. BOEM continues to fund studies to address concerns raised in public comments, including responses of additional species to EMF (https://www.boem.gov/environment/environmental-studies/renewable-energy-research).
13102-020	The SEIS says that noise from pile driving and construction for foundations would be "temporary." But then it proceeds to say that this noise would be produced for 4-6 hours at a time for a 6-10 year period, and from 2021-2030 in the MA/RI lease areas alone. That is not temporary. That is long term. Particularly for species such as longfin squid that live only approximately 9 months. Such a construction time would affect many generations of this	Section 3.4.1 of the SEIS discussed the vulnerability of longfin squid, which spawn only once, to pile-driving noise; therefore, no change to the FEIS is warranted.

Index Number	Comment Text	Response
Number	species, the most prevalent species in the Proposed Project and surrounding areas.	
13102-021	The [pile driving] impacts may in fact extend further than 5.7 miles, as the SEIS references for these estimates the COP Section 4.2.3, which anticipated to use less than 4,000 kJ of energy per strike on up to 10 MW turbines and which is the same kJ estimate given in the SEIS regarding hammer size impacts. This is not reasonable, given that the new PDE anticipates 14 MW turbines with larger foundations that would logically require more force to install. The SEIS also quotes updated information in Epsilon 2020, which is fully redacted, so informed comment on that document is unfortunately not possible.	Section 3.3.2 of the FEIS has been updated to discuss potential increases in pile-driving hammer energy. The COP states that the foundations and pile driving would not change as a result of the proposed 14-MW turbines.
13102-022	The impact of pie driving noise on finfish and invertebrates would depend on the time of year it occurs; the impact could be greater if the noise occurs in spawning habitat during a spawning period, particularly for species thatspawn only once during their lifetime (e.g. longfin squidIt is anticipated that most pile-driving activity would occur in the summer months when weather windows are favorable. Thus, species that spawn in the summer (e.g. longfin squid) would be more susceptible to disturbance from pile driving noiseWe do not understand how the SEIS has not singled out longfin squid for "major" impacts considering [injurious noise discussed in the SEIS]longfin squid live 9 months and spawn once. The Proposed Project area, as well as the NY lease area re cumulative impacts, are two summer spawning areas that also support healthy and sustainable fisheries. Noise kills longfin squid and other cephalopodsThe construction will happen in the summer months, which is the time of year when the squid are presentIt is reasonable to assume that 6-10 year classes of longfin squid will suffer repressed recruitment due to consecutive years of pile driving during the summer months. This is entirely unacceptable, and will result in major, not moderate, impacts to the longfin squid stock and summer fishery. There is no mitigation for this should construction occur as planned, and no reparations to the squid industry for the potential loss of the squid population and summer fishery. Should population level impacts, Seafreeze Shoreside and Seafreeze Ltd., both national leaders in longfin squid production and harvest, will experience significant and irreversible negative economic impacts.	Section 3.4.1 of the SEIS discussed the vulnerability of longfin squid, which spawn only once, to pile-driving noise, and Section 3.3.6 of the DEIS discussed mitigation of impacts from pile-driving noise. Section 3.3 and Appendix D of the FEIS include the corresponding information from the DEIS and SEIS.
13102-023	The SEIS states "while noise associated with operational WTGs may be audible to some finfish and invertebrates, this would occur at relatively short distances from the WTG foundations, and there is no information to suggest that such noise would adversely affect finfish, invertebrates, and EHF (English et al)," "[t]here does not appear to be evidence that noise related to	Please refer to the revised Section 3.3 of the FEIS for a discussion of operational turbine noise impacts from existing wind farms.

Index	Comment Text	Response
Number		
	operations and maintenance of offshore wind energy facilities would	
	negatively affect finfish, invertebrates and EFH", and concludes that	
	operational noise would therefore "not likely lead to noticeable impacts on	
	commercial fisheries." This is entirely false [references studies cited in	
	SEIS]The impacts from the Vineyard Wind project alone, never mind	
	cumulative impacts, are orders of magnitude larger than anything studied. It	
	is not reasonable to assume that sound impacts from a wind farm comprised	
	of 2 MW turbines, or measurements taken from two 6 MW turbines, will be	
	the same level of noise generated by over 900 MW+ turbines. The MA/RI	
	area alone is larger than the state of Rhode Island. Introducing that degree of	
	noise over an area larger than an entire state is not a minor or moderate	
	impactIntroducing massive levels of low frequency noise lethal to longfin	
	squid for decades on end right on top and adjacent to their prime summer	
	habitat and the irreplaceable fishery that relies on this stock is completely	
	unacceptable.	
13102-024	Introducing massive levels of low frequency noise lethal to longfin squid for	Section 3.4 of the SEIS discussed the potential impacts of WTG operational
	decades on end right on top and adjacent to their prime summer habitat and	noise and construction noise on squid. Given the nature and extent of impacts
	the irreplaceable fishery that relies on this stock is completely	anticipated, BOEM has no reason to expect that finfish and invertebrate
	unacceptableImpacts to longfin squid cannot be lumped in with general	communities, or longfin squid in particular, would not fully recover, even
	"moderate" impacts to fish and invertebrates both from the Proposed Action	after the impacting agent is gone and remedial or mitigating action is taken.
	and cumulatively. It is the most impacted commercial species in the Vineyard	Quantitative stock assessments are beyond the scope of this EIS. Therefore,
	Wind area, and has significant overlaps with both the MA/RI and NY lease	no change to the FEIS is warranted.
	areas, as does the summer longfin squid fishery. Squid will suffer major	
	impacts as a result of lethal sound alone, both from 6-10 years of	
	construction noise during summer spawning and summer fishing activity as	
	well as over 20-30 years of operational noise which is projected to worsen	
	over time as structures age. These are major impacts by SEIS definition.	
	They will remain throughout the life of the project(s) and cannot be	
	mitigated The Rhode Island longfin squid fishing industry, the largest in the	
	country, cannot withstand these major impacts to its product source.	
13102-025	The SEIS contends that finfish and invertebrates will be affected by climate	Section 3.4.1 of the SEIS discussed the potential impacts of climate change
	change, affecting species composition, leading to changes in fishing activity	on species and considers that some changes may be positive, negative, or
	and frequencies of disease. According to the definitions put forth in the	neither; therefore, no change to the FEIS is warranted. A stock-specific
	document, all impacts are considered adverse impacts unless otherwise	analysis is beyond the scope of this EIS and is not essential to a reasoned
	specified as beneficial. Therefore, it assumes that climate change impacts on	choice among alternatives.
	longfin squid will be negative. However, this is not what the science says. In	
	fact, according to Hare et. al., which the SEIS quotes for this information,	
	longtin squid is projected to be positively impacted by climate change, along	
	with several other species. Therefore, productivity of this species and related	
	Ifishery should actually increase, not decrease. If other fisheries are negatively	

Index	Comment Text	Response
Number		
	impacted by climate change, the longfin squid fishery due to increased	
	productivity would, absent negative impacts due to offshore wind	
	development, become even more economically important to fisheries	
	stakeholders. If it is majorly impacted by offshore wind development, the	
	negative impacts may become even more severe in the future.	
13102-026	One particularly pertinent impact not discussed by the SEIS is the potential	Horseshoe crabs are discussed in the revised Section 3.2 of the FEIS.
	impacts to the Massachusetts area horseshoe crab population from cable	Potential impacts on horseshoe crabs are considered alongside other slow-
	laying, EMF, cable exposure and/or scour protection in the Proposed Project	moving benthic species of importance. Impacts on spawning horseshoe crabs
	area, as well as potential other construction activities for the Proposed Action	are addressed specifically.
	and other anticipated projects, through and on horseshoe crab habitat	
	coastwide. Neither the SEIS nor the COP analyze these impactsThe	
	impacts to horseshoe crabs from both the Vineyard Wind project and other	
	anticipated cumulative projects is much broader than a basic "fishery	
	analysis"Considering the importance of horseshoe crab blood to the FDA	
	on all injectable drugs, in addition to the COVID19 situation, the impacts to	
	the entire U.S. public health system and medical safety of U.S. citizens	
	should be a factor evaluated by the SEIS for both the Proposed Project and	
	cumulative projects if this species may experience any impacts whatsoever.	
13102-027	There is no cumulative analysis on the impacts to [the Mid Atlantic] Cold	Section A.8.2.1.1 of the SEIS discussed the potential impacts from the
	Pool from the extent of structures planned in the cumulative scenario.	placement of up to 373 structures within the water quality geographic
	However, in the SEIS, "using the assumptions in Table A-4, it is anticipated	analysis area. It concluded the overall impact of changes in local water
	that the expanded cumulative scenario would include up to 373 structures in	currents (and sedimentation) from the presence of structures is anticipated to
	the water quality geographic analysis area and could result in alteration of	be localized and interim over the life of the projects, resulting in little change
	local water currents."	to water quality. The FEIS also considers the impacts of the Proposed Action
	The water quality geographic analysis area only partially covers sections of	in combination with other projects. It is reasonable to assume that impacts
	the MA/RI lease area. This must be expanded to an overall NEPA cumulative	from the Proposed Action on water quality would typically occur within a 10-
	impact analysis for the entire East Coast or potentially risk irreversible	mile radius around the WDA, the OECC, and vessel approach routes to port
	impacts to the Mid Atlantic Cold Pool and marine food web.	facilities that would be used by the Project, as described in Table A-1 and in
		Section A.8.2.1. Furthermore, Section 3.4.4.1 of the SEIS discussed the cold
		pool more specifically, as well as the potential impacts on finfish,
		invertebrates, and EFH from potential mixing of the cold pool. Therefore, no
		change to the FEIS is warranted. This is a Project-specific EIS, not a
		Programmatic EIS or assessment.
13102-028	"Marine mammals have the potential to react to submarine cable EMF:	Sections 3.5.1 and 3.5.2 of the SEIS discussed the potential impacts of EMF
	however, this impact, if any, would be limited to extremely small portions of	on marine mammals, including the NARW. As discussed, modeled and
	the areas used by migrating marine mammals. As such, exposure to this IPF	measured magnetic fields from AC cables buried to a depth of 3 feet would
	would be low" [from SEIS]. This is wholly untrue considering the number of	emit detectable fields up to 82 feet above the cable and 79 feet along the sea
	endangered NARWs that habitually migrate through the Project area and	floor. Vinevard Wind proposes to bury Project cables to a depth of 5-8 feet.
	entire MA/RI lease area. [presents figures depicting right whale	providing greater shielding and reducing field detection distances. Additional
	sightings/dynamic management areas within Project area]. Based on the	discussion of the uncertainty regarding the individual and/or population level

Index	Comment Text	Response
Number	above notices to mariners provided by NOAA fisheries regarding endangered NARWs in the Project area and MA/RI lease areas, the SEIS is incorrect to assume that migratory exposure by this endangered species would be "low."	impacts of EMF on marine mammals was provided in Appendix H of the SEIS. Given the extremely localized nature of the potential EMF related impacts exposure is expected to be low. Therefore, no change to the FEIS is warranted.
13102-029	Additionally, based on our above discussion about tidal currents, scour and potential for unburied cables in the benthic impacts section, it is unreasonable to assume that the EMF will be in the low(er) levels assumed by the COP/SEIS.	Section 3.2 of the FEIS was updated to note that if cables are not sufficiently buried this may lead to stronger EMF; however, the cables would be contained in grounded metallic shielding to prevent detectable direct electric fields and routine monitoring would be performed by Vineyard Wind to make sure cables are buried.
13102-030	Noise sensitive and endangered NARWs, have demonstrated altered behavior when exposed to background noiseWe therefore disagree with the SEIS assessment of "moderate" adverse impacts for marine mammals because of the presence of structures and pile driving noise. Additionally, it is wholly unreasonable for the SEIS to assume "moderate beneficial" impacts due to the presence of noise and EMF-creating structures. Based on the impacts to NARWs from even ship created and background noise, we do not agree that the "continuous underwater noise of operational WTGs" will result in "negligible" impacts on this species.	The FEIS addresses both adverse and beneficial impacts to marine mammals form the Vineyard Wind 1 Project from individual Impact Producing Factors and overall impacts. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, the consequences of Level A harassment as a result of exposure to pile driving noise would be "minor degradation of hearing capabilities" and the PTS anticipated is considered a "minor auditory injury." Level B harassment is expected to result in "low-level, temporary behavior modifications" NMFS expects exposures to be brief and that behavior responses would be temporary, with behavior returning to as baseline state after the pile driving stops or the individual swims far enough away to avoid exposure to disturbing levels of noise (NMFS 2020). Further, NMFS (2020) concluded that these behavior responses are not expected to impact individual health, survival, or reproduction. Also discussed in the Biological Opinion (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of noise associated with the project. The potentially beneficial impacts are concluded for increased foraging opportunities created by the reef effect the WTG foundations will have, particularly for fish- and shell-fish eating marine mammals. The vertical WTG structures may also result in increased primary production and zooplankton abundance, increasing prey availability for mysticete whales, relative to surrounding locations. Section 3.5 of the SEIS concludes long- term, moderate beneficial impacts to some marine mammal groups that may benefit from increased foraging opportunities. This impact rating has been updated in the FEIS. BOEM believes that structures will not ad

Index	Comment Text	Response
Number		
		large amount of uncertainty relative to large whale responses to the presence of offshore WTG structures. Therefore, long-term, intermittent impacts on foraging, migratory movements, or other important behaviors may occur as a result of the future offshore wind development. Regarding underwater noise, an extensive mitigation and monitoring plan is proposed (Appendix D) that will avoid and minimize potential impacts from pile driving on NARWs. Section 3.3.7.3 of the DEIS and Section 3.5.1 of the SEIS discussed the expected distance that noise associated with operational WTGS would reach ambient levels. Based on measurements at the Block Island Wind Farm, low frequency noise generated by operating turbines reaches ambient levels at 164 feet (50 meters; Miller and Potty 2017). Overall, considering all the individual impact determinations combined, both moderate beneficial and moderate adverse impacts may occur to some marine mammals.
13102-031	Particularly given the fact that the NARW population has dropped from 450 to 400 in two years, and that 25% of the known world population is known to inhabit the area of the Proposed Action at one time, and knowing that the Proposed Action as well as cumulative MA/RI projects will have adverse impacts on this declining stock, it would not be in the interest of conservation to permit construction in these areas.	Section 3.4.2 of the FEIS discusses the potential impact of the proposed Project on marine mammals, including the NARW. A detailed analysis of impacts to ESA listed species, including the NARW is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation- Documents/. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13102-032	The SEIS notes that there are current measures being taken to reduce the interactions between certain types of fishing gear and NARWs by 60%, which would occur as a measure to permitted entities. It is not reasonable to require certain existing entities permitted in federal waters to bear conservation burdens that will be exacerbated by entities applying for new federal permits and which will not be held to the same level of conservation responsibility.	The FEIS only considers those mitigation, monitoring, and reporting conditions as it pertain to the proposed Vineyard Wind 1 Project. No future measures are being proposed to reduce interactions between commercial fishing activities and marine mammals through this FEIS. The current measures being taken to reduce the interactions between certain types of fishing gear and NARWs is assessed to establish the baseline conditions for NARWs and the additional measures that may be required by Vineyard Wind due to those ongoing impacts on this species. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine

Index	Comment Text	Response
Number		mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, enhanced mitigation measures during the month of May and when DMAs or NARW Slow Zones are designated, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. The commenter
		provided no additional information and no revisions to the FEIS are required.
13102-033	The SEIS claims that "The economic impacts of future offshore wind activities (including associated energy storage and peaker generation capacity projects) on energy generation and energy security cannot be quantified, but would be indirect, long-term and beneficial." However, the unreliability of wind power is well documented, which is a negative impact to energy security[presents case studies]. This is not "beneficial" energy security.	Commenter presents no data or references to support their claim; therefore, no change to the FEIS.
13102-034	Additionally, according to the U.S. Energy Information Administration, offshore wind is the most expensive type of potential electricity in the nation, with estimated levelized costs of electricity for new generation resources entering service in 2023 at more than double that of natural gasTherefore, adoption of offshore wind results in much lower energy reliability and output compared to other energy sources, but for a much greater costthe projected ability of offshore wind to meet state offshore wind energy goals is less than the SEIS estimates in Section 1.2. [based on recent Harvard research on the average power density of a wind farm].	Commenter presents no data or references to support their claim; therefore, no change to the FEIS.
13102-035	Considering the fact that the United States is a leader in oil and natural gas production, as well as other energy technologies more reliable than offshore wind, it does not seem that national energy security will benefit from offshore wind construction by foreign offshore wind entities. Additionally, since the SEIS states that there will be no impact to climate change from offshore wind facilities, there is no logical reason to move towards unreliable energy and away from current U.S. resources.	Thank you for your comment.
13102-036	One of impacts regarding energy generation and economics that has been completely omitted from the SEIS is that of U.S. tax creditsFor some large investors, this is the sole reason for investment.	Section 3.6.1.1 of the FEIS has been updated to include additional projections of economic investment from offshore wind (updating information that was included in Section 3.7.2.1 of the SEIS). The projections are sufficient to support conclusions that offshore wind would support jobs and businesses within the geographic analysis area. Consideration of the source of funding is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
13102-037	When it comes to offshore wind, all developers with current U.S. leases are entirely foreign owned, some majority owned by foreign governmentsThe Vineyard Wind project under consideration in this SEIS is 50% owned by Copenhagen Infrastructure PartnersTherefore, foreign governments and	Section 3.6.1.1 of the FEIS has been updated to include additional projections of economic investment from offshore wind (updating information that was included in Section 3.7.2.1 of the SEIS). The projections are sufficient to support conclusions that offshore wind would support jobs and businesses

Index	Comment Text	Response
Number	European pension funds will directly benefit from U.S. taxpayer credits given to their companies should offshore wind move forward under the cumulative scenario, even as they put U.S. fishermen out of work.	within the geographic analysis area. Consideration of the nationality of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
13102-038	We do not believe it is good public policy to put U.S. citizens, jobs, and existing industries such as the commercial fishing industry at risk to enrich foreign governments and pension funds with taxes derived from the very U.S. citizens being placed at economic disadvantages by their projects.	Thank you for your comment.
13102-039	The SEIS admits that the majority of employment created by offshore wind development would occur during construction. Therefore, these are not full time, long term jobs, like the jobs in the U.S. commercial fishing industry that they would displace [W]e do not believe the jobs, even of operations and maintenance, will be American jobs [because there will be no] U.S. flagged, U.S. built, U.S. crewed, Jones Act compliant wind farm construction/turbine installation vessels in existence, these jobs and associated activities will be carried on by foreign entities, not contributing to U.S. employmentThis does not benefit U.S. employment. Rather, it is a negative impact, considering the potential job losses in the U.S. commercial fishing industry as a result of offshore wind development on fishing grounds.	Section 3.6.1.1 of the FEIS uses several studies that provide generalized projections of economic investment from offshore wind. These studies incorporate varying projections of projected foreign versus domestic economic activity, depending upon the growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions. Although recognizing that most jobs would be created during construction, Section 3.6.2 of the FEIS has been updated to include additional information on this concern.
13102-040	The Proposed Vineyard Wind project has already demonstrated that job creation will be foreign and not U.S. jobsTherefore, expectations that jobs created will be American are unfounded, particularly for the construction phase which is projected to be the predominant job creation period.	While Section 3.7 of the SEIS addressed projected national job creation, Section 3.6.1.1 of the FEIS has been updated to include more detailed information from several studies that provide generalized projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions. The text of the SEIS and FEIS clearly state that most jobs would be created during construction. Although included in the SEIS, the FEIS has been updated to more clearly explain that the jobs created during operations would last for 25 to 30 years; thus, the estimate of approximately 80 full-time operational jobs would result in 2,000 FTE job years (80 times 25 equals 2,000).
13102-041	Additionally, the SEIS notes that if Vineyard Wind moves towards the larger 14 MW turbines, creating lower employment, economic output, and tax revenue, producing the smallest "beneficial economic benefit". As other developers are already planning for up to 15 MW turbines, this scenario is likely and should impact the cumulative impacts analysis as well as analysis for the Proposed Action.	The SEIS in Section 3.7.2.1 noted that the larger, 14 MW turbines would result in slightly lower employment and economic output during construction, and during the operations and maintenance phase. The conclusions of the SEIS and FEIS are based upon this scenario.

Index	Comment Text	Response
Number		
13102-042	[L]iving resources, including commercial fishing and aquaculture, and tourism and recreation, including recreational fishing will be negatively impacted by offshore wind construction due to commercial fishing displacement, negative impacts on commercially harvested species- which has impacts on national food security, negative impacts on tourism due to a resultant lack of locally caught seafood for coastal restaurants, negative impacts on various recreational species and food sources for recreational species, and negative navigational impacts on fishing vessels. All of this stands in contrast to and outweighs the AWEA estimate that offshore wind would support \$14.2 billion in total output by 2030, with the majority of jobs created being foreign jobs.	The SEIS evaluated the impacts of offshore wind on the commercial/for hire recreational fishing as well as the impact of the offshore wind industry itself on employment and economic activity, and concluded that the Proposed Action combined with reasonably foreseeable offshore wind development would have moderate adverse impacts on the commercial fishing sector, resulting in minor adverse impacts on employment and economics as a whole (Section 3.7.2.1). These adverse impacts are in addition to and distinct from the finding that there would be minor beneficial impacts on employment and economics due to offshore wind employment and economic activity. The FEIS retains the finding of a moderate adverse impact on employment and economics related to commercial fishing, and is updated to include information on the importance of commercial fishing engagement and reliance for communities within the geographic analysis area (Section 3.6.1) and 3.6.2). The FEIS also updates information on recent investment in job training and port infrastructure, and analysis of projected investment in offshore wind (Section 3.6.1), to conclude that the Proposed Action combined with other offshore wind development would have a moderate, rather than minor, beneficial impact on employment and economics. In both the SEIS and FEIS, conclusions are based on domestic job projections only.
13102-043	Finally, offshore wind development and foreign job creation at the expense	Thank you for your comment.
	of U.S. jobs would run contrary to the policy of the Office of Trade and Manufacturing Policy, "Buy American, Hire American."	
13102-044	we do not agree that "the long term impacts of concrete cable protection on	Sections 3.11.1.1 and 3.11.2 of the SEIS discuss the needs of trawl fisheries
	commercial fishing businesses would be indirect and localized" or that	for sufficient sea room, the potential for hanging up on structures. Section
	"[o]perators would be able to adjust to avoid affected locations."The entire	3.10 and Appendix D of the FEIS have been updated to discuss potential
	area both inside the Project area, as well as outside the Project area wherever	mitigation measures to help avoid trawl hangs, and the financial exposure of
10100.015	cables are present, will be a complete loss to trawl fisheries.	trawl fisheries to the Vineyard Wind WDA.
13102-045	Therefore, for years at a time during construction, which requires exclusion	Section 3.10.2 of the FEIS was updated to discuss potential additional
	zones for safety purposes, both of these areas will be off limits to the summer	mitigation including daily two-way communication during construction in order to reduce conflict with the commercial squid fishery in the spring and
	months when the fishery also occurs The SEIS ignores this seasonal aspect	summer. Section 3.10.2 of the FEIS also discusses how development in a
	Informer longfin squid fishery, when construction is planned to occur.	Wind Lease Area could cause fishing vessel relocation increased conflict
	Should [the vessels engaged in this fishery] have no income for months at a	increased operating costs, and potentially lower revenue.
	time for many years in a row during construction, particularly of these two	
	areas at the same time, and then suffer permanent loss of area in the future	
	during operations, many vessels in this fishery will not survive the impacts.	
13102-046	The areas in and around/outside the Project Area already contain pre-existing	Sections 3.11.1.1 and 3.11.2 of the SEIS discuss the potential for hanging up
	"hangs", whether rocks or shipwrecks, etc. Commercial trawl vessels	on structures and potential impacts caused by construction vessels and
	participating in the squid fishery already have detailed charts marking each of	increased vessel traffic; therefore, no change to the FEIS is warranted. The

Index Number	Comment Text	Response
	these hangs, with the purpose of avoiding that coordinate and preserving their fishing gear. Avoidance of new structure, concrete mats and cables even outside the WDA may not be possible due to these existing avoidance areas. Additionally, it is likely that "available space" left even outside the WDA, inside of which trawling will be impossible, will be taken up by many of the 184 construction vessels in the MA/RI navigational analysis area at times of peak construction, and lesser but considerable numbers of construction vessels over the 6-10 year construction period.	FEIS Appendix D discusses potential mitigation measures to help avoid trawl hangs.
13102-047	We do not agree that these impacts [of cable installation and maintenance] will be temporary and/or short term. We also do not agree that commercial fishing vessels can simply "adjust" their operations to avoid cables They will certainly, however, result in substantial revenue and local job loss[because] all cabled areas will become a complete exclusion zone for trawl fisheries.	Sections 3.11.1.1 and 3.11.2 of the SEIS discuss the needs of trawl fisheries for sufficient room to maneuver, the potential for hanging up on structures, and the financial exposure of trawl fisheries to the Vineyard Wind WDA. The impacts from the "presence of structures: transmission cable infrastructure", would have long-term, minor to moderate impacts on commercial fisheries that use mobile bottom gear (Table 3.11-1). The presence of transmission cable infrastructure is discussed under a different IPF than "new cable emplacement and maintenance." Therefore, no change to the FEIS is warranted.
13102-048	However, we continue to emphasize that commercial fishing vessels, and therefore related businesses, may not simply be able to "adjust". Adjustment may be impossible due to permit restrictions, fishery regulations, and the lack of available alternative species for harvestThe fishing industry is one of the few industries left in the country where an American without higher education can work hard and make a good living. Land-based seafood facilities also employ a diverse workforce of various ethnicities and income levels Therefore, the most impacted environmental justice populations as a result of the Proposed Action are in fact a part of the commercial fishing and seafood industries and therefore have the most to lose. In light of this fact, we would disagree with the SEIS "overall minor adverse impacts". Lumping in the most negatively affected environmental justice population with a general geographic environmental justice population.	Detailed impacts on commercial fishing were provided in Section 3.11 of the SEIS, and the FEIS is updated to provide additional detail. With regard to environmental justice populations, the DEIS provided information to address this comment, and the data has been updated for the FEIS. The environmental justice analysis specifically refers to potential impacts on low income workers in the commercial and for-hire fishing sector with regard to the impacts of cable emplacement, the presence of offshore structures, and increased vessel traffic. The analysis relies on the analysis in the commercial fishing and demographics, employment and economics section to assess the likely impact. The FEIS also provides data in Table 3.7-3 on income of workers in commercial fishing compared to average income, but clearly points out that the "average" income includes workers of both low and high income. Section 3.6.1 of the FEIS provides data on the proportion of county economies attributed by NOAA Coastal and Ocean Economy data to the "ocean economy," the living resources sector and the recreation and tourism sector. The environmental justice analysis area counties as well as potential impacts on the commercial fishing industry and the recreation/tourism sectors of the coastal economy. The finding of a minor impact on low income
13102-049	As no commercial fishing vessels will be permitted in the construction zone during construction due to safety/exclusion areas, if the construction vessels anchor in areas outside the exclusion zones, there could be very significant	Sections 3.10.1 and 3.10.2 of the FEIS discuss the potential impacts caused by construction vessels, anchoring, and increased vessel traffic, and have been updated to discuss potential additional mitigation, including daily two-

Index	Comment Text	Response
Number		
	impacts to commercial fishing activity in these areas (providing there are any harvestable animals still in the vicinity of construction)As this anchoring activity would occur primarily in the summer months, the impacts may not be insignificant, particularly if anchoring occurs in the middle of longfin squid fishing tows/fishing grounds which have not already been made construction exclusion zones or de fact exclusion zones due to cable placement or installation of structure.	way communication during construction in order to reduce conflict with the commercial squid fishery in the spring and summer.
13102-050	The SEIS states that "Fishing vessels may not have access to impacted areas, which could lead to reduced revenue and/or increased conflict over other fishing grounds" during cable placement/maintenance. This is correct. However, the assumption that this would be "temporary displacement and disruption of fishing activities" is incorrect. Avoidance of wind farm cables will be a permanent displacement for mobile bottom tending gear vessels such as trawl vessels. This particularly impacts the longfin squid fishery, a trawl fishery which is overwhelmingly the predominant existing fishery in the MA/RI and NY lease areas. Contrary to all assumptions made in the SEIS and assertions by wind developers both to BOEM and the U.S. commercial fishing industry, mobile bottom tending gear fishing in wind energy areas and along export cable routes will not be possible without risk of loss of life.	Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS discuss that some vessels may choose not to fish near the Proposed Action during its operational period due to restrictions on maneuverability from the presence of structures, the potential for hanging up on structures, and has been updated to discuss potential mitigation measures. BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. The FEIS states that some impacts due to the presence of structures may be permanent.
13102-051	the SEIS assumption that cables will only result in temporary fishing displacement while installation occurs is erroneous. During the entire life of the Proposed Action and all other cumulative actions, inter-array and export cables will present a default exclusion zone for mobile bottom tending gear vessels, such as longfin squid trawl vessels. Unless the vessel is willing to risk "loss of life." We believe this is a major impact. The SEIS and all BOEM analysis must therefore consider all inter array areas within the wind farm as well as export cable routes a complete loss of trawl fishing activity and revenue.	The impact level for commercial fisheries is major and the impact from the presence of structures, which includes cables, has been updated in the Table 3.10-1 of the FEIS to range up to major impacts. Sections 3.10.2, 3.10.8, and Appendix D of the FEIS have been updated to discuss potential mitigation measures. BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth.
13102-052	the Vineyard Wind export cable is planned to go directly through the middle longfin squid trawl fishery area on the outside of the MA/RI lease area. As this export cable is both a hazard in itself and will also be covered with concrete matting in some areas, this will cut some of the fishery's most productive tows outside the WDA in half. We raised this problematic issue to Vineyard Wind early on in the process during port meetings, as well as throughout the process with Vineyard Wind fishery liaisons, in an attempt to	The Section 3.10 of the FEIS states that the OECC intersects areas with high vessel density for fishermen targeting squid, that the accessibility of resources within the OECC may be affected by the location of the proposed infrastructure in some locations, and that some loss of fishing revenue is expected. Section 3.10 of the FEIS also discusses increased traffic, fishing congestion, increased competition, Vineyard Wind's voluntary financial compensation measures, and was updated to discuss potential additional

Index	Comment Text	Response
Number	route the cable through a less disruptive route, but to no avail. Cutting off a tow halfway can mean half the harvest and more lack of maneuverability as the vessel is forced to set and reset its gear. If all vessels are forced to do this at the same exact spot, it can lead to congestion and other issues.	mitigation measures. BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for
13102-053	The SEIS mentions in this section that "It is anticipated that most construction activities would take place in the summer months due to more favorable weather conditions. Thus fisheries and fishery resources most active in the summer will likely be impacted more than those in the winter." And we again point out that the fishing activity that occurs in this area from the most impacted fishery from the Proposed Action, is the summer longfin squid fishery which takes place in the area only in the summer. There is no fishing in the area in the winter. The SEIS fails to assess the seasonality of this fishery and therefore assess accurate impacts. This is true for both cable construction and construction noise, as well as operations, belowThe impacts of cable exclusions and inability to operate in the wind farm itself as well as export cable corridors would be permanent for the life of the project(s)Consideration of the longfin summer squid fishery, the most impacted fishery by the Proposed action, cannot be lumped together with general "commercial fishing" impacts	details. The FEIS acknowledges fisheries most active in the summer will likely be impacted more than those in the winter and Section 3.10.1.1 was updated to clarify this would impact on the longfin squid fishery. Section 3.10.2 of the FEIS discusses additional mitigation including daily two-way communication during construction in order to reduce conflict with the commercial squid fishery in the spring and summer. Sections 3.10.2, 3.10.8, and Appendix D of the FEIS have been updated to discuss mitigation measures.
13102-054	The fact that [finfish and longfin squid] both spawn and support a summer fishery not only in and around the Proposed Project and other MA/RI lease areas and NY Equinor lease area at the same time, and as construction and operations for all of these areas will be simultaneous, is a tremendous cumulative population and fishery level impact.	Section 3.11.1.1 and 3.11.2 of the SEIS estimates fishing revenue exposure as more offshore wind energy facilities are developed, and Section 3.3.1.1 and 3.3.2 of the FEIS considers potential impacts on fish and invertebrate populations; therefore, no change to the FEIS is warranted.
13102-055	The SEIS assumes "These direct impacts on fish could impact fishing activities if vessels need to temporarily relocate to other fishing locations in order to avoid or reduce impacts on revenue What it does not acknowledge is that the summer longfin squid fishery occurs in primarily two areas: the Vineyard Wind lease/ MA/RI WEA and surrounding areas, and the NY Equinor lease and surrounding areas south of Long Island[Additionally] the idea that a vessel can simply engage in another fishery is flawed. Fishing vessels are limited by their federal permits and associated species permit suite, and cannot simply shift effort into other fisheries. Furthermore, permits	Section 3.11.1.1 and 3.11.2 of the SEIS discusses how offshore wind development will potentially impact the squid fishery. This includes a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas (Table 3.11-3) if a harvester opts to no longer fish in the area and cannot recapture that income in a different location; therefore, no change to the FEIS is warranted.

Index Number	Comment Text	Response
	cannot be added to or consolidated into one vessel in order to expand permitted fisheries alternatives.	
13102-056	Should trawl gear become snagged on underwater infrastructure, the vessel could suffer severe damage and endanger the crew if it were to swing into a turbine or ESP due to wind, tide/current, or inclement weatherNone of the Seafreeze vessels will be able to safely operate in a wind farm None of our customer vessels will be able to work inside a wind facility. Longfin squid trawl vessels will suffer complete exclusions from developed areas, as well as cable areas. This is true regardless of the 1x1 nm layout that developers and the SEIS assume will alleviate these issues	BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for details. Section 3.11.2 of the SEIS also discusses the needs of some fishing operations for greater than 1 nautical mile clearance and the potential of practical exclusion of some fishing operations from Wind Development Areas.
13102-057	We also submit that the SEIS should consider the enormity of the MA/RI lease areas and account for potential lack of vessel maneuverability due to the fact that this combined lease area is larger than any other continuous wind area/wind farm in the worldThis makes the issue of conflict with fixed structure orders of magnitude larger than the U.K. experience in just the MA/RI lease area alone.	Section 3.10 and 3.11 of the FEIS discuss impacts from offshore wind development to vessel navigation and maneuverability. This includes a cumulative assessment of impacts from all potential offshore wind lease areas in the geographic analysis area, including the RI and MA Lease Areas.
13102-058	The SEIS notes that fixed structure may attract more recreational for-hire and private anglers, which could lead to space conflicts with commercial fisheries. This is a huge issue that is not well explained in the SEISTherefore, user conflicts have the ability to permanently alter huge portions of a fishery revenue. Should these types of issues occur to vessels after they have already lost significant amounts of revenue due to fixed structure and wind farm displacement, provided there was anywhere else to go which would be doubtful at best for the summer longfin squid fishery, the rest of a vessels' revenue could easily be swallowed by a management action due to "user conflicts" borne out of wind farm displacement.	Sections 3.11.1.1 and 3.11.2 of the SEIS discuss space use conflicts that may result from offshore wind development and acknowledge that impacts on management processes would in turn have short-term or long-term impacts on commercial and for-hire recreational fisheries operations; therefore, no change to the FEIS is warranted.
13102-059	The SEIS states that "Vineyard Wind has committed to voluntarily establish gear loss and revenue compensation funds for fishing interests in Rhode Island and Massachusetts, which is intended to compensate for gear and/or revenue losses over the life of the Project (Table 3.11-5)." This fund in no way provides reparations to the Rhode Island commercial longfin squid fishing industry for the economic activity that would be lost as a result of the Proposed Action. As such, the impacts have not been mitigated and have not been reduced from "major" to "moderate".	Section 3.10.2 and Appendix D of the FEIS has been updated to discuss the revenue voluntary compensation funds established by Vineyard Wind and states that impacts or losses for which claims may be filed include lost revenues related to the Project's interference with fishing activities (if any).

Index	Comment Text	Response
Number		
13102-060	Both the SEIS estimates of squid fishery value in the WDA and the Vineyard	Section 3.10 of the FEIS explains the methods used to estimate fishing
	wind compensation plan severely underestimate the value of the longfin	revenue exposure and the methods used to set the value of the voluntary
	squid fishery in the area. The SEIS estimates the total revenue exposure from	compensation funds. Table 3.10-11 snows a cumulative assessment of
	ule squid fishery to an cumulative projects, including the Proposed Project, at any \$1.16 million from 2020 2020. This is judiarous. And the Vineward	projected revenue exposure from an potential orisitore wind rease areas in a
	Wind "Direct Compensation Fund" would provide only \$4.2 million over a	in a different location. Furthermore, the FEIS was undeted to include a
	30-year period for all fishery claims. The fund would initially only contain	different methodology submitted by RIDEM (Table 3 10-3a) to provide a
	\$1 million initially with subsequent annual payments starting at \$76,000 and	areater range in the impact assessment. The data used in the FEIS are the best
	paid claims would require a release of liability from future claims. This is	data available to estimate revenue exposure in wind lease areas
	also ludicrous and does not represent the true impacts to the Rhode Island	add avanuore to estimate revenue exposure in which reuse areas.
	summer longfin squid fishery alone. In fact \$76,000 would cover the cost of	
	one net and set of trawl doors lost on subsea structure.	
13102-061	Neither the SEIS nor the Vineyard Wind Rhode Island Direct Compensation	The Section 3.10.1 of the FEIS has been updated to utilize the cited RI DEM
	Fund acknowledge the fishery values analysis compiled by the Rhode Island	analysis.
	DEM Division of Marine Fisheries specifically for the Vineyard Wind	
	project. This analysis is much more aligned with the true level of fishery	
	impacts experienced by the fishing industry in the Proposed Project area. Yet,	
	it is glaringly absent from any mention in the SEIS.	
13102-062	We agree with the SEIS conclusion that cumulative impacts from all the IPFs	The Section 3.10.1 of the FEIS was updated to utilize the cited RI DEM
	together would result in "major" impacts to commercial fisheries from	analysis. Section 3.3 of the FEIS considers potential impacts of the Proposed
	offshore wind activities in the geographic analysis area, and that the	Action on fish and invertebrate populations, both positive and negative;
	cumulative impacts associated with the Proposed Action combined with	however, a quantitative assessment of individual fish stocks is beyond the
	reasonably foreseeable activities would result in "major" impacts on	scope of a typical NEPA analysis and is not essential to a reasoned choice
	commercial fisheries. However, we disagree that "The financial	among alternatives.
	compensation agreements outlined in Table 3.11-5 may result in a lower	
	impact specific to the Proposed Action", as the compensation level is only	
	2.6% of the actual economic impacts from the Proposed Action to the longfin	
	squid industry in the state of Rhode Island alone. We will again point out that	
	Vineyerd Wind project, even when combined with the composition multiplier	
	of the Science Center for Marine Eicheries study, do not take into account the	
	stock level/population impacts to the longfin squid stock that are likely to	
	occur due to construction and operational noise of planned wind farms both	
	of the Proposed Action and cumulative lease areas. The economic impacts of	
	stock decline would require additional discussions and valuations.	
13102-063	This is the only place in the entire SEIS that marine radar is mentioned,	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar
	despite the fact that marine radar interference has been a topic of concern for	interference. The discussion of potential impacts to marine radar has been
	the fishing industry for years, and for years we have asked that a model be	expanded in Section 3.11.1. Offshore wind projects would increase
	created to assess radar interference impacts from the turbine sizes and project	navigational complexity and ocean space use conflicts, including potential
	sizes planned for all cumulative East Coast leases, and specifically for the	interfere with marine radars (although other navigation tools are available to

Index	Comment Text	Response
Number	Vineyard Wind and MA/RI lease area. Omission of so great an impact results in the SEIS navigational analysis being seriously flawed. Wind turbines are not simply fixed structure. They are moving structures that create significant marine radar interferenceThe Proposed Action area is notorious for foggy conditions, and is a primary transit area for many vessels headed to offshore fishing grounds even outside the Project area and MA/RI WEAThe majority of these vessels are also without AIS. Therefore, a good portion of the vessel traffic in the analysis area is visible on marine radar only.	ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection
13102-064	interference to marine radar interference due to turbines cannot simply be tuned out by the vessel radar operator without losing true targets. This is especially true in inclement weather conditions. Navigation in and around the Proposed Project and other cumulative projects is even more dangerous and the impacts more severe than already estimated in the SEIS As the radar interference arising from 955 WTGs will be a significant issue for the commercial fishing vessels both inside and outside the area to navigate, and as there is likely to be difficulty target tracking recreational and sailing vessels both inside the area, in any transit lanes through the area, and in the areas adjacent to the wind farm, these are not minor considerations. For the SEIS to completely ignore this issue and only mention "marine radar" one time in the entire document with absolutely no analysis of this impact is a huge shortfall.	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar interference. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13102-065	The SEIS states, "The most prevalent vessel route pattern though the WDA is a roughly northwest/southeast orientation." This is in fact the current transit route taken by our vessels through the area. However, even in the Draft MARIPARS recommendation for 1x1 nm grid spacing of turbines, the NW- SE spacing would only be 0.6 to 0.8 nm wide. This means that the most heavily trafficked area will be the narrowest part of the layout. This is not rational.	The Final MARIPARS study report (USCG 2020) states that multiple parallel vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study report (USCG 2020).
13102-066	Due to the flaws and omissions on [the Draft MARIPARS] report, we do not believe that the SEIS can rely on its recommendations alone in determining navigational impacts to vessels in and around wind energy areas. Both the	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar interference. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As

Index	Comment Text	Response
Number		
	omitted radar analysis and flawed structural analysis should be rectified prior to authoritative use by BOEM.	stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS
13102-067	SEIS utilizes AIS to assert that fishing vessels will be able to make 180- degree turns inside the wind farm, using AIS data. We presume this is implying that fishing activity can take place within the array, as we know is not the case for trawl vessels based on our comments regarding cables in the Commercial Fishing Impacts section. However, even if there were a cable- free corridor, the assumption that trawl fishing activity could continue within the area is still flawed. Trawl vessel tracks themselves may show maneuverability, but the trawl gear is not where the vessel is located. It may be in fact up to half a mile behind the vessel itself, and can shift in tides and currents requiring the vessel to position itself accordingly to ensure that trawl gear remains in areas free of undersea hangs and structure. Operating a trawl vessel inside either the Proposed Action or 1x1 nm spacing recommended by the MARIPARS will still be impossible for larger vessels, including those in the longfin squid fishery.	Section 3.10.1 and 3.11.2 of the FEIS addresses the use of AIS. According to the AIS data, trawling vessels required 180-degree turning diameters between 0.16 nautical mile and 0.86 nautical mile in good weather and sea conditions (larger diameters would be required in poor weather and sea conditions, and to account for trawling equipment) (COP Volume III, Appendix III-I; Epsilon 2020b). These diameters were found to be possible within the Vineyard Wind turbine layout, where vessels could turn either within a row of WTGs or from one row to another (COP Volume III, Appendix III-I, Epsilon 2020a). In addition, a formula from offshore wind farm and maritime navigation guidance developed by the Permanent International Association of Navigation Congresses found that the minimum fishing vessel channel widths of 0.33 nautical mile and 0.32 nautical mile were calculated for transiting and trawling vessels, respectively (COP Volume III, Appendix III-I, Epsilon 2020a). Additional rationale is provided in the Final MARIPARS study report (USCG 2020), which states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Finally, as discussed in Section 3.10.2, mitigation includes Vineyard Wind's proposal to establish a voluntary financial compensation program for documented loss of income due to inability of fishing vessels to access previously fished locations within the WDA and temporary loss of use during cable maintenance. Direct impacts or losses for which claims may be filed include, but are not necessarily limited to, lost or damaged gear associated with fishing within the Project area and lost revenues related to the Project's interference with fishing activities (if anv).

Index	Comment Text	Response
Number		
13102-068	The SEIS impacts regarding SAR in the Project Area, as both a result of the Proposed Action (which lacks uniform 1x1 nm spacing and therefore less desirable according to the document) as well as other alternatives such as Alternative D2 (which the SEIS asserts will contribute to USCG SAR success) do not consider marine radar interference impacts on USCG SAR vessel capabilities, and associated computational flaws of the MARIPARS.	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar interference. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. Further, the USCG is the consulting agency with the expertise regarding navigation impacts; therefore, BOEM considers the MARIPARS to be the best available information for purposes of analyzing the impacts to paying tion resulting from the project
13102-069	Realistic radar modeling and impacts assessments should and must occur as part of the SEIS Navigational Impacts analysis section, especially for marine radar and HF radar impacts. Absolutely no offshore wind construction should occur until all radar interference issues and related impacts on vessel safety can be properly assessed. Maritime safety and lives are at stake and should not be left to experience these impacts via potentially fatal trial and error. All flaws in the MARPARS methodology should and must be addressed and the results used to reassess the Navigational and Vessel Traffic section of the SEIS.	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar interference. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. Further, the USCG is the consulting agency with the expertise regarding navigation impacts, and is therefore the agency best suited to determine the adequacy of the Final MARIPARS. The USCG is a concenting navigation impacts, and is

Index	Comment Text	Response
Number		leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13102-070	Additionally, radar interference with the HF radars associated with SAR will experience impacts as a result of cumulative lease areas.	Sections 3.11 and 3.12 of the FEIS have been updated to include additional information on potential radar interference.
13102-071	the SEIS acknowledges that fixed structures alter water flow , and that it expects changes in water flow caused by wind farm development on the OCSThis means that currents will change due to the presence of fixed structures, and previous experience with typical current direction in the area may not be useful in predicting future currentsLack of accurate SAR has life threatening implications for mariners, and lack of accurate oil spill response has potential far reaching consequences for natural resources, including commercially harvested species.	Impacts on navigation that may impact SAR activities are discussed in Section 3.11.2 of the FEIS. The USCG has not raised any concerns to navigation related to changes in currents due to the presence of structures.
13102-072	One additional omission is the fact that the USCG does not provides towing services for disabled vessels. Therefore, if a vessel becomes disabled in or near a wind farm, it is up to either a Good Samaritan or a professional towing company to recover the vessel. It is questionable whether professional towing companies or Good Samaritans will risk the liability of hooking up to a vessel slamming against turbines or in the middle of a field of fixed structure. This is particularly true in inclement weather.	Section 3.11.2 of the FEIS discusses the presence of structures and the potential impacts. Vessels that could continue to navigate within the WDA would need to navigate with more caution than is currently necessary to avoid WTGs and ESPs, especially during inclement weather. Professional towing companies are experienced in securing vessels under a variety of conditions. Since the USCG has determined that the spacing provides for adequate navigation, BOEM has no reason to believe that all towing companies will refuse to provide services to a disabled vessel within the WDA.
13102-073	Realistic radar modeling and impacts assessments should and must occur as part of the SEIS Navigational Impacts analysis section, especially for marine radar and HF radar impacts. Absolutely no offshore wind construction should occur until all radar interference issues and related impacts on vessel safety can be properly assessed. Maritime safety and lives are at stake and should not be left to experience these impacts via potentially fatal trial and error. All flaws in the MARPARS methodology should and must be addressed and the results used to reassess the Navigational and Vessel Traffic section of the SEIS. We do agree with the SEIS conclusion that overall cumulative impacts of any alternative when combined with past, present, and reasonably foreseeable activities on navigation and vessel traffic would be "major", and that the impacts of the Proposed Action even including Alternative F would be "major". However, we disagree with the SEIS assessment that Alternative D2 or Alternative F with the D2 layout will be "moderate" [based on navigation and radar comments above].	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar interference. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. Further, the USCG is the consulting agency with the expertise regarding navigation impacts, and is therefore the agency best suited to determine the adequacy of the Final MARIPARS. Finally, the analysis is in accordance with the impact definitions for moderate (Section 3.0). The USCG is a cooperating agency for

Index	Comment Text	Response
Number		the FEIS that is the leading agency on navigational matters; therefore, BOEM
		purposes of informing the navigational impacts in the EIS.
13102-074	Considering the fact that wind leases have been sited on the approach to potential terrorist targets such as New York, Philadelphia, Norfolk Virginia, and in the case of the Proposed Project, the approaches to Quonset, RI and Groton, CT, the primary construction sites for U.S. Navy nuclear submarines, this would seem to pose a grave and immediate threat to U.S. military and homeland defense capabilities.	As was the case in the DEIS, the FEIS includes language in Section 2.3 addressing the potential terrorist attacks. Since BOEM considers potential terrorist attacks as low probability events, and since the magnitude and extent of such unlikely events cannot be predicted, the effects of terrorist attacks are not fully evaluated in the FEIS.
13102-075	According to both the SEIS and the COP, "Any impacts on long-range radar systems are anticipated to be mitigated by overlapping coverage and radar optimization" and states that the "FAA would evaluate potential impacts on radar systems, as well as mitigation measures for those when Vineyard Wind refiles Form 7460-1 for individual WTGs." This reasoning is flawed for two reasons. First, the FAA form 7460-1 is only for assessing if the height of fixed structure poses a threat to airspace use and any antenna/frequency transmission, and FAA authority only extends out to 12 nm. Second, in 2017 the federal interagency Wind Turbine Radar Interference Mitigation Working Group comprised of the DOE, DOD, FAA, DHS, NOAA, determined that radar interference caused by offshore wind leases off Massachusetts and Rhode Island could not be solved by overlapping coverage mitigation approaches and that such approaches could not restore low altitude radar coverageDespite the claim by the SEIS that "the cumulative impacts on radar systems would be localizedand minor and potential conflicts addressed through established processes" if no solutions exist at this time, as detailed by the information above and discussed as recently as April 2020, the impacts are anything but minor. In fact, any permitting of offshore wind on the U.S. OCS could result in catastrophic consequences.	Section 3.12 of the FEIS has been updated to 1) Include references to FAA Order JO 7400.2M, (FAA 2019) which implement procedures for conducting aeronautical studies per 14 CFR Part 77, and require an obstruction evaluation to consider "physical, electromagnetic, or line-of-sight interference on existing or proposed air navigation, communications, radar, and control systems facilities" and provide specific requirements for such an analysis; 2) Clarify that BOEM assumes offshore project proponents would conduct radar studies in coordination with BOEM's Information Guidelines for a Renewable Energy Construction and Operations Plan (COP) issued May 27, 2020 and the requirements of 30 CFR 585.621; and 3) provide additional detail for radar systems; and 4) update potential impacts to radar systems in the context of reasonably foreseeable environmental trends and planned actions to moderate instead of minor. The 2017 document (available at https://www.energy.gov/sites/prod/files/2017/12/f46/Final%20Coastal%20Ra dar%20Public%20Summary%20-%20Comments%20Incorporated.pdf) states that "This study is mission agnostic and does not constitute a full assessment of offshore wind turbine interference or mitigation. It should be viewed as the first of many steps in determining where there is potential for impacts in terms of geographic areas and radar types." Therefore it is not considered a resource for development of the FEIS. BOEM relied on the FAA's DOD Preliminary Screening Tool which indicates potential to impact Air Defense and Homeland Security radars, NEXRAD Radars, and Military Operations; prior FAA determination for WTGs up to 696 feet, Vineyard Wind's project- specific evaluations including a radar line-of-sight analysis, the Aviation Impact Analysis included in COP Volume III, Appendix III-J; Epsilon 2020a,
		and input received from military and national security agencies to develop the information in the FEIS.
13102-076	The SEIS states "It is assumed that all project operators would coordinate with relevant agencies during the COP development process to identify and minimize conflicts with military and national security operations." This is clearly not happening, and has not happened during the progression of the	Section 3.12 of the FEIS has been updated to include additional information on BOEM's coordination with military and national security agencies. BOEM coordinated with the DoD and USCG throughout the RI and MA Lease Area identification process and associated environmental review. and continues to
Index	Comment Text	Response
-----------	--	--
Number	BOEM and offshore wind process if existing leases are in wind farm	coordinate with Vineyard Wind and other project proponent during COP
	exclusion zones, if the Vineyard Wind COP assumes radar mitigation	development and approval to identify and minimize potential conflicts with
	techniques that are invalid, and if BOEM has not even assessed or included	military and national security concerns. The FEIS also describes Vineyard
	all of the above information in its SEIS. The process is clearly broken and	Wind's FAA Determination of No Hazard for the original proposed Vineyard
	there is a lack of interagency and interdepartmental communication and	Wind structures. Furthermore, Vineyard Wind is required to submit Form
10100.055	transparency.	7460-1 to FAA, which also triggers consultation with DoD.
13102-077	The lack of having a functional fishery survey in all of the areas under	Section 3.14 of the SEIS addressed potential project-related and cumulative
	consideration by the SEIS, including the Proposed Action, could will result in	impacts to scientific research and surveys in detail and discussed the potential
	lower harvest limits and quotas, potentially leading to zero possession limits	for lower quotas. The discussion of impacts on scientific research and
	over time, which would in essence eliminate commercial and recreational	surveys was developed jointly by BOEM and NOAA, and acknowledges that
	fishing. Making commercial fisheries economically responsible for a lack of	additional studies are needed and ongoing to assess uncertainties in scientific
	survey and scientific data caused by offshore wind projects is unacceptable.	data collection and implement any changes to surveys. Therefore, no changes
		to the FEIS are warranted. Furthermore, concerning vessel access to the
		w DA, it is worth mentioning that temporary inmited or restricted access areas
		(safety zones) may be set up around active construction areas where
		applicable. However, note that BOEM does not have the authority to restrict
		they will not restrict access to the WDA during areastions. The USCC's
		authority to establish sofety games only extends to the houndary of the
		tarritorial waters of the United States, which is 12 neutical miles from shore
		and outside the WDA DOEM is funding a process to begin to understand the
		and outside the wDA. BOEM is funding a process to begin to understand the
		surveys Regardless of such actions long standing NMES surveys would not
		be able to continue as currently designed and extensive costs and efforts will
		be required to adjust survey approaches. Therefore, potential impacts on
		scientific surveys and research is anticipated to be major. Please refer to the
		following link: https://www.boem.gov/environment/environmental-
		studies/20-x07
13102-078	What [the SEIS] does not adequately discuss is that due to the legal	The SEIS addresses these issues throughout Section 3 14 1 1 (Other Uses
10102 070	constraints of the Manguson Act, the fishing industry will be held as the	Scientific Research and Surveys), and Section 3.14.2 addresses potential
	wholly responsible and accountable entity for both lack of data and any	project-related and cumulative impacts to scientific research and surveys in
	negative stock impacts as the result of offshore wind development.	detail and discusses the potential for lower quotas. The discussion of impacts
		on scientific research and surveys was developed jointly by BOEM and
		NOAA, and acknowledges that additional studies are needed and ongoing to
		assess uncertainties in scientific data collection and implement any changes
		to surveys. Therefore, no change to the FEIS is warranted. BOEM is actively
		working with NMFS on a process to adapt survey methodologies to the
		presence of offshore wind (see:
		https://www.boem.gov/environment/environmental-studies/20-x07).

Index	Comment Text	Response
13102-079	One issue not discussed in the SEIS at all is the potential impact to U.S. submarine detection and capabilities. The DOD acknowledged in May 2019 that offshore wind turbines that underwater noise generated by offshore wind turbines disturb acoustically sensitive environments.	The U.S. Navy operates the military's submarine fleet. Section 3.12 of the FEIS states the Navy has informed Vineyard Wind that the Vineyard Wind 1 Project does not raise concerns for their military operations.
13102-080	The SEIS states that "The Proposed Action would likely result in both long- term and localized, temporary negligible to minor impacts on birds and may include minor beneficial impacts"Assuming minor or beneficial impacts to birds is incorrect. In a 2020 study entitled "Mortality limits used in wind energy impact assessment underestimate impacts of wind farms on bird populations", scientists showed that rather than having a negligible effect, just a 1% additional mortality in postfledgling cohorts of studied populations resulted in up to 24% decrease in population level after 10 years, and allowing a 5% mortality resulted in up to a 77% reduction in the populations after 10 years. This level of impact is in line with those observed on the Isle of Man as wind farms have continued to be constructed in the Irish Sea. In an Isle of Man study, partly supported by the Walney Extension Offshore Wind Farm project, populations of herring gulls were found to be down 82%, European Shag down 51% and Razorbills down 55%. These potential types of population level impacts would appear "major."	The Walney Extension is not a valid offshore wind facility to compare to the Vineyard Wind 1 Project for several reasons. First, the Walney Extension is located much nearer to shore (less than 20 km) and is surrounded by land. Additionally, as shown in FEIS Table A.8.3-6, the median predicted annual mortality of herring gulls and razorbills are both zero (range - 0-349 and 0-17, respectively). Therefore, no change to the FEIS is warranted.
13102-081	The SEIS does not assess the impacts to national food security arising from major commercial fishing impacts associated with offshore development and relative to the President's Executive Order on "Promoting American Seafood Competitiveness and Economic Growth". American citizens cannot eat electricity.	The Secretary of the Interior will work with the Secretary of the Army, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Homeland Security, the Administrator of the Environmental Protection Agency, other appropriate Federal officials, and appropriate State officials to implement the Executive Order as described in the Order. FEIS Table 3.10- 11 shows a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. In addition Tables 3.10-3 and 3.10-7b allow for a comparison of the total volume of seafood landed at affected ports compared to seafood harvested just from the Vineyard Wind Development area.
13102-082	In the development of this entire Proposed Project, as well as the whole BOEM offshore leasing process, there has been a complete lack of rational procedure or really any process at allThe current lack of rational BOEM process and clear federal leadership in what is a federal jurisdiction affecting existing federal permit holders has allowed offshore wind lease siting and development to be driven by state renewable energy goals, multiple state Task Forces, and other state groups. This is not acceptable for a federal issue. Lack of process has also led to unassessed impacts discussed in our comments due to lack of interagency and interdepartmental coordination.	The potential effects of commercial wind lease issuance and site assessment activities offshore Rhode Island and Massachusetts had notice and comment opportunities that resulted in the removal areas from consideration because of known fishing activity (e.g., Massachusetts [Nantucket Lightship], and Rhode Island/Massachusetts [Cox Ledge]). These areas were then evaluated and presented in an Environmental Assessment in 2013. A link to that document can be found here: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_E nergy_Program/State_Activities/BOEM%20RI_MA_Revised%20EA_22Ma y2013.pdf

Index	Comment Text	Response
Number		
		That process included and accounted for public input. In addition to project specific meetings as part of the NEPA process, BOEM also regularly briefs and solicits comments from the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils, as well as the Atlantic States Marine Fisheries Commission. These briefings are an important avenue for BOEM to make sure the fishing community is aware of the status of projects, when there is opportunity to comment on a project and for BOEM to receive important information from the fishing community regarding its leasing activities. BOEM has continued to engage with commercial fishing industry and interested stakeholders throughout the NEPA process for the proposed Project; BOEM engages with the public and stakeholders in each step of the process and takes public input into consideration when making any decision. BOEM has considered all comments throughout the Vineyard Wind 1 Project NEPA process. In addition, Appendix C of the FEIS provides information related to BOEM's consultation and coordination efforts.
13102-083	Furthermore, there are some decisions that should not be left in the hands of BOEM. Wind exclusion zones, defense radar impacts, and issues affecting national security should not be relegated to mere "Cooperating Agency" status. These should take first and foremost priority in any process and eliminate any conflict areas whatsoever at the outsetIn summation, the entire federal offshore wind process needs to be redesigned from the bottom up. This would result in greater certainty for all involved, and much better public policy than currently exists on this issue.	BOEM works closely with Cooperating Agencies on each step of the leasing and COP approval process. BOEM recognizes these agencies hold the expertise in each of their representative jurisdictions and BOEM works with them to resolve issues prior to proceeding. In addition, throughout the development of this EIS the Cooperating Agencies have provided concurrence on several steps prior to moving forward in the NEPA review.
13102-084	Based on all of the information we have detailed in this comment, the only Alternative that we can support is Alternative G- No Action. As national and world leaders in longfin squid production, the cannot accept these major impacts to our product source, our vessels, our customers vessels, the safety of our vessel crew, our shoreside facilities, livelihoods and our nation. We demand a 5 year moratorium on all offshore wind permitting off the U.S. East Coast until all these issues are completely addressed.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13108-001	These physical structures [WTGs and cables] along with massive transmission cables attached to each turbine stretching as much as 17 miles or more carrying 60,000 volts each will effectively close these areas to commercial fishing. Our business relies on our 20 vessels at sea to harvest clams using a hydraulic dredge to release the Atlantic Surfclam and Ocean Quahog clams from the high energy sand where they grow.	BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for details. Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS also discuss that some vessels may

Index	Comment Text	Response
Number		
		choose not to fish near the Proposed Action during its operational period due to restrictions on maneuverability from the presence of structures, the potential for hanging up on structures, and has been updated to discuss potential mitigation measures. Section 3.10 of the FEIS explains the methods used to estimate fishing revenue exposure and the methods used to set the value of the voluntary compensation funds. SEIS Table 3.11-3 shows the potential average revenue exposed per year if a harvester opts to no longer fish in the area and cannot recapture that income in a different location, including the surfclam and ocean quahog fishery. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas.
13108-002	Taking these structures into consideration makes it impossible for us to safely send our fleet into these areas because of the proposed spacing of turbines and the buried cables which have a tendency not to stayed buried. Using hydraulic dredges, we have interacted for years with old and new telecommunication cables which are few and far between, but they do not carry 60,000 volts each. The current proposed layout of Vineyard Wind I and other proposed WEA's would render these WEA's unfishable to us and the majority of other commercial fisheries.	BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for details. Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS also discuss that some vessels may choose not to fish near the Proposed Action during its operational period due to restrictions on maneuverability from the presence of structures, the potential for hanging up on structures, and has been updated to discuss potential mitigation measures.
13108-003	Let me say this, we are not opposed to Clean Energy Alternatives and have embarked on several projects ourselves to investigate this for our processing business. What I cannot understand is why Offshore Wind is so attractive to the Governors of coastal states when there is so much proven success with land-based wind energy in this country. We have seen successful WEA's in the west for decades and along the mountain tops of West Virginia and on land right in Atlantic City where we port a good portion of our fleet. Solar farms are becoming common place now throughout the country. Building wind farms in the middle of the ocean cannot be cheap, transmission cannot be cheap, what will this do to the cost of energy in the coastal states?	BOEM' s action is to assess the potential impacts of the proposed Project as specified in Vineyard Wind's COP, as well as reasonable alternatives to the proposed Project that meet the purpose and need. Onshore wind and solar projects would not meet the purpose and need and were therefore not evaluated as part of the NEPA process for the proposed Project.
13108-004	The Atlantic Surfclam and Ocean Quahog Fisheries have been managed under the Magnuson- Stevens Act since 1977 which is when the EEZ was established to protect our fisheries from foreign companies coming into harvest our domestic natural resource. Now we have foreign owned energy	Thank you for your comment.

Index	Comment Text	Response
Number		
	companies coming into our waters and dictating the use of our traditional	
	fishing grounds. If the pandemic has taught us anything it is that our national	
	security, health, and jobs should not be controlled by foreign companies.	
	These foreign companies will reap the majority of the financial gains from	
	these offshore WEA's. Power production is a matter of national security and	
	our national infrastructure should not be placed into the hands of foreign	
	owned companies who will take profits overseas.	
13108-005	It is for these reasons and many other submitted by our staff and RODA that	BOEM is evaluating Vineyard Wind's COP which is for the development of
	we ask that BOEM choose Alternative G, No Action on the Vineyard Wind I	an 800-MW offshore wind farm and the potential impacts associated with
	project. We also strongly support the 5-year moratorium put forth by RODA	their action. Section 2.5 of the FEIS has been added which includes the
	on all WEA construction, leasing, and surveying so the proper science can be	agency-preferred alternative.
	performed to determine the best path forward for the safety of our fishermen,	
	protection of our natural resources and environment.	
13109-001	I am writing you today to show my support for the offshore wind industry	Thank you for your comment.
	and to emphasize the importance of continuing the momentum that the	
	industry has gained. This is a vital time for renewable energy everywhere,	
	and we need to foster its growth to the best of our ability. Putting off the	
	potential of offshore wind is unacceptable. Especially with the recent	
	mentions of a moratorium on offshore wind, the industry is in desperate need	
	of people who believe in what wind can do to change our world. We've seen	
	it work magic in Europe, and the rest of the world has been following suit	
	and investing in a cleaner future. We have seen the effects of nonrenewable	
	energy, and our populations continue to grow. If not now for offshore wind,	
	then when?	
13111-001	After more than 10 years of exhaustive study and public consultation to	Thank you for your comment.
	identify areas for offshore wind leasing in the United States, the SDEIS	
	presents a comprehensive and in-depth analysis of the potential impacts of an	
	industry that is poised to, by 2030, create 83,000 jobs, generate \$25 billion in	
	annual economic output, and deliver substantial infrastructure investments in	
	port facilities along the East Coast. The enormous economic opportunities	
	this home-grown energy industry presents are unparalleled in recent times.	
13111-002	The Vineyard Wind 1 Project is at the forefront of the nascent U.S. offshore	Thank you for your comment.
	wind industry; a responsibility that we take very seriously. We have worked	
	diligently over the past 10 years to engage with thousands of stakeholders,	
	form partnerships with local communities and organizations, support work	
	force initiatives and job training programs, commit funds that support	
	projects that enable fishermen to continue to safely fish within offshore wind	
	farms, advance methods and technologies that enhance protections for marine	
	mammals, enable battery energy storage and solar projects in local	

Index	Comment Text	Response
Number		
	communities, provide credits to low income ratepayers, and advance the	
	offshore wind supply chain, businesses, and infrastructure in Massachusetts.	
	We have also committed to numerous measures to minimize and mitigate	
	impacts through all phases of the project. We have learned much through the	
	process and we hope to serve as a role model for projects that follow.	
13111-003	The successful launch of the project is a critical marker for the long-term	Thank you for your comment.
	success of the industry. The timely completion of the federal review and	
	approval process will provide the certainty needed for continued investments	
	in a U.S. market. Further delay risks undermining investor confidence in the	
	market and could have broader negative economic implications for an	
	industry that is poised to inject significant U.S. and inward investments that	
	will deliver affordable power, displace foreign energy imports, and help	
	facilitate recovery from the COVID-19-related economic impacts the country	
	is now experiencing.	
13111-004	Importantly, the timely completion of the federal review process fulfills the	Thank you for your comment.
	central purpose of Executive Order 13807, which is to make "efficient and	
	effective" infrastructure decisions that will strengthen the economy, create	
	jobs, increase wages for workers, and reduce the costs of goods and services	
	for families, as well as Executive Order 13927, which aims to accelerate	
	economic recovery from COVID-19 and requires agencies to "take all	
	reasonable measures to speed infrastructure investments and to speed other	
	actions in addition to such investments that will strengthen the economy and	
	return Americans to work."	
13111-005	We applaud BOEM for its far-reaching and objective analysis that provides	Thank you for your comment.
	the reader with a complete understanding of the potential effects of 22	
	gigawatts of offshore wind power development from the Gulf of Maine to	
	Cape Hatteras, North Carolina. The SDEIS more than fulfills BOEM's	
	obligations under the National Environmental Policy Act (NEPA) to examine	
	the Vineyard Wind 1 Project in the context of other reasonably foreseeable	
	offshore wind projects.	
13111-006	The SDEIS correctly identifies some of the many technical challenges	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	created by the imposition of a transit lane intersecting the Vineyard Wind 1	that could occur in Alternative F were implemented. Therefore, no changes to
	wind development area (WDA). However, the SDEIS underestimates the	the FEIS are warranted.
	potential impacts a transit lane would have on the viability of the project and,	
	on a cumulative basis, the effects of multiple transit lanes on the offshore	
	wind energy industry's ability to meet the need for energy generation in New	
	England and New York and the associated loss of iobs and economic	
	benefits.	

Index	Comment Text	Response
Number		
13111-007	With respect to the project, the SDEIS correctly recognizes that a transit lane	Section 2.5 of the FEIS has been added which includes the agency-preferred
	through the WDA would result in additional transmission losses that are not	alternative.
	factored into the design that could result in "technical difficulties and	
	additional unanticipated costs." SDEIS at 2-5. As we have explained, inter-	
	array cables experience the greatest transmission losses of all cables due to	
	their lower voltage and lengthening each of them by 2 or 4 NMs would	
	significantly increase such losses proportionally to the added length of	
	cables, in addition to those losses already incurred by adopting the D2 1 x 1	
	NM layout.	
13111-008	The SDEIS also correctly recognizes that a transit lane through the WDA	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	would significantly increase cable joints along the inter-array cables which	that could occur in Alternative F were implemented. Therefore, no changes to
	significantly increases the risk of cable failures, associated loss of	the FEIS are warranted.
	production, increased insurance costs and expensive and weather sensitive	
	repairs compared to a project where transit lanes are not intersecting the	
	WDA. Vineyard Wind, and other offshore wind developers work hard to	
	eliminate such joints in their designs, however introduction of 2 or 4NM	
	wide lanes would not make that possible.	
13111-009	Vineyard wind is not aware of other projects globally being designed with	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	such array cable lengths and none of these factors were considered in	that could occur in Alternative F were implemented. Therefore, no changes to
	Vineyard Wind's design of the project or its pricing of power under its power	the FEIS are warranted.
	purchase agreements with Massachusetts distribution companies. Nor could	
	Vineyard Wind have reasonably expected that its project proposal could be	
	upended in such a way. The SDEIS does not recognize the full extent of these	
	technical difficulties or the potential of foreclosing Vineyard Wind's ability	
	to deliver 800 MWs of power under contracts with Massachusetts	
	distribution companies.	
13111-010	In addition, while the SDEIS recognizes that Alternative F would again delay	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	the project because of the additional geophysical and geotechnical data that	that could occur in Alternative F were implemented. Therefore, no changes to
	would be needed to site turbines beyond the WDA, it does not fully address	the FEIS are warranted. Section 2.5 of the FEIS has been added that includes
	the impacts of such a delay. The FEIS should recognize that the technical	the agency-preferred alternative.
	complexities of a transit lane and delaying the project a second time would	
	not only significantly increase project costs, it could preclude Vineyard	
	Wind's ability to meet its current contractual obligations with Massachusetts	
	distribution companies thereby creating significant risk for the project's long-	
	term viability. The SDEIS therefore incorrectly concludes that "[d]espite the	
	technical, operational, and economic challenges that Alternative F would	
	present if selected, this Alternative could technically and economically meet	
	the purpose and need." SDEIS at 2-6.	

Index	Comment Text	Response
Number		
13111-011	The Council on Environmental Quality ("CEQ") finalized its revised	Section 2.5 of the FEIS has been added which includes the agency-preferred
	regulations implementing NEPA that become effective on September 14,	alternative.
	2020 and are thus applicable to the FEIS. The revised regulations direct that	
	where, as here, the agency is reviewing an application for authorization, the	
	agency "shall base the purpose and need on the goals of the applicant and the	
	agency's authority." 40 C.F.R. §1502.13. The revised regulations further	
	define that a reasonable alternative "must be technically and economically	
	feasible and meet the purpose and need of the proposed action." Final Rule at	
	192 (July 16, 2020), citing Yankee Nuclear Power Corp. v. Nat. Res. Def.	
	Council, Inc., 435 U.S. 519, 551 (1978) ("alternatives must be bounded by	
	some notion of feasibility"). BOEM must therefore recognize in the FEIS the	
	magnitude of the technical difficulties associated with siting a transit lane	
	through either the proposed project or the D2 Alternative and the impacts of	
	further delay on the project, which could potentially render the project	
	incapable of delivering 800 MWs of power in accordance with Vineyard	
	Wind's stated purpose and need for the project, which in turn would render	
	Alternative F an infeasible alternative under NEPA.	
13111-012	Further delay would also be contrary to Executive Order 13807 and the	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect BOEM's
	Administration's stated policy to "conduct environmental reviews and	anticipated date for a decision on the COP.
	authorization processes in a coordinated, consistent, and timely manner in	
	order to give the public and private investors the confidence they need to	
	make funding decisions for new infrastructure projects" and BOEM's review	
	has already exceeded the stated goal of completing all federal reviews within	
	two years.	
13111-013	Finally, it is important to note that in proposing the 4 NM transit lanes in	Section 2.5 of the FEIS has been added which includes the agency-preferred
	January 2020, the Responsible Offshore Development Alliance (RODA)	alternative.
	assumed that "the locations of the proposed transit lanes should not affect the	
	projects with existing state procurement agreements, and should therefore not	
	impact any project's ability to meet its pricing goals" This is an	
	inaccurate assumption with respect to a transit lane intersecting the Vineyard	
	Wind 1 project.	
13111-014	On a cumulative basis, the SDEIS estimates that if all six of 4-NM transit	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	lanes proposed by RODA were implemented, there would be a loss of 3,300	that could occur in Alternative F were implemented. Therefore, no changes to
	MWs of power generation across the Rhode Island and Massachusetts lease	the FEIS are warranted. The resource sections within Chapter 3 and
	areas, which is 500 MW less than the current state demand for offshore wind	Appendix A of the FEIS also address the potential impacts of implementing
	in the area. It also represents a loss of thousands of jobs, capital investment,	Alternative F. Furthermore, the FEIS was modified in Section 3.6.4 to
	and economic development opportunities. Using Vineyard Wind's 800 MW	explain the smaller beneficial impact resulting from Alternative F due to
	project as a basis, the loss of 3,300 MWs of power equates to a loss of almost	potentially lower levels of job creation and economic investment in offshore
	15,000 good-paying U.S. jobs, which is likely a low estimate as subsequent	wind, and potentially lower energy generation. This conclusion is sufficient
	projects will have the benefit of adding more U.S. workers as the industry	to support the FEIS recommended alternative, which does not include

Index	Comment Text	Response
Number		
	grows. Even so, we believe the SDEIS underestimates the potential loss of	Alternative F. More detailed analysis of the potential impacts of Alternative F
10111 015	power production and its associated economic benefits.	is not necessary to support the conclusion.
13111-015	Vineyard Wind and the other Rhode Island and Massachusetts leaseholders	Section 2.5 of the FEIS has been added which includes the agency-preferred
	have committed to implement the D2 Alternative, 1 x 1 NM, layout if no	alternative.
	transit lanes are added which would add further burdens on the individual	
	projects. The 1 x1 NM turbine spacing is significantly wider than any of the	
	offshore wind projects constructed globally within the last 20 years This	
	was a significant, but important compromise to foster the coexistence of the	
	offshore wind and commercial fishing industries as it significantly impacted	
	the economics of projects with existing power purchase contracts by forcing	
	developers like Vineyard Wind to redo geotechnical surveys, locate turbines	
	in deeper water, and incur higher transmission losses due to increased cable	
	lengths. The compromise was in response to commercial fishermen	
	advocating strongly that turbines to be oriented in east-west rows to	
	accommodate long-standing practices designed to minimize conflict between	
	fixed and mobile fishing gear and facilitate safe fishing operations among the	
	turbines. Fishermen also asked that turbine layouts be consistent across lease	
	areas to avoid changing their operations as they pass from one lease area into	
	the next. The Rhode Island Coastal Resources Management Council, as a	
	cooperating agency in the Vineyard Wind project NEPA process, urged, with	
	input from its Fishermen's Advisory Board, BOEM to include the 1 x 1 NM	
	layout as an alternative in the environmental impact statement.	
13111-016	Further, the leaseholders only proposed the uniform layout after they had	Section 2.1.3 and Section 3.11 of the FEIS incorporate, where appropriate,
	assured themselves through extensive third-party analysis that it promoted	the Final MARIPARS. Section 2.5 of the FEIS has been added which
	safe navigation in and around the wind farms, ensured safe search-and-rescue	includes the agency-preferred alternative.
	activities, and allowed fishermen to continue fishing safely within the turbine	
	arrays, all to be safeguarded without the need for transit lanes. These findings	
	were confirmed by the Coast Guard's recommendations after its careful	
10111 015	analysis in the MARIPARS study released in May 2020.	
13111-017	In adopting the D2 Alternative, 1 x 1 NM, layout, the leaseholders lost	Section 2.5 of the FEIS has been added which includes the agency-preferred
	approximately 30% of the lease areas that otherwise would have been used	alternative.
	for power production and added additional costs to all projects. RODA's	
	proposed six, 4-NM transit lanes eliminate another 31% of the area available	
	for locating turbines within the 1 x1 NM grid. That is a total loss of	
	approximately 50% of usable lease areas.	
13111-018	While Vineyard Wind and the other developers have committed to the 1 x1	Section 2.5 of the FEIS has been added which includes the agency-preferred
	NM layout, the imposition of 4 NM transit lanes on top of the D2 Alternative	alternative.
	would eliminate an additional 329 turbine positions. Assuming 12 MW wind	
	turbine generators (WTGs) are utilized across the lease areas, Alternative F	

Index	Comment Text	Response
Number	would impose a further loss of 3 948 MW of offshore wind capacity, which is	
	648 MW greater than the loss estimated in the SDEIS. The further loss of	
	almost 4.000 MW of power generation capacity is significant by any standard	
	and, as noted in the SDEIS would not leave enough power generation to meet	
	current state demand. Indeed, based on the Vinevard Wind 1 project, 4,000	
	MW of offshore wind capacity would power some 2 million homes and	
	businesses, sustain 18,000 U.S. jobs, provide billions of dollars in ratepayer	
	savings, and reduce carbon emissions by 8.5 million tons per year.	
13111-019	Moreover, the loss of this much power production would have a ripple effect	Section 2.5 of the FEIS has been added which includes the agency-preferred
	on development of the U.S. supply chain and market investments. These are	alternative.
	all factors that BOEM should consider in the FEIS, particularly because, as	
	shown in the next section, a transit lane intersecting Vineyard Wind's WDA	
	is not justified by the low volume of vessel traffic that transits through the	
	WDA.	
13111-020	A 2 or 4 NM transit lane in combination with the 1 x 1 NM layout would not	Section 3.11.2 of the FEIS includes a discussion on potential impacts on
	improve transit to George's Bank fishing grounds for two reasons: (1) the 1 x	vessel traffic. In addition, Section 3.11.4 and 3.11.5 of the FEIS includes a
	I NM layout provides more than 200 separate lanes of travel and (2) the data	discussion of potential effects of Alternative D2 and Alternative F,
	show that the level of vessel transit activity through the WDA is relatively	respectively.
	low and varies from year-to-year with vessels transiting both through and to	
	ine north of the wDA. At vineyard wind's request, Baird, leading experts in	
	Wind's WDA over the past four years (2016, 2010) Raird's report is	
	attached	
13111-021	Baird found that over four years on average only 2.8 fishing vessels transit	The FEIS addresses vessel traffic in Section 3.11.2. Although findings of the
	the WDA each day with the highest volume of traffic occurring in August	Baird (2020) study were not included in the FEIS, the findings described here
	where an average of 7 vessels per day transit the WDA. While these figures	are consistent with findings in the FEIS. Information presented draws upon
	represent AIS-equipped vessels, which accounts for approximately 50% of	the COP, (Epsilon 2018a), including the Revised NRA for the Project (COP
	all vessels operating in the area, even a maximum of 14 vessels on average	Volume III, Appendix III-I, Epsilon 2020a), and the Supplemental NRA
	per day still demonstrates the exceedingly low level of traffic transiting	(COP Volume III, Appendix III-I, Epsilon 2020a), which were prepared to
	through the WDA. Baird's analysis further found that 86% of the time there	comply with guidelines in the USCG's Navigation and Vessel Inspection
	are no vessels present at all in the WDA. Baird also compared the transits	Circular 02-07 (USCG 2007).
	through the WDA to all transits out of New Bedford and found that the	
	transits through the WDA are small percentage (~6%) of the overall transits.	
13111-022	Imposing an additional transit lane beyond the many provided by the 1 x 1	Section 3.11.2 of the FEIS includes a discussion on potential impacts on
	INM layout to accommodate a small percentage of vessel transits through the	vessel traffic.
	WDA is not justified by the available data, especially when balanced against	
	In the impacts on the project and the ripple effects on offshore wind industry.	
	Indeed, vineyard wind would most likely on average have more vessels	
	crossing the transit lane daily to maintain turbines during their operational	

Index	Comment Text	Response
Number		
	life than vessels that would on average transit through the lane. Moreover,	
	the expert federal agency charged with ensuring navigational safety, the U.S.	
	Coast Guard, makes clear that additional transit lanes are not necessary and	
	in fact could increase conflicts between fishing and transiting vessels. The	
	FEIS should recognize the low volume of traffic a transit lane would serve.	
13111-023	Baird also examined the variability of fishing vessel transit patterns over the	Section 3.11.4 of the FEIS includes a detailed discussion of Alternative D2
	past four years and found there is no consistent pattern from year-to-year. In	and the potential impacts.
	some years fishing vessels transiting from ports to George's Bank largely	
	transit to the north of the WDA while in other years they transit through the	
	WDA. The MARIPARS study illustrates the variability where in 2017 most	
	vessels transited to the north of the WDA, while in 2018 more vessels	
	transited through the WDA. This demonstrates that transiting outside of the	
	WDA rather than through it is common practice and does not impose undue	
	burdens on fishermen. Moreover, the difference between transiting through	
	the WDA and just to the north of it is a distance of approximately 2 NMs,	
	which at most may add 15 minutes to a more than 100 NM-mile trip from the	
	ports to the George's Bank fishing grounds. The FEIS should recognize the	
	variability in vessel traffic patterns and the marginal difference between	
	transiting through the WDA or to the north of it.	
13111-024	As the Coast Guard MARIPARS study concluded, "[s]afety considerations	Section 3.11.4 of the FEIS includes a detailed discussion of Alternative D2
	require a standard and uniform grid pattern with sufficient path width and	and the potential impacts.
	spacing between turbines to provide adequate sea room for vessels to avoid	
	collision in passing, crossing, and overtaking situations, and adequate room	
	to react to various potential emergencies." This is what the D2 Alternative	
	provides.	
13111-025	The Coast Guard also explained that: Although these larger navigation	Section 3.11.5 of the FEIS includes a discussion of potential effects of
	corridors may appear to provide area for navigation, they actually provide far	Alternative F.
	less area than the numerous corridors that result from the recommended array	
	and spacing Furthermore, the recommended standard and uniform grid	
	pattern provide sufficient space for certain vessels that fish in the WEA to	
	continue fishing after the wind farms are constructed. For these reasons, the	
	Coast Guard confirmed the 1 x 1 NM layout provides the best approach for	
	safe navigation and "will result in the functional equivalent of numerous	
	navigation corridors that can safely accommodate both transits through and	
	fishing within the [the lease areas]."	
13111-026	In addition, the SDEIS correctly finds that the D2 Alternative combined with	Thank you for your comment.
	the Alternative F transit lane does not materially change the impact ratings	
	assigned to the identified navigational impact producing factors and may	
	actually "increase adverse impacts on safe vessel movement and navigation	

Index Number	Comment Text	Response
	as a whole by adding choke points and funneling navigation." SDEIS at 3- 1093. This is because "fishing vessels are more likely to conduct active fishing within a 4 NM transit lane thereby increasing the risk of allision or collision, thereby increasing navigational safety risks."	
13111-027	The SDEIS acknowledges that the presence of wind turbine generators (WTGs) "would interfere with marine radars (although other navigation tools are available to ship captains)." SDEIS at 3-113. The MARIPARS study examined the potential interference WTGs may cause with marine radar and noted it is "site specific and depends on many factors including, but not limited to, turbine size, array layouts, number of turbines, construction material(s), and the vessel types." The Coast Guard also reviewed several studies that address correlations between wind turbines and marine radar interference and concluded that, "to date, the USCG is not aware of an authoritative scientific study that confirms or refutes the concern that WTGs will degrade marine radar." The FEIS should acknowledge these findings [in the MARIPARS study p. 25].	Section 3.11.2 of the FEIS includes a discussion of radar and acknowledges the USCG's findings on radar. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13111-028	To further its commitment to work with mariners to address potential impacts of the project on marine radar, Vineyard Wind has commissioned Baird to conduct a study to quantify the potential radar impacts and identify potential mitigation strategies. Baird's summary of the proposed study is attached. Vineyard Wind has also committed funds for two innovation funds that can, and should, be used for upgrading or procuring radar equipment for fishermen who fish within the lease areas if deemed necessary. The FEIS should acknowledge the important contribution this study and the innovation funding Vineyard Wind will provide is expected to make towards addressing potential radar interference concerns.	Section 3.11.2 of the FEIS notes that a radar study will be completed by Baird.
13111-029	In the Executive Summary of the SDEIS, BOEM concludes that the Vineyard Wind 1 Project, as proposed, and Alternatives B, C, D1, and F combined with the proposed project, could have "major direct" impacts on navigation due to the presence of structures. However, in the body of the analysis BOEM determines that the presence of structures "would have a localized (to the WDA), long-term, continuous moderate impacts on navigation and vessel traffic." SDEIS at 3-113. Under the impact producing factors identified in Table 3.13-1, BOEM similarly finds that the presence of structures in the proposed project area would have moderate impacts on navigation and vessel traffic, including impacts on search and rescue (SAR) operations and risks of allision. It is therefore unclear to us how the Executive Summary concludes that the proposed project would have "major" direct impacts on navigation due to the presence of structures. We understand that because the Vineyard Wind 1 Project, as proposed, is not aligned in a 1 x 1 nautical mile (NM)	The FEIS addresses this comment in the Executive Summary and Sections 3.11.3 and 3.11.5. Even with mitigation, overall, the impacts of Alternatives C, D1, and F on navigation and vessel traffic would likely be major, due primarily to the increased potential for loss of life due to maritime incidents, which would produce significant local and possibly regional disruptions for ocean users in the RI and MA Lease Areas.

Index	Comment Text	Response
Number	layout, on a cumulative basis, the disparity in layouts could complicate SAR operations and that could support a major impact rating, but the Executive Summary is referring to the direct, not cumulative, impacts of the proposed project. We therefore recommend that BOEM clarify the direct impact rating in the Executive Summary.	
13111-030	It also appears that the major impact rating assigned to the cumulative impacts of structures is principally driven by the disparity in layouts between the proposed project and the assumed $1 \ge 1$ NM layouts for other projects. We believe that BOEM should recognize in the navigation and vessel traffic section, as it does in other sections of the SDEIS, that Vineyard Wind in conjunction with the other Rhode Island and Massachusetts leaseholders, has committed to align the project in the $1 \ge 1$ NM layout, which would eliminate the disparity in layouts thereby decreasing the risk of collision/allision and navigational complexity. Consistent with BOEM's impact rating for the D2 Alternative, the cumulative impacts of the proposed project, when mitigated by the $1 \ge 1$ NM layout, would be moderate, not major.	Section 3.11.4 of the FEIS discusses Alternative D2. Alternative D2 would result in 1 x 1 nautical mile spacing between WTGs, with WTGs arranged in east-to-west rows and north to south columns, matching the orientation that BOEM assumes for all other future offshore wind projects. Impact ratings are based on consultations with cooperating agencies (specifically the USCG) and the definitions in Section 3.0. The overall reasonably foreseeable environmental trends and planned action impacts of Alternative D2 when combined with past, present, and reasonably foreseeable activities on navigation and vessel traffic within the geographic analysis area would be lower than under the Proposed Action—moderate— due to improved SAR access and reduced loss of life.
13111-031	The SDEIS identifies that the Vineyard Wind 1 Project, as proposed, could have major impacts on environmental justice communities. The "major" impact rating is driven by Vineyard Wind's potential use of the New Hampshire Avenue cable landing site in Yarmouth which would require cable installation through Lewis Bay. The SDEIS finds that installing a cable through Lewis Bay would have a disproportionate impact on low-income residents in the commercial and for-hire recreational fishing industry near Lewis Bay, albeit localized and short-term. On June 26, 2020, Vineyard Wind formally notified BOEM that it was not pursuing the New Hampshire Avenue landing site. While the New Hampshire Avenue site was included in the project design envelope, Vineyard Wind never sought state or local permits for the site and instead has obtained all of the state and local permits necessary to bring the cable onshore at the Covell's Beach in Barnstable. The Vineyard Wind 1 project therefore will not have a major impact on environmental justice communities.	The references to the New Hampshire Avenue landfall route and the associated "major" impact ratings from the DEIS have been removed in the FEIS as Vineyard Wind has obtained all necessary permits from state and local entities for use of Covell's Beach.
13111-032	Finally, the SDEIS assigns a major impact rating to both the direct and cumulative impacts of the proposed project on the National Marine Fisheries Service's (NMFS) scientific research and studies because the wind turbine structures would restrict access to research areas under current protocols. We understand that these impacts can be mitigated through adapting NMFS's research protocols to account for the presence of offshore wind structures but will require additional agency resources. We further understand that BOEM is working closely with NMFS to address the issue and is in the process of awarding a contract to assist NMFS in revising its methodologies. We	Section 3.12 of the FEIS has been updated to acknowledge potential future developments in scientific research in surveys, including use of unmanned vessel and aerial vehicles. The level of impact to scientific research and surveys (major) was jointly agreed to by NMFS and BOEM based on currently available information and remains unchanged in the Section 3.12 of the FEIS. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be

Index	Comment Text	Response
Number	recommend that BOEM include in the FEIS more detail on the ongoing agency efforts to address the issue and consider how ongoing fisheries studies being conducted by Vineyard Wind and other developers, as well as regional science efforts advanced by the Responsible Offshore Science Alliance contribute to the overall efforts to obtain the needed data on fisheries in the wind development areas.	required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13111-033	When BOEM issues its decision on the Vineyard Wind 1 project in December 2020, the project will have been delayed by more than one year. During this time, we have worked hard to address numerous concerns and most importantly we have committed to adopting the 1 x 1 NM layout, D2 Alternative. The Coast Guard's MARIPARS recommendations confirm that this layout is safe for navigation and "will result in the functional equivalent of numerous navigation corridors that can safely accommodate both transits through and fishing." We therefore urge BOEM to adopt the D2 Alternative as the right solution for coexistence of the offshore wind and commercial fishing industries and growth of the blue economy.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13111-034	We further implore BOEM not to further delay the project by imposing a transit lane through the project area. The technical challenges and delay associated with a transit lane create significant risks for the project, which we believe will have a ripple effect on an industry that is poised to create tens of thousands of U.S. jobs, generate billions in annual economic output, and revitalize U.S. port facilities along the East Coast. BOEM should render a timely and feasible permitting decision in order to promote public confidence, as well as give private investors the confidence needed to make funding decisions for new infrastructure projects and the associated U.S. supply chain growth.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13111-035	 Several comments in the SDEIS pertain to the potential issue of the impacts of the proposed development on vessel navigation. Two of the draft findings relate to the following topics: Marine radar systems. The SDEIS Cumulative Impacts assessment (Section 3.13.2.1) indicates that the presence of Wind Turbine Generators (WTGs) "would interfere with marine radars" and that "vessel owners would likely need to add navigation and communication equipment to safely navigate through the offshore wind project". Navigation risk and vessel traffic. The SDEIS mentions the potential for increased risk of vessel collision and allision within the turbine field. This document provides supplementary information related to both concerns. Specifically, a marine radar study comprised of field and numerical investigations is to be carried out in 2021, as summarized briefly in Section 2.0. As well, additional AIS data analyses have been completed to better 	Thank you for your comment.

Index Number	Comment Text	Response
	quantify the volume of vessel traffic transiting within and outside the Project area, as discussed in Section 3.0	
13111-036	 area, as discussed in Section 3.0. MARIPARS, examined a number of potential navigational issues, including the potential for WTGs to affect marine radar systems. Some key points outlined in the Final MARIPARS on this topic were: 2. The potential for interference with marine radar is site specific and depends on many factors including, but not limited to, turbine size, array layouts, number of turbines, construction material(s), and the vessel types. A number of commenters mentioned the potential for radar interference by WTGs. The USCG reviewed several studies that address correlations between wind turbines and marine radar interference. To date, the USCG is not aware of an authoritative scientific study that confirms or refutes the concern that WTGs will degrade marine radar. 3. Some of the general types of interference may include radar clutter, radar saturation, and shadowing 4. Vessels have different types of radar with different capabilities. UK radar studies have concluded that the that the location of radar antenna aboard vessels may contribute to the ability of radar to properly detect targets and may even cause false echoes. For example, radars that are off-center or obstructed by railings, antennas, masts and the like are more likely to detect objects falsely. Additionally, radar operator wind farm. 5. The UK studies also show that general mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines and the use of AIS enable safe navigation with minimal loss of radar detection. Thus, the USCG noted that it is unclear as to whether WTGs will cause a degradation of marine radar and that UK studies have indicated the potential 	Section 3.11 of the FEIS has been updated to address the Final MARIPARS study. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines, and the use of AIS enable safe navigation with minimal loss of radar detection.
13111-037	Concerns have been raised by the local fishing community as to the possible impact of WTGs on marine radar systems. To address this concern, Vineyard Wind has undertaken the design of a detailed study [Baird, 2020] to quantify the potential impacts of the Vineyard Wind project on marine radars and to identify mitigation strategies (if needed). The proposed radar study includes documenting the types of radar systems commonly used by vessels regularly transiting through and around Vineyard Wind's Lease Area OCS-A 0501, completing a site specific numerical modeling assessment, and undertaking a two-day field program to take advantage of a unique opportunity for testing of actual marine radar systems at the nearby Block Island Wind Farm.	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar interference. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease

Index	Comment Text	Response
Number		
		as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines, and the use of AIS enable safe navigation with minimal loss of radar detection.
13111-038	In addition to the Block Island field trial, a complementary numerical modeling assessment will also be undertaken for Vineyard Wind's proposed turbine layout in the Wind Development Area (WDA). The site-specific numerical modeling approach enables a direct assessment of potential radar interference for the proposed WTGs and marine radars representative of the systems used by the local fleetThe scope of work for numerical study includes a turbine reflectivity assessment, radar system modeling, scenario simulations, impact assessment, and a mitigation discussion (all supported by site specific modeling results). The model will incorporate sea clutter approximating the effects of waves and weather, and takes into account the turbine sizes and spacing.	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar interference. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines, and the use of AIS enable safe navigation with minimal loss of radar detection.
13111-039	The radar study will advance the understanding and provide documented full- scale observations on how the Project may influence marine radar and radio. Three vessel sizes will be used in the field trial portion of the study, and have been selected to be representative of the full range of vessel sizes in the local fishing fleet (vessel selection is expected to include an ~87 ft scalloper, a ~47 ft gillnet vessel, and a ~23 ft skiff, though final vessel selection will depend on vessel availability at the time of the field trial).	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential radar interference. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines, and the use of AIS enable safe navigation with minimal loss of radar detection.

Index	Comment Text	Response
13111-040	Expected outcomes of the overall radar study include the following:	Thank you for your comment
15111 040	• Assessment of the ability of vessel radar systems of different types to track	Thank you for your comment.
	stationary, moving, and turning vessels in the presence of WTGs.	
	• Evaluation of the performance of different radar systems from several	
	manufacturers, including both older magnetron/pulse types and the latest	
	solid-state technology. Radar height, scanner size, and output power will also	
	vary, depending on the specific details unique to each vessel. The extent to	
	which WTGs create effects on marine radar systems, such as side lobe	
	clutter, spurious reflections and shadowing, will be assessed for each system	
	at different settings and adjustment levels.	
	• Identification of potential mitigation strategies including the use of manual	
	gain control as well as automatic anti-clutter technology to identify real	
	targets and eliminate false echoes.	
	• Evaluation of the potential influence, if any, of WTGs on VHF radio	
12111.041	direction-finding communication from the Vineyard Wind development.	
13111-041	It is anticipated that the proposed study will result in the advancement of	I hank you for your comment.
	knowledge related to the use of marine radars in the vicinity of the Vineyard	
	wind project and future offshore wind energy developments in	
	generalObservations related to VHF radio direction finding and	
	operators and Search and Rescue organizations	
13111-042	At a technical level, the proposed numerical modeling investigation and full-	Thank you for your comment
15111 012	scale field trial will document and quantify potential impacts and identify	Thank you for your confident.
	mitigation strategies to improve radar-based navigational safety. More	
	importantly, the overall value of the study will be to improve the	
	understanding and the extent to which the Vineyard Wind Project (and	
	potentially future projects) may affect marine radar compared to the current	
	state of knowledge.	
13111-043	Analyses of historical AIS data (Baird, 2019a,b) have indicated that there is	The FEIS discusses vessel traffic in Section 3.11.2.
	relatively low traffic density in the Wind Development Area (WDA) under	
	existing conditions:	
	• 86% of the time there are no vessels present in the WDA.	
	• Two or more vessels are present in the WDA simultaneously 258 hours per vear on average (2.9% of the time).	
	• The maximum amount of recorded traffic in four years (2016-19) in a 15-	
	minute period over the 306 square kilometer area of the WDA was 22 vessels	
	(Sept. 2016) during a very active trawling period of short duration. The	
	maximum amount of transiting traffic in this same 4-year period was 7	
	vessels.	

Index	Comment Text	Response
Number		
13111-044	Table 3.1 summarizes the number of vessel transits by month across the	The FEIS discusses vessel traffic in Section 3.11.2, which has been edited to
	WDA over a four-year time period (2016-2019) based on analyses of AIS	include the SNRA estimation of the percentage of fishing fleet covered by
	data. Transiting fishing vessels were identified as being those vessels having	AIS data.
	a speed greater than 4 knots. On average, there were 2.8 transits per day	
	across the WDA with peak traffic occurring in August with an average of 7	
	vessels per day in transit (roughly one every three hours if evenly spread	
	through the day). It is important to recognize that vessels less than 65 feet in	
	length are not required to carry AIS although many do. In Baird (2019), it	
	was estimated that AIS-equipped vessels may represent about 50% of the	
	total fishing fleet. Thus, the transit numbers may be double those shown in	
	Table 3.1, but this still represents a relatively small amount of vessel	
	trafficThere is significant variability in the transiting fishing vessel traffic	
	patterns from year to year. For example, in 2016 fewer fishing vessels	
	transited through the WDA (1.8 vessels per day on average) while in 2019	
	there was more traffic (4.1 vessels per day on average).	
13111-045	Transiting vessels may prefer to divert around the WDA rather than sail	Thank you for your comment.
	through the turbine field. Figure 3.1 shows two possible transit paths – one	
	through the WDA and one around the northern extent of the WDA. The	
	difference in distance is 2 nautical miles. At an average transit speed of 8	
	knots, this additional distance would add 15 minutes to the trip.	
13111-046	One concern with the designating a vessel transit corridor is the potential	The FEIS addresses this comment in Section 3.11.5.
	conflict between transiting vessels and those fishing. A corridor will naturally	
	attract traffic that currently spreads over a wider area under existing	
	conditions. This increased traffic in the corridor may result in increased	
	interactions with vessels trawling in the corridor. Figure 3.2 shows the	
	average AIS traffic density map for vessels conducting fishing (assumed to	
	be moving at speeds of less than 4 knots) over the 2016 to 2019 time period.	
	The proposed 4 nm transit corridor is shown on the maps. As with the	
	transiting vessels, there is considerable variation in fishing activity from year	
	to year, as may be noted in the plots of Figures 3.3 and 3.4 for the years 2016	
	and 2019, respectively. Overall, given the low density and variability of the	
	vessel traffic, the relatively short additional distance to divert around the	
	WDA should this be preferred and the potential to increase conflicts between	
	transiting and fishing traffic, the designation of a wide transit lane through	
	the project area does not appear warranted.	
13112-001	I fully support the efforts for Vineyard wind to start. We need more	Thank you for your comment.
	renewables and working in the education field more and more kids want to be	
	a part of the green movement. We should move this project forward 100%	

Index	Comment Text	Response
13113-001	I lived on the cape for 40 years. Now, I'm in Maine. I remember when pilgrim nuclear power plant went in. No one objected. And that is such a scary issue. We have many wind turbines on the ridges around us, in Maine. No issues. No fears of a meltdown. Let's be forward thinking and Get this wind power going! Europe has embraced wind for decades. I say Do It.	Thank you for your comment.
13117-001	On behalf of Garden State Seafood Association we ask for a five-year delay on wind energy solicitation in the Mid Atlantic. The current process in use by the Bureau of Ocean Energy Management (BOEM), identifies wind energy area sites without consideration of their adverse environmental impacts in the original lease selection, on the locations historically rich and economically vital commercial fisheries, or on the communities that support and benefit from those fisheries. The only factors even considered in the initial location determination was visibility from shore and an attempt to minimize bird interactions, not the needs of other ocean users, particularly fishermen. The potential results of continuing offshore wind solicitation include permanent harm to our environment, diminishment of our industry's ability to produce food from the sea, and increased costs to the consumers who must purchase expensive 'green' power. We therefor support Alternative G, the No Action Alternative at this time.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project. In addition, the NEPA process for the proposed Project is being implemented consistent with Secretarial Order 3355, including the page and timing limitations for preparing the EIS. Last, the FEIS does not evaluate impacts as a result of lease selection and issuance because that assessment has already been conducted and published in 2013. The Environmental Assessment for commercial wind lease issuance and site assessment activities offshore Rhode Island and Massachusetts can be found online here: https://boem-prod.opengov.ibmcloud.com/sites/default/files/uploadedFiles/BOEM/Renew able_Energy_Program/State_Activities/BOEM%20RI_MA_Revised%20EA_22May2013.pdf
13117-002	By nature of their reliance on the ocean for their way of life, fishermen must be good stewards of the environment. Any proposed opening of fishing grounds or increase in allowable catch requires years of intensive scientific study. By contrast, there have been almost no environmental studies on the impact of offshore wind farms and, thus far, the BOEM has not addressed any major environmental concerns that were raised as a result of the first project solicitations.	The environmental assessment for the Vineyard Wind 1 Project has relied upon the best available information regarding impacts from the proposed action by using the results of local site characterization information from the developer, the National Marine Fisheries Service, and others. Impact information from the Block Island Wind Farm and European projects are applicable to the anticipated impacts of the proposed action. Section 3.3 of the FEIS has been updated to include European studies of impacts from offshore wind facilities on finfish and Section 3.10 has been updated with a U.K. study (by Roach et al.) that shows impacts to catch rates from offshore wind facilities.
13117-003	The New York bight is also home to a unique phenomenon called the cold pool. The cold pool is a significant element in the reproduction and migratory patterns of many aquatic species on the east coast and its disruption could be catastrophic to those species. It is as significant to our marine environment as the Pine Barrens, Catskills or Martha's Vinyard. Though this has been brought to the attention of developers and federal officials on several occasions, no research has been done to determine the impacts of offshore wind on this important part of our ecosystem.	Section 3.4 of the SEIS discussed the cold pool and potential effects of offshore wind development. Therefore, no change to the FEIS is warranted. Potential impacts on the cold pool are dominated by factors other than the Proposed Action; nevertheless, the FEIS considers impacts of reasonably foreseeable environmental trends and planned actions, including the Proposed Action. This is a Project-specific EIS, not a Programmatic EIS or assessment.
13117-004	While the SEIS and developer talk of successful project in Europe, we have found no peer reviewed scientific studies on the impact of wind energy	Section 3.10.2 of the FEIS has been updated to include a European study on the impact of offshore wind on lobster. The Section 3.14.2.5 of the SEIS

Index	Comment Text	Response
Number	facilities to fisheries or fish stock. This fact combined with the projects	addresses potential project-related and cumulative impacts to scientific
	impact on federal fisheries resource surveys should give the federal	research and surveys in detail and discusses the potential for lower quotas.
	government ample reason to pause. With the potential impact to the surveys	The discussion of impacts on scientific research and surveys was developed
	the resulting uncertainty will create pressure to reduce legally allowable catch	jointly by BOEM and NOAA, and acknowledges that additional studies are
	at the industry and nations detriment.	implement any changes to surveys BOEM is actively working with NMFS
		on a process to adapt survey methodologies to the presence of offshore wind
		(see: https://www.boem.gov/environment/environmental-studies/20-x07).
13117-005	Finally, this area is the site of right whale activity for a healthy portion of the	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and
	year. Fisheries are held to significant regulatory restrictions to minimize	monitoring measures that would be implemented to avoid, minimize, and
	potential impact. BOEM must develop a similar system to insure the whales	mitigate adverse impacts to marine mammals, specifically the NARW. These
	continued protection prior to approving this project with possible significant	use of sound attenuation technologies use of PSOs PAM soft start
	acoustie impacts during construction and operation.	procedures, shut down procedures, and other measures. The use of PAM
		technologies will allow Vineyard Wind to monitor the large Level A and B
		harassment zones. In addition, monitoring of the effectiveness of sound
		attenuation methods will be conducted and secondary measures would be
		implemented if the required sound reduction is not met. Further, should a
		Right Whale Slow Zone or DMA overlap the proposed Project area between
		June 1 and October 31 implementation of enhanced monitoring/mitigation
13117-006	There has yet to be any true commitment from the developers with an	Section 3.11.2 and 3.13.2 of the SEIS evaluates impacts from alternatives
13117 000	existing procurement to modify design plans in any way to limit impacts on	with different spacing of turbines and transit corridors (Alternatives D1, D2,
	safe fishing near or transit through their site, and BOEM has ever mandated	and F) on commercial fisheries and navigation. Three of the Alternatives, D1,
	or even encouraged such modifications despite the late stage of the project.	D2, and F, were a direct result of commercial fishing industry comments.
	Discussions identifying transit lanes and spacing needs for continued	Section 2.1.3 of the FEIS was updated to clarify that Alternatives D1 and D2
	commercial fishing operations within the project have resulted in zero	were the direct result of scoping comments received from the commercial
	changes. Despite numerous proposals and requests made by the fishing	fishing industry (see April 30, 2018 comment from Tkjedle Law on behalf of
	he addressed in order to keep our state's fishermen safe at sea	an EIS) Alternative E was proposed by the Responsible Offshore
	be addressed in order to keep our state's rishermen safe at sea.	Development Alliance through a collaborative process with commercial
		fishermen and the offshore wind industry.
13117-007	The SEIS in Appendix B Figures 3.11-2, 3.11-3 and 3.11-5 show significant	The FEIS addresses this comment in Section 3.10.1.1 and 3.11.2 and was
	transiting through the proposed development area in a North Eastern / South	updated to include the Final MARIPARS (USCG 2020), which states that
	Western directions. As identified and proposed to BOWM and the	vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow
	developers, by the fishing industry and supported by RODA proposed 4 nm	vessels the ability to maneuver in accordance with the [International
	navigation corridor proposed in Alternative F. The TNM E/W spatial layout	Regulations for Preventing Collisions at Sea 19/2 (COLREGS)] while
	Scallon fishery identified in Figure 3.11.5, this lack of transit corridor will	Final MARIPARS (USCG 2020) Section 2.11.2 and 2.12.2 of the SEIS
	Scalop honory identified in Figure 5.11-5, this lack of transit confider will	evaluates impacts from alternatives with different spacing of turbines and

Index	Comment Text	Response
Number	have direct impact on the time constrained permit of the industry with a limited number of days at sea and running 24 hour clocks.	transit corridors (Alternatives D1, D2, and F) on commercial fisheries and navigation. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments. Section 2.1.3 of the FEIS was updated to clarify that Alternatives D1 and D2 were the direct result of scoping comments received from the commercial fishing industry (see April 30, 2018 comment from Tkjedle Law on behalf of the East Farm Commercial Fisheries Center on the Notice of Intent to Prepare an EIS). Section 3.10 of the FEIS also notes that some fisheries may require spacing greater than 1 nautical mile between wind turbines.
13117-008	Current plans also call for separate transmission infrastructure for each project which will create additional cost to the rate payer and greater potential impact to commercial and recreational fishing grounds. Existing projects have already shown the problems that can arise when cables are only minimally buried. The need for deep cable burial suggests that a transmission backbone is required in order to build these projects with limited impacts on fishing.	BOEM assumed in Chapter 1 of the SEIS and FEIS that each project would require separate transmission infrastructure in order to evaluate a worst-case or most impactful scenario. BOEM acknowledges in Chapter 1 of the SEIS that if shared transmission infrastructure were implemented for future projects, potential impacts could be less.
13117-009	The Federal Government has stated that they will waive requirements under the Jones Act and allow foreign flagged vessels to transport and install turbine components produced overseas. This will significantly decrease the number of jobs created in the Unites States, despite the wind developers promises. A delay in future solicitations could give the industry time to build the necessary infrastructure to support these projects and allow for construction vessels to be built in American shipyards. Without this infrastructure, American wind farms will likely be imported, producing few, if any, local jobs. For example, construction of the recent pilot project off the coast of Virginia included two prefabricated turbines which were shipped from Europe to Nova Scotia and then traveled down the coast to VA on foreign vessels with foreign crews.	Section 3.6.1.1 of the FEIS references several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending upon the anticipated growth of the domestic offshore wind supply chain, and the FEIS consistently uses the base or lower projections of domestic economic activity in arriving at conclusions. Consideration of the nationality of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
13117-010	Finally, BOEM has done no cost-benefit analysis on the impact to the fishing industry. We are being sold the promise of future job creation with no analysis of how existing jobs and investments will be impacted. Recent studies from Europe do not support the wind energy developer's assertion that thousands of jobs will be created1. In fact a 2006 German study found a net loss of jobs from windmill projects. Without a true cost benefit analysis, BOEM should defer and ensure the protection of existing commercial fishing jobs and the hundreds of millions of dollars in existing infrastructure investments.	This EIS provides an evaluation of both beneficial and adverse effects of the Proposed Action and the alternatives to the Proposed Action. Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries and Section 3.6 discusses impacts to employment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Although fishing activity may change, employment in the fishing sector is not anticipated to change as a result of the proposed action. Per 40 CFR 1502.23, a cost-benefit analysis is only required if it is relevant to the choice among environmentally different alternatives being considered. Therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number	I support putting the wind towars in Nantuskat Sound I think they'd he good	Thenk you for your comment
13119-001	for the environment and the fishermen. We've procreatinated too long and we	
	can't continue to go through life with our heads buried in the sand	
13123-001	Lam strongly in favor of a Mass offshore windfarm. For me, the positives	Thank you for your comment
15125 001	of such an initiative make this project completely worth it. Not only would it	Thank you for your comment.
	create jobs in the immediate future, but it would be a jump start to an entire	
	potential industry that would boost the economy of our state in the years to	
	come. Massachusetts stands out as an environmentally conscious state, so	
	this project would also serve to make our state an example across the	
	country.	
13126-001	Research from Europe has dispelled misconceptions that construction of	Section 3.4 of the SEIS discusses the "reef effect" and the potential benefits
	Offshore Wind foundations harm marine life. Quite the contrary marine life	to finfish and invertebrates. Section 3.10 and 3.11 discuss the potential for
	congregate around Offshore Wind tower foundations making things easier for	increased recreational, commercial, and for-hire fishing opportunities;
	commercial fishermen. Those foundations are of the same construction that	therefore, no change to the FEIS is warranted.
	enabled oil rigs to survive Hurricane Katrina in the Gulf of Mexico. Offshore	
	Wind has proven successful in Europe and serves as a unique job creator for	
	construction trades and in disadvantaged communities. Traumatic times such	
	as these require a facilitation philosophy rather than one of obstruction.	
13128-001	The need to reduce fossil fuel use has been known for decades now, and	Thank you for your comment.
	procrastination is not helpful.	
13129-001	OCEAN encourages the forward progress toward permitting of Vineyard	Thank you for your comment.
	Wind with careful attention paid not only to fishing interests but to the	
	overall health of the ocean and the planet. We feel that the wind lease areas	
	can be designed to improve fish stocks, and to provide some added	
	commercial and recreational fishing benefits within the Vineyard Wind	
12120.001	Project.	
13130-001	SIOW emphatically endorses Alternative D2 and urges BOEM to adopt it as	Section 2.5 of the FEIS has been added which includes the agency-preferred
	the Preferred Alternative. SIOW also strongly encourages BOEM to reject	alternative.
	Alternative F. Lastly, SIOw would like to incorporate by reference the	
12120.002	Dividing a successful offenere wind in dustry will require a diverse technical	Section 2.6.1.1 of the EEIS has been undeted to marvide estimates from
15150-002	Building a successful offshore wind industry will require a diverse technical	section 5.0.1.1 of the FEIS has been updated to provide estimates from
	wolkroice spanning an estimated /4 occupations ranging nom electricians,	growth of the wind energy industry along the Atlantic coast. This information
	operators, lawyers and scientists. Many offshore wind jobs will be union	was also included in the SEIS (Section 3.7.2.1) and the FEIS provides
	ights. The existing U.S. offshore oil and gas supply chain is bringing its	additional detail and analysis Section 3.6.2 provides information on types of
	expertise to the development of offshore wind energy facilities. Companies	iobs required for the Vineward Wind 1 Project, but generally the FFIS does
	that have been working exclusively in the U.S. oil and gas industry have	not address in detail the required workforce for offshore wind development
	become involved in all aspects of offshore wind development. Their	not address in down the required workforce for orishore wind development.
	involvement has ranged from survey work to turbine installation to support.	

Index Number	Comment Text	Response
	For example, the foundations and service vessel provided to the Block Island	
	Wind Farm were transported to New England from the Gulf of Mexico.	
13130-003	The Vinevard Wind project will create 3,600 jobs for local residents, while	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
	making a significant contribution towards climate change mitigation.	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
		3,600 FTE job years, including 1,100 to 1,550 job years during construction
		and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
		during operation. These data were also provided in the DEIS. The Vineyard
		Wind 1 Project contribution towards climate change mitigation is also
		addressed in Section 3.6.2 and in addition, the FEIS has been updated in
		Appendix A, Section A.8.1 to address potential air emission reductions in
12120 004		greater detail than the SEIS.
13130-004	In addition to the continuous and ongoing communications that exist between	I hank you for your comment.
	base also been on the receiving and of extensive angegement from both the	
	federal government and the states regarding offshore wind development. In	
	fact it would be difficult to find a stakeholder group whose participation has	
	been more sought-after throughout the U.S. offshore wind area identification	
	permitting and leasing processes than the commercial fishing industry.	
13130-005	BOEM should adopt alternative D2, comprised of a uniform 1 nm x 1 nm	Section 2.5 of the FEIS has been added which includes the agency-preferred
	grid layout of turbines across contiguous lease areas, as the Preferred	alternative.
	Alternative. After extensive study and public input, the USCG recently	
	endorsed this layout as superior from a navigational safety perspective. In the	
	context of its recently released final report "The Areas Offshore of	
	Massachusetts and Rhode Island Port Access Route Study" (MARIPARS),	
	the USCG determined that the grid layout pattern "will result in the	
	functional equivalent of numerous navigation corridors that can safely	
	accommodate both transits through and fishing within the [Wind Energy	
12120.000	Area]."	
13130-006	BOEM should reject alternative F, comprised of a 4-mile wide dedicated	Section 2.5 of the FEIS has been added which includes the agency-preferred
	transit corridor, either alone or in combination with D2. Large transit lanes	alternative.
	risk to payigation than the uniform grid layout as proposed in Alternative D2	
	as more traffic is likely to be funneled into the lanes	
13130-007	Alternative D2 strikes an appropriate balance by ensuring the cost-effective	Section 2.5 of the FFIS has been added which includes the agency-preferred
15150 007	development of federal WEAs without compromising the safety of	alternative
	recreational and commercial fishermen or other mariners. By contrast.	
	Alternative F, which has no factual or scientific basis, would impose a	
	significant burden on offshore wind development with no countervailing	
	benefit to fishermen or other mariners, from a navigational safety	

Index Number	Comment Text	Response
	perspective. On this issue, BOEM should defer to the USCG, the federal agency charged with ensuring the safe navigation within federal waters, and adopt alternative D2 as the Preferred Alternative and reject Alternative F.	
13131-001	The only challenge to the supplement from an informed party took the form of a Request For Corrections to the USCG MARIPARS under the Information Quality Act (IQA). Incorporating the changes proposed in this request, including a 2 X 2 NM grid layout and 4 NM transit lane, would be the equivalent of BOEM selecting "G," the "No Action" alternative. Calling for a five-year moratorium of OSW development in order to conduct additional surveys in the WEA would have the same effect. I can't see this as a legitimate reason for further delay of the approval process for the VW1 project since RODA couldn't cite a previous challenge to a PARS made in this manner and that the USCG was aware of it prior to their approval of the MARIPARS.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action. Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13131-002	Large infrastructure projects will be key to our economic recovery from the effects of the pandemic. The approval of this \$2 billion project will open the floodgates to an over \$20 billion flow of projects along the east coast that will cement the domestic OSW industry's introduction to the United States. These projects will not only lead to investment in the education and training of a domestic OSW workforce, but will also convince the industries in the supply-chain that it's more efficient to locate production facilities closer to the coastal staging areas here in the U.S. rather than shipping components across the ocean.	Thank you for your comment.
13131-003	I encourage BOEM to approve this project with some combination of alternatives that will allow this project to move forward as expeditiously as possible.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13131-004	The valid concerns raised by RI squid fishermen being left out of financial mitigation and the fishing fleet's concern over X-Band radar interference can be addressed as the project moves forward, as explicitly stated by BOEM during the hearings.	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. Section 3.10 and Appendix D of the FEIS discuss the details of the voluntary revenue compensation funds. Vineyard Wind has established voluntary gear loss and revenue compensation funds for fishing interests based in Rhode Island and Massachusetts, which includes owners and operators of vessels, vessel crews, shoreside processors, vessel supplier and support services, and other entities that can demonstrate losses directly related to the Vineyard Wind 1 Project.
13133-001	The Port of New Bedford has long been a leader in the effort to bring offshore wind to American waters. We have long believed that our port could reap the benefits of investment by an industry that has helped to revitalize and enhance ports across Northern Europe, creating tens of thousands of jobs	Thank you for your comment.

Index Number	Comment Text	Response
Tumber	along the way. In the last eight years, the Port Authority, the New Bedford	
	Wind Energy Center, New Bedford Ocean Cluster and other city agencies	
	have conducted extensive planning, programming, research, and networking	
	to place New Bedford in the middle of the offshore wind discussion in the	
	United States. We are home to America's first purpose built offshore wind	
	deployment facility, which is slated to stage the Vineyard Wind project and	
	generate considerable economic activity in our region.	
13133-002	At the same time, we recognize that offshore wind must work in harmony	The DEIS provided data on the economic importance of the New Bedford
	with the commercial fishing industry, which is our primary industry. New	commercial fishing and seafood processing industries. The FEIS updates and
	Bedford is the highest grossing fishing port in America and is the undisputed	expands this data based upon a more recent study (Section 3.6.1).
	epicenter of the fishing industry on the East Coast. Nearly five hundred	Furthermore, Section 3.10.1 of the FEIS was updated to discuss the
	vessels land fish in New Bedford each year, and we are home to dozens of	importance of New Bedford to the fishing industry.
	shoreside support businesses. According to a recent study, fishing and related	
	industries in New Bedford support over six thousand jobs and generate over	
	\$10 billion in direct and induced economic output. Suffice it say, no other	
	American port has more at stake in the resolution of the potential conflicts	
	between the offshore wind and fishing industries.	
13133-003	We in New Bedford believe that offshore wind and commercial fishing can	Thank you for your comment.
	successfully coexist. To do so, there must be an open dialog between the two	
	industries, something we have strived to facilitate. The New Bedford Port	
	Authority has been engaged in marine spatial planning efforts on the	
	continental shelf since the launching of Massachusetts Ocean Management	
	Planning process. That process, built on the input of stakeholders from	
	Massachusetts and Rhode Island, resulted in the establishment of wind areas	
	that were commercially viable for wind developers while making every effort	
12122 004	to avoid the most valuable and contentious fishing grounds.	
13133-004	As a result of the work done almost ten years ago to avoid conflicts with the	Thank you for your comment.
	fishing industry, the Massachusetts lease areas historically have not been	
	heavily fished. This includes the Vineyard Wind lease area. While there is	
	scarcely any place on the Outer Continental Shelf on the East Coast where	
	windmills would have no conceivable impact on fishing, the Vineyard Wind	
	lease area would rise to the top of the list of viable energy wind areas with	
	the least impact on commercial fishing. In analyzing the impacts of fishing	
	industry - either by individual wind project or cumulatively- one must ask, if	
12122 005	mot unere, unen where?	
13133-005	we reject the idea, suggested by some, that there should a moratorium on	i nank you for your comment.
	while farms. The American offshore while industry has been gestalling for	
13133-005	fishing industry, the Massachusetts lease areas historically have not been heavily fished. This includes the Vineyard Wind lease area. While there is scarcely any place on the Outer Continental Shelf on the East Coast where windmills would have no conceivable impact on fishing, the Vineyard Wind lease area would rise to the top of the list of viable energy wind areas with the least impact on commercial fishing. In analyzing the impacts of fishing industry - either by individual wind project or cumulatively- one must ask, if not there, then where? We reject the idea, suggested by some, that there should a moratorium on wind farms. The American offshore wind industry has been gestating for nearly twenty years, with only seven total turbines installed on the East	Thank you for your comment.

Index	Comment Text	Response
Number		
	Coast. Imposing an arbitrary waiting period for still more study will	
	assuredly dampen industry investment for a far longer period.	
13133-006	Having the first wind project go forward in a lease area that is not heavily	Thank you for your comment.
	fished, is the best way for BOEM to understand the real cumulative impacts	
	on the industry. This will be especially important to understanding the	
	impacts in the New York Bight, which is far more heavily fished than the	
	Massachusetts area, and where there has been considerably less impact	
	analysis.	
13133-007	We believe the fishing industry will help ensure that the offshore wind	Section 3.6.2 of the FEIS has been updated to include information on the
	industry develops in the U.S. with the most local content and job creation.	coordinated effort by the Port of New Bedford, MassCEC, and Vineyard
	We have worked with MassCEC and Vineyard Wind to develop those supply	Wind to develop supply chain opportunities.
	chain opportunities, with a focus on fishing businesses.	
13133-008	In the absence of well-sited and planned development of the offshore wind	Thank you for your comment.
	industry, however, we foresee tremendous conflict ahead between [the	
	offshore wind and commercial fishing] industries, that will likely result in	
	years of litigation and lost economic opportunity. It is critical that BOEM	
	ensure the nation's interests and natural resources are protected in federal	
	waters and that the right uses are identified through stakeholder engagement.	
13133-009	As [the offshore wind and commercial fishing] industries move forward more	Thank you for your comment.
	and more synergies will be found. They will use the same suppliers, buy from	
	the same businesses, and work together to identify commercial opportunities.	
	We believe that if offshore wind is going to happen in the US, we need to	
	learn from areas that do not have significant impact to fisheries, and	
	Vineyard Wind's lease is one of those areas.	
13134-001	Orsted strongly supports the adoption of Alternative D2 (and the rejection of	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative F) as the Preferred Alternative for project layout in the Rhode	alternative.
	Island/Massachusetts contiguous lease areas. As one of the participating	
	developers to the consensus developers' proposall for a uniform 1 nautical	
	mile ("nm") x 1 nm grid configuration for these specific lease areas, Orsted	
	welcomes the solid evidence presented in the SDEIS demonstrating the	
10104.000	superiority of this approach from a navigational safety perspective.	
13134-002	Adopting Alternative F—thereby effectuating material and arbitrary	Section 2.5 of the FEIS has been added which includes the agency-preferred
	reductions in the lease areas—could also significantly depress the value of	alternative.
	future lease sales. Further, retroactively shrinking lease areas introduces	
	uncertainty into the federal offshore energy development process. That may	
	have a chilling effect on developers' financial investment appetite and	
	therefore lower lease revenues not only from reduced auction sales prices but	
	also during the operating term.	

Index	Comment Text	Response
Number		
13134-003	It is hard to reconcile the SDEIS's qualitative assessment that future offshore wind development will result only in minor net economic benefits to the region with the SDEIS's recognition of significant new investment in ports and harbors, manufacturing and other supply chain activities, and workforce development. Orsted alone plans to invest \$10 billion over the next decade in the United States. The final EIS should reflect more realistic and more significant positive economic rating of offshore wind as a domestic financial development engine consistent with ongoing and planned investments.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13134-004	BOEM should more clearly acknowledge that the negative impacts described in the cumulative analysis are likely conservative worst-case estimates rather than the reasonably foreseeable scenario. That is because for many of the cumulative impact parameters considered in the SDEIS, BOEM chose not to incorporate widely accepted or legally required mitigation strategies, such as working with the Department of Defense Clearinghouse to resolve conflicts with military uses. Thus, the "bottom line" impact of the 22 gigawatts ("GW") build-out must be considered (as BOEM itself admits) as a worst- case scenario and not representative of as-constructed project impacts. The final EIS should incorporate reasonably foreseeable industry practices or legally required mitigation in assessing impacts.	As noted in the SEIS, the summary of the Proposed Action and the alternative analyses in this SEIS did not assume that the proposed mitigation measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation for eagundate the set of the resource of a proval.
13134-005	It is inconsistent for BOEM to cite climate change as a contributing factor to impacts to fisheries and not acknowledge the positive impact offshore wind will have in displacing fossil-fuel electric generation and in reducing the carbon intensity of the economy.	Section 2.2.1 of the FEIS has been updated to reflect this information. Sections 3.11.1 and A.8.1 of the SEIS considered the influence of offshore wind energy development on climate change and state that offshore wind projects will likely result in a net decrease in GHGs. Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output

Index	Comment Text	Response
Number		
		can then be analyzed with COBRA. The annual potential avoided emissions
		Calculated by AVERI for an 800 M w offshore wind facility in the New
12124 006	Not marting the approximated Record of Desigion deadline (December 18	England AVERT region are included in Table A.8.1-5 of the FEIS.
13134-000	2020) would have a chilling effect on the U.S. offshere wind energy market	antiginated data for a decision on the COD
	and its resulting iob creation. Further delay would signal unreliable	
	regulatory timelines by which development plans and investment decisions	
	are guided	
13134-007	from a navigation perspective, the least conflicted alternative in the SDEIS	Section 2.5 of the FEIS has been added which includes the agency-preferred
10101007	with regard to impacts on navigation is Alternative D2A grid layout that is	alternative.
	uniform across the entire geographic analysis area, at a spacing of 1 nm x 1	
	nm as discussed in the final MARIPARS report and proposed in Alternative	
	D2, would not have an adverse impact on navigation, and would not lead to	
	increased loss of life. It also would be sufficient for navigation safety and	
	search and rescue operations. The final EIS should reflect the Coast Guard's	
	recommendation and adopt Alternative D2. The final EIS should reflect the	
	Coast Guard's recommendation and adopt Alternative D2.	
13134-008	The Coast Guard made three specific recommendations in its MARIPARS	Section 2.5 of the FEIS has been added which includes the agency-preferred
	report regarding spacing and layout: 1. Lanes oriented in a northwest to	alternative.
	southeast direction, 0.6 to 0.8 nm wide; 2. Lanes oriented in an east to west	
	direction, 1 nm wide; and 3. Lanes oriented in a north to south and east to	
	west direction, I nm wide, to facilitate helicopter search and rescue	
	operations. Alternative D2 is the only action alternative in the SDEIS that	
12124 000	meets all three of the Coast Guard's criteria for navigation safety.	
13134-009	Alternative F will not appreciably improve navigation safety. The Coast	section 2.5 of the FEIS has been added which includes the agency-preferred
	would transit lange as proposed in Alternative E fail to preserve pavigation	and native. The FEIS addresses this comment in Section 5.11.5.
	safety, such lanes would increase risk and make navigation more dangerous	
13134-010	the Coast Guard found that transit corridors as proposed in Alternative F	The FFIS addresses this comment in Section 3.11.5
15154 010	would make "navigation more challenging. [as] most traffic would then be	
	funneled into the corridors thereby increasing traffic density and risks for	
	vessel interaction."The Coast Guard further concluded that the spacing and	
	layout as recommended in the MARIPARS report-and as proposed in	
	Alternative D2—would "provide sufficient space for certain vessels that fish	
	in the WEA to continue fishing after the wind farms are constructed." In	
	contrast, wider transit lanes, as proposed in Alternative F, would "largely	
	preclude fishing in the WEA" according to the final MARIPARS report.	
13134-011	The SDEIS applies an overly abstract standard in determining that	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative F is "reasonable" under 40 C.F.R. § 1502.14, and fails to consider	alternative. The SEIS and Section 2.1.5 of the FEIS address some of the

Index	Comment Text	Response
Number		
Number	adequately Vineyard Wind's specific circumstancesthe imposition of 4-nm transit corridors would impose significant technical and economic constraints on all proposed offshore wind farms in the northeastern United States. And in fact, BOEM has underestimated significantly the loss of energy production from the MA/RI WEA if the transit lanes in Alternative F were to be adopted Assuming 12 MW turbines, as BOEM has for the SDEIS, this equals a loss of 3,948 MWs of potential power, which is 648 MWs greater than BOEM's estimated loss. It also is 1,148 MWs less than the current demand for offshore wind in the region. This analysis is in addition to the losses in turbine positions associated with the 1 nm x 1 nm layout, which precludes more turbines in the WEA. The final EIS for the Vineyard Wind Project should acknowledge this practical reality, and it should give	technical and practical challenges of implementing Alternative F. In preparing the FEIS, BOEM does acknowledge the technical and economic preferences of Vineyard Wind as it relates to alternatives to the proposed Project and meeting the purpose and need specified in Chapter 1.
	substantial weight to the specific needs and preferences of Vineyard Wind in determining whether Alternative E is technically and economically feasible	
13134-012	The layout assumptions underlying the cumulative analysis should not be used to impose the expectation of 1 nm x 1 nm spacing on projects outside of the MA/RI WEA. In relation to Alternative D2, this spacing is specifically applicable to the MA/RI WEA lease areas. It followed the 10-year leasing consultation initiated by a Memorandum of Understanding signed by the Governors of Rhode Island and Massachusetts in 2010The result was the MA/RI WEA, which through a lengthy stakeholder and scientific review process identified "high value" fishing grounds and excluded those areas from the MA/RI WEA. High value fishing includes the overlap between fixed gear fisheries (traps, pots, and gillnets) and mobile fisheries (trawls, dredges). Areas excluded from the MA/RI WEA had three to four types of fishing pressure from participating fisheries such as bottom trawling, scallop dredging, and lobster trap fisheries.	As noted in Appendix A of the SEIS, BOEM assumed that all offshore wind developments offshore Massachusetts and Rhode Island would have 1 x 1 nautical mile spacing. This assumption was made based on the developers' agreement made among the developers and does not preclude the selection of another alternative by the decision maker. BOEM further assumed that wind development offshore other states, with the exception Virginia, is assumed to occur at the same density as 1 x 1 nautical mile spacing, but no particular layout orientation or foundation spacing is assumed as ocean users offshore different states may have different patterns of movement or considerations than projects in leases offshore Massachusetts and Rhode Island. Therefore, no changes to the FEIS are warranted.
13134-013	There is no data or evidence in the record for holding projects in New York, New Jersey, Maryland, and Delaware lease areas to the same layout constraints applicable to the Massachusetts and Rhode Island lease areas. If BOEM intends to use the cumulative impact analysis in the SDEIS as a template for future offshore wind projects, it should clarify in the final EIS that there is no expectation for developers to commit to a 1 nm x 1 nm layout across the Outer Continental Shelf, and that any layout in lease areas outside of Rhode Island and Massachusetts lease areas will be based on site-specific considerations.	As noted in Appendix A of the SEIS, BOEM assumed that all offshore wind developments offshore Massachusetts and Rhode Island would have 1 x 1 nautical mile spacing. This assumption was made based on the developers' agreement made among the developers and does not preclude the selection of another alternative by the decision maker. BOEM further assumed that wind development offshore other states, with the exception Virginia, is assumed to occur at the same density as 1 x 1 nautical mile spacing, but no particular layout orientation or foundation spacing is assumed as ocean users offshore different states may have different patterns of movement or considerations than projects in leases offshore Massachusetts and Rhode Island. Therefore, no changes to the FEIS are warranted. Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a

Index Number	Comment Text	Response
		NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
13134-014	BOEM's classification of the cumulative impacts on demographics, employment and economics as "minor to minor beneficial" does not fully assess or reflect the plethora of reports and data concerning the existing benefits and economic impacts from other marketsFirst, offshore wind procurements including local content requirements will spur significant investment in a domestic U.S. supply chainSecond, offshore wind development will spur the creation of high-quality, high-wage jobs, as well as even more indirect jobsThird, the efficient build-out of the U.S. offshore wind potential will require a massive investment in new and revitalized port and harbor infrastructureFourth, offshore wind can produce economic benefits by providing clean energy and stabilizing often volatile energy pricesFinally, OSW directly addresses the challenges many states face in the imminent retirement of aging fossil- and nuclear-fired generationIn sum, a moderate or major beneficial rating is warranted in the final SDEIS when the beneficial economic impacts currently in the record are fully accounted.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13134-015	The SDEIS's rating of the cumulative impact on military and national security as "major" is confusing and a departure from the DEISIt is unclear in the SDEIS what new or changed information caused the shift from "minor" in the DEIS to the "major" designation in the SDEIS. In the absence of public input from DoD, the main drivers for the major impact rating are installation of structures—primarily wind turbines—within the RI and MA lease areas that allegedly would hinder Coast Guard SAR operations.44 It appears that BOEM considers SAR to be a "military and national security use"; this may not be an appropriate characterization of that function, and certainly is not a basis for assigning a "major" impact to the military and national security category. As noted above in Section II.A., the Coast Guard's MARIPARS report clearly states that it can effectively execute its SAR mission in a layout configuration as proposed in Alternative D2.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2 and F with D2 impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. Following the layout recommendations in the MARIPARS report would improve safety, but it would not remove the risk of allisions or collisions with WTGs during SAR operations particularly in challenging weather or visibility conditions (USCG 2020). The USCG is a branch of the armed forces that operates under the Department of Homeland Security during peacetime, and under the Navy during times of war (14 USC §101 - 102). Thus USCG SAR operations are discussed in SEIS and Section 3.12 of the FEIS, which includes military and national security uses. As stated in the Final MARIPARS, "The USCG will continue to serve as a [NEPA] cooperating agency to BOEM's environmental review of each proposed project. In that role, the USCG will evaluate the navigational risks of each proposal on a case-by-case basis" (USCG 2020). As described in Appendix C of the SEIS and the FEIS, the USCG has supported preparation of the FEIS as a cooperating agency and has provided direct input to the impact evaluation, including to the evaluation of impacts to SAR activities. The impact ratings for military and national security uses and SAR activities.

Index	Comment Text	Response
Number		
		USCG and other entities in the course of the SEIS development. BOEM and Vinevard Wind have conducted extensive coordination with the DoD and the
		USCG, which is described in Section 3.14 of the SEIS.
13134-016	The SDEIS also rates as "major" the cumulative impacts of developments on military vessels and aircraft the explanation of the rating appears inconsistent with statements in the SDEIS that (1) structures located in U.S. territorial waters require Federal Aviation Administration and DoD approval, and (2) BOEM assumes developers will identify and resolve aviation-related conflicts as standard due diligence, regardless of where they are sited. The SDEIS also Characterizes aviation impacts as "localized." How localized impacts could lead to an increase in the cumulative impact rating for this category is unexplained and unsupported by the record.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2 and F with D2 impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The impact ratings for military and national security uses and SAR activities were updated due to additional analysis and comments provided by the USCG and other entities in the course of the SEIS development. BOEM and Vineyard Wind have conducted extensive coordination with the DoD and the USCG, which is described in Section 3.12 of the FEIS. FAA and DOD review may identify actions required to enhance navigational safety, but would not remove the navigational hazard associated with installing WTGs in the open ocean. Section 3.12 of the FEIS characterizes impacts of the Proposed Action as localized (near the WDA), but regional in the context of reasonably foreseeable environmental trends
13134-017	the discussion of impacts in Section 3.11.2.4 suggests that (1) offshore wind is not a key action addressing climate change and hence would have an adverse effect on fish distribution, (2) offshore wind would have a negative impact on fishing due to mortality caused by fishing, and (3) the permanent presence of structures will prevent commercial fishing vessels from actually fishing. The SDEIS lacks adequate support for assertions (1) or (2), and assertion (3) does not comport with the findings of the Coast Guard MARIPARS, which clearly stated that the grid layout proposed in Alternative D2 would "provide sufficient space for certain vessels that fish in the WEA to continue fishing after the wind farms are constructed.	Sections 3.10.1 and A.8.1 of the FEIS consider the influence of offshore wind energy development on climate change and state that offshore wind projects will likely result in a net decrease in GHGs. Section 3.10 of the FEIS was updated to clarify that ongoing activities reduce stock levels through fishing mortality. Sections 3.10 and 3.11 of the FEIS discuss the Final MARIPARS and the impact of the proposed Project on vessel maneuverability.
13134-018	BOEM's cumulative impact analysis should consider the cumulative positive impacts on climate change of U.S. offshore wind together with global replacement of non-renewable generation. Indeed, a significant build out of offshore wind as contemplated in the reasonably foreseeable scenario would mitigate impacts from climate change by displacing fossil-fuel power generationthe Final EIS should clarify the beneficial impact of wind facilities as a key action addressing climate change and not confound the impact rating on commercial fisheries and for-hire recreational fishing.	Sections 3.11.1 and A.8.1 of the SEIS considered the influence of offshore wind energy development on climate change and state that offshore wind projects will likely result in a net decrease in GHGs. Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of

Index	Comment Text	Response
Number		
		renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS.
13134-019	The SDEIS states that the cumulative impact on recreational fisheries in	Although a small proportion of recreational vessels travel as far from shore as
	terms of allisions with wind related structures is direct, long-term,	the WDA, the number is not insignificant, and the vessels are not limited to
	continuous, and minor to moderateit appears that potential allisions with	recreational fisheries. As noted in Section 3.9.1 of the FEIS, recreational
	offshore wind structures would have a negligible impact on recreational	vessels that routinely travel as far from shore as the WDA include HMS
	fishing interests as a whole. As for the 3% or less of recreational fishing	fishing vessels, sightseeing and tour boats, and ocean-going sailboats
	interests traveling more than 3 nm offshore, there is little or no evidence in	(including sailing races). The finding of minor to moderate impacts resulting
	the SDEIS to suggest the risk of allisions is anything more than negligible to	from the risk of allision within the RI and MA Lease Areas does not apply to
	minor.	recreation and tourism as a whole, but is a reasonable impact level for these
		vessels that customarily travel in or near the RI and MA Lease Areas.
13134-020	Orsted has undertaken a long-term study examining the potential ecological	Section 3.3 of the FEIS considers the potential for wind farms to reduce or
	effects on crab and lobster populations associated with construction and	exclude fishing, resulting in benefits to marine life. Furthermore, Section
	operation activities in and around the wind farm. The resulting peer-reviewed	3.10.2 of the FEIS was updated to include the Cohen study and the Roach et
	study found that the temporary no-take zone established during construction	al. study.
	had a net positive effect on crustacean stock levels.	
13134-021	The SDEIS concludes that recreational fishing would suffer long term,	Section 3.9.1 of the FEIS was updated to add the anticipated provision of
	continuous, minor to moderate impacts relative to gear loss due to offshore	charts and aids to navigation. The impact level reflects reasonable
	wind structures. There is no basis for a minor to moderate designation	consideration of issues that could arise as recreational fishing occurs in
	without describing the type of gear anticipated to be lost and a comparison to	waters above hard cable cover and near scour protection around WTGs and
	existing gear losses in the area the SDEIS assigns a continuous designation	ESPs. Section 3.10 of the FEIS provides more detail on types of gear loss.
	yet does not consider the impact of learning, the use of non-conflicting gear,	Although a learning process would certainly take place, the presence of
	or the use of charts and other aids-to-navigation.	permanent structures would require additional caution and altered methods to
12124 022	The SDEIS states representional fighering will experience minor hereficial	avoid gear loss.
13134-022	impacts because structures will greate babitat and fish will aggregate in these	notential increased apportunities for the for hire recreational fisheries
	areas. On the other hand, the SDEIS claims structure will remove commercial	potential increased opportunities for the for-fine recreational fisheries.
	fishing effort for the proposed action and disproportionately impact bottom	
	tending mobile gear. Even though for-hire fishing is combined with	
	commercial fishing, the SDEIS is silent on the impacts regarding structure.	
	Likely, the for-hire industry would realize the same benefits as the	
	recreational industry. This is not mentioned for other alternatives.	
13134-023	The SDEIS in Section 3.11 shows potential revenue exposure to commercial	Section 3.10.1.1 and 3.10.2 of the FEIS qualitatively discusses the potential
	fisheries but does not show exposure or growth potential for the for-hire	beneficial impacts for the for-hire recreational fisheries.
	fishery which is included as part of the same section. Given that the for-hire	
	industry (and even the commercial industry) would experience the same	
	beneficial impacts as predicted for the recreational group, the SDEIS should	

Index	Comment Text	Response
Number		
	quantify those beneficial impacts or explain how the for-hire group's revenue	
	exposure is in line with the commercial figures presented.	
13134-024	Presumably, all fishing interests, regardless of recreational, commercial, or	Section 3.10.1.1 and 3.10.2 of the FEIS have been updated to discuss
	for-hire status, would take advantage of fish aggregation and other tourism	potential increased opportunities for the for-hire recreational fisheries.
	opportunities. However, the SDEIS only attributes this as a benefit to the	
	recreational and tourism industries. The for-hire group would no doubt take	
	advantage of good fishing as a destination. Additionally, the for-hire group	
	would be the de-facto means of tourism as they would be operating	
	sightseeing tours as well as fishing trips. This is not considered in the SDEIS.	
	Further, the SDEIS states commercial fishing interests would also be able to	
	realize the benefits of fish aggregation but does not expand on how. This	
12124 025	should offset economic exposure.	
13134-025	The SDEIS states commercial fishing interests will experience conflicts with	The increase in the presence of recreational vessels and other vessels does not
	other maritime users such as recreational fishing vessels. This implies more	singularly result in the cumulative finding of major. This impact rating is
	recreational fishing concerturities will be in the area than at present because	alimete change reduced steel levels due to encourse fishing mertality and
	the presence of regreational vessals has driven the sumulative finding of	command timpets due to the process of structures (cable protection)
	major, then that increase needs to be consistently accounted for in other parts	measures and foundations). Therefore, no change to the FEIS is warranted
	of the SDEIS, e.g. the recreational fishing vessel community's impact on	measures and foundations). Therefore, no change to the FERS is warranted.
	commercial fishing needs to be accounted as more than a minor benefit to the	
	recreational fishing industry	
13134-026	BOEM's designation of "major" impacts to scientific research and surveys	Section 3.12 of the FEIS has been undated to acknowledge potential future
	from both the Proposed Action and the effects of other offshore wind projects	developments in scientific research in surveys, including use of unmanned
	lacks adequate support in the record because the analysis incorrectly assumes	vessel and aerial vehicles. The level of impact to scientific research and
	that manned vessel and aerial surveys are the only means to collect necessary	surveys (major) was jointly agreed to by NMFS and BOEM based on
	data. This directly contradicts efforts to reduce dependence on manned vessel	currently available information and remains unchanged in the Section 3.12 of
	and aerial surveys in the future. It also ignores contributions to surveys being	the FEIS. BOEM is funding a process to begin to understand the options
	made by the offshore wind industry and academia. Orsted respectfully urges	available to mitigate potential impacts on scientific research and surveys.
	that BOEM reconsider this designation of "major" impacts to scientific	Regardless of such actions, long-standing NMFS surveys would not be able
	research and surveys.	to continue as currently designed and extensive costs and efforts will be
		required to adjust survey approaches. Therefore, potential impacts on
		scientific surveys and research is anticipated to be major. Please refer to the
		following link: https://www.boem.gov/environment/environmental-
		studies/20-x07
13134-027	The SDEIS does not consider trends already underway in survey techniques	Section 3.12 of the FEIS has been updated to acknowledge potential future
	that will reduce the impact of wind development on oceanographic surveys.	developments in scientific research in surveys, including use of unmanned
	The SDEIS acknowledges but fails to expand upon the "considerable	vessel and aerial vehicles. The level of impact to scientific research and
	survey effortsunderway for years using digital aerial surveys The final	surveys (major) was jointly agreed to by NMFS and BOEM based on
		currently available information and remains unchanged in the Section 3.12 of

Index	Comment Text	Response
Number	EIS should therefore account for existing and new survey methods to be implemented as well as calibration surveys to be conducted.	the FEIS. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental- studies/20-x07
13134-028	BOEM's statement that the overall cumulative impacts on scientific research and surveys would qualify as "major" because those entities conducting surveys would have to make significant investments to change methodologies is inaccurate, especially given the recent release of the Unmanned Systems Strategy, including unmanned aircraft systems.	Section 3.12 of the FEIS has been updated to acknowledge potential future developments in scientific research in surveys, including use of unmanned vessel and aerial vehicles. The level of impact to scientific research and surveys (major) was jointly agreed to by NMFS and BOEM based on currently available information and remains unchanged in the Section 3.12 of the FEIS. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13134-029	If the implication from NOAA is that any reduction in survey area—even a reduction of 3% before mitigation—constitutes a major impact [to NOAA/NMFS scientific surveys], such a conclusion is not supported by the record and, if implemented, would hinder achievement of state policy goals. Orsted requests reconsideration of this point or clarification and further definition of the impact of affected surveys.	Section 3.12 of the FEIS has been updated to acknowledge potential future developments in scientific research in surveys, including use of unmanned vessel and aerial vehicles. The level of impact to scientific research and surveys (major) was jointly agreed to by NMFS and BOEM based on currently available information and remains unchanged in the Section 3.12 of the FEIS. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13134-030	Lastly, the "major" impact [to NOAA/NMFS scientific surveys] also does not recognize sampling, monitoring, and/or research contributions from the offshore wind industry and other non-NOAA stakeholders. Although Orsted and other offshore developers cannot and should not substitute for NOAA's research work, they can offer valuable contributions to augment NOAA's data. The Commercial Engagement Through Ocean Technology Act of 2018	Section 3.12 of the FEIS has been updated to acknowledge potential contributions by the offshore wind industry and other stakeholders, and potential future developments in scientific research in surveys, including use of unmanned vessel and aerial vehicles. The level of impact to scientific research and surveys (major) was jointly agreed to by NMFS and BOEM based on currently available information and remains unchanged in the

Index	Comment Text	Response
Number		
	requires NOAA to coordinate research, assessment, and acquisition of unmanned maritime systems with the U.S. Navy, other federal agencies, industry and academia.76	Section 3.12 of the FEIS. BOEM is funding a process to begin to understand the options available to evaluate and mitigate potential impacts and mitigation measures for scientific research and surveys. The outcome of that study and other actions that may mitigate impacts on scientific research and surveys may reduce some impact, but the extent of mitigation is not reasonably foreseeable at this time. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13134-031	The SDEIS weights its evaluation toward socioeconomic impacts to low- income individuals employed in fishing industries rather than to the health and environmental impacts of at-risk environmental justice communities. Assessing impacts to (unquantified) low-income workers in the commercial/for-hire fishing, marine recreation, and supporting industries duplicates the analysis conducted for commercial/for-hire fishing and recreational fishing. There is no basis for it to be doublecounted in the SDEIS. Moreover, as stated in the DEIS, and as required by executive order, "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, <i>disproportionately high and</i> <i>adverse human health or environmental effects of its programs</i> , policies, and activities on minority populations and low-income populations. These health and environmental impacts should be reflected more fully in the environmental justice analysis.	Section 3.7.1 of the FEIS has been revised to discuss how health impacts of fossil fuel consumption and resulting air quality impacts affect different racial groups, as well as different income groups. Section 3.7.1 has also been updated to note the impacts on Native American tribes resulting from viewshed impacts and disturbance of submerged landscape features. The DEIS and SEIS in Section 3.8.1 and 3.8.2 identified environmental impacts on fish and invertebrates that could impact subsistence fishing. EO 12898 and subsequent guidance from CEQ specifically requires the evaluation of impacts on low-income populations as part of the environmental justice assessment. Because the Proposed Action will have impacts on marine industries (commercial fishing and marine recreation) that employ a substantial number of low income employees. Section 3.7 is the correct section of the FEIS to discuss these employees. Section 3.9 of the FEIS evaluates impacts on the commercial/for-hire fishing industry as a whole. These are related but separate evaluations. The FEIS does not "count" impacts in the sense implied by the commenter.
13134-032	Rather than cursorily passing over displacement of fossil fuel generation by offshore wind, the SDEIS should reflect how oil and gas emissions increase health risks to environmental justice communities, and how offshore wind can displace older, higher-emitting power plants the cumulative impact of offshore wind's displacement of fossil fuel generation will result in positive environmental and health impacts to environmental justice communities who often live adjacent to fossil fuel power plants. These impacts—rather than the "presence of offshore structures that would affect navigation and commercial fishing"— should form the foundation of the cumulative environmental justice analysis.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
13134-033	The SDEIS in Section 3.10.1.1 states, "Current and likely future offshore wind applicants (including Vineyard Wind) have not proposed to work with USCG to note scour protection or cable hard cover hazards on navigational charts. Updating charts in this way would help make operators of recreational vessels aware of the locations of the cable protection and scour protection."92 This statement is inaccurate and should be removed from the	The text referred to in this comment has been deleted, and Section 3.9.1 of the FEIS was updated to note that cooperative efforts will continue to establish aids to navigation.

Index Number	Comment Text	Response
Number	SDEIS Orsted and all lessees in the MA/RI WEA have been engaged and	
	continue to engage with both the U.S. Coast Guard and NOAA in developing	
	a single, comprehensive aids-to-navigation plan for the entire WEA.	
	including charting symbology and notes.	
13134-034	the SDEIS in Section 3.13.1.1 states. "Future offshore wind developers are	Section 3.11.1.1 addresses coordination with USCG. The cable route does not
	expected to coordinate with the maritime community and USCG to avoid	pass through any traditional large vessel anchorage, or even transit, areas.
	laying export cables through any traditional or designated	Anchoring (specifically large vessel anchoring) is incompatible with standard
	lightering/anchorage areas." That statement could have far reaching impact	cable burial depths.
	and requires clarification The SDEIS fails to provide any reasoning for	
	BOEM's or the Coast Guard's expectation that subsea cable should avoid	
	these areas, particularly where there are dozens of examples through the U.S.	
	maritime environment where subsea cables cross what could be considered	
	traditional lightering/anchoring areas without incident or hazard to	
	navigation. The SDEIS does not address why mitigation would be	
	insufficient Absent evidence or explanation, this blanket expectation	
	should be clarified or removed in the final EIS. The SDEIS should provide	
	for coordination with the Coast Guard but leave the final prescription on	
	avoidance to the Coast Guard, which is better suited to evaluate risk.	
13136-001	As stated in our comments to the 2018 Draft Environmental Impact	Thank you for your comment.
	Statement (DEIS), the Vineyard Wind Project in federal waters off New	
	England, if responsibly developed with care to avoid, minimize, and mitigate	
	potential environmental and economic impacts, will have substantial benefits	
	to society in its urgent transition away from dirty, climate-altering fossil fuels	
	to a clean energy economy. When built, the Project is expected to provide	
12126.002	enough electricity to power approximately 400,000 homes.	
13136-002	While our final views on the Project will await our review of its Final	Thank you for your comment.
	Environmental Impact Statement (Final EIS), which is the last step in the	
	environmental review process, we again commend vineyard wind for its	
	leadership in protecting right whales and entitusiastically look forward to	
12126 002	As states set hold goals to transition from polluting fossil fuels to a clean	Theals you for your comment
13130-003	As states set bold goals to transition from ponuting lossification a crean	Thank you for your comment.
	climate change, reduce local and regional air pollution, and grow a new	
	industry that will support thousands of well-paying jobs in both coastal and	
	inland communities. States from Massachusetts to Virginia have collectively	
	committed to developing approximately 29 gigawatts of offshore wind power	
	and this number is only expected to increase.	
13136-004	The rapid transition to a clean energy economy is of paramount importance.	Thank you for your comment.
	Absent a substantial shift from carbon intensive sources of energy to	· · · · · · · · · · · · · · · · · · ·
Index	Comment Text	Response
-----------	---	---
Number	solutions like offshore wind, we face climate change that will drive many species of fish, mammals, birds, waterfowl, amphibians, reptiles, and pollinators to extinction in both marine and terrestrial environments.	
13136-005	As recognized by the United Nations Environment Program Convention on the Conservation of Migratory Species of Wild Animals, migratory species, such as migratory marine species, are particularly vulnerable to the impacts of climate change.	Thank you for your comment.
13136-006	Similarly, a recent report by National Audubon found that bird species, already facing threats from habitat loss and other stressors, face significant impacts from climate change that can be ameliorated if we are able to keep warming from reaching higher levels.	Climate change was addressed in the SEIS as an Impact Producing Factor and potential impacts to bird species was discussed in Sections A.8.3.1 and A.8.3.2. As such no change to the FEIS is warranted.
13136-007	Against this backdrop of unprecedented climate change risks and the threat of species extinction and shifts in distribution, it is critical that all offshore wind development activities move forward with strong protections for coastal and marine habitat and wildlife. We can and must develop this resource thoughtfully and responsibly, using science-based measures to avoid, minimize, mitigate, and monitor impacts on valuable and vulnerable wildlife. This must include a specific focus on ensuring sufficient measures are in place to protect our most vulnerable threatened and endangered species.	Mitigation and monitoring requirements are specified in the resource-specific sections within Chapter 3 and Appendix A of the FEIS. Appendix D of the FEIS has been updated and includes a comprehensive list of all monitoring and mitigation measures, including pre-, during, and post-construction monitoring, proposed for the agency-preferred alternative. If the COP is approved or approved with conditions, the ROD will specify the mitigation measures that BOEM and other resource agencies will require. Some of such measures that could become requirements are outlined in Appendix D of the FEIS (updated since the DEIS), although other measures not included, or additional details of those that are, could be included in the ROD.
13136-008	BOEM should reject alternative F	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13136-009	BOEM should move forward to prepare a comprehensive Final EIS that fully analyzes the potential impacts and benefits of the Project, including consideration of all measures that Vineyard Wind has proposed implementing to mitigate environmental impacts. That will both help ensure the success of this Project and, more broadly, that the U.S. embarks on the right path forward in the continued, rapid development of offshore wind energy.	Thank you for your comment.
13136-010	In particular, we recommend BOEM move ahead with Alternative D2, with improvements recommended in these comments and the landing site detailed in Alternative B.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13136-011	More broadly, and separate and apart from the specific Vineyard Wind Project, BOEM should adopt our recommendations on how to develop U.S. offshore wind in a sustainable manner.	Thank you for your comment.
13136-012	We note that new NEPA regulations were published in the Federal Register on July 16, 2020. 85 Fed. Reg. 43304 (July 16, 2020). According to the new regulations, "The regulations in this subchapter apply to any NEPA process	The analysis in the FEIS incorporates the DEIS and SEIS analysis and builds upon the assessments presented in those documents to respond to comments received. In addition, the FEIS, as did the SEIS, includes an analysis of the

Index Number	Comment Text	Response
Number 13136-013	begun after September 14, 2020. An agency may apply the regulations in this subchapter to ongoing activities and environmental documents begun before September 14, 2020." Id. at 43373 (new regulation 40 C.F.R. § 1506.13). We have written these comments with the assumption that the current effective regulations, promulgated in 1978, apply. We strongly oppose BOEM attempting to apply the forthcoming regulations to this process. Among other concerns, including whether BOEM may retroactively apply the new regulations, is our belief that the new regulations do not comply with NEPA or case law interpreting it. Further, we believe that BOEM's obligations to evaluate potential effects, including cumulative impacts, and mitigation measures, are required under any interpretation of the statute. To comply with NEPA, an EIS must, inter alia, include a "full and fair discussion" of direct and indirect environmental impacts, including positive as well as negative impacts, consider the cumulative effects of reasonably foreseeable activities in combination with the proposed action, analyze all reasonable alternatives that would avoid or minimize the action's adverse impacts, address measures to mitigate those adverse effects, and assess possible conflicts with other federal, regional, state, and local authorities.	The development of the EIS has included a discussion of all potential impacts of the proposed Project based on Vineyard Wind's utilization of the PDE. The FEIS assesses the impacts of the reasonable range of Project designs that are described in the Vineyard Wind COP and presented in Appendix G by using the "maximum-case scenario" process. Furthermore, the EIS analyzed a reasonable range of alternatives that were developed based on comments received during the scoping process as well as comments on the DEIS. Last, resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS
13136-014	Additionally, as we stated in our DEIS comments, fundamental to satisfying NEPA's requirement of fair and objective review, agencies must ensure the "professional integrity, including scientific integrity," of the discussions and analyses that appear in environmental impact statements. To this end, they [agencies] must make every attempt to obtain and disclose data necessary to their analysis. The simple assertion that "no information exists" will not suffice. Unless the costs of obtaining the information are exorbitant, NEPA requires that it be obtained.	Where information was incomplete or unavailable for the evaluation of reasonably foreseeable impacts analyzed in this chapter, BOEM identified said information and conducted its analysis in accordance with Section 1502.22 of the CEQ regulations. The findings of this assessment are presented in Appendix H, Analysis of Incomplete or Unavailable Information.
13136-015	Agencies are further required to identify their methodologies, indicate when necessary information is incomplete or unavailable, acknowledge scientific disagreement and data gaps, and evaluate indeterminate adverse impacts based upon approaches or methods "generally accepted in the scientific community." Such requirements become acutely important in cases where, as	Where information was incomplete or unavailable for the evaluation of reasonably foreseeable impacts analyzed in this chapter, BOEM identified said information and conducted its analysis in accordance with Section 1502.22 of the CEQ regulations. The findings of this assessment are

Index Number	Comment Text	Response
	here, so much about an activity's impacts depend on newly emerging science. Finally, NEPA does not permit agencies to "ignore available information that undermines their environmental impact conclusions."	presented in Appendix H, Analysis of Incomplete or Unavailable Information.
13136-016	The NEPA process should inform BOEM, stakeholders, and the public about how to responsibly proceed with developing the promising resource of offshore wind power. Several decades of offshore wind development in Europe have shown that offshore wind power can be developed responsibly with regard to local wildlife, provided that all siting and permitting decisions are based on sound science and informed by key experts and stakeholders.	Thank you for your comment.
13136-017	The European experience shows us that avoiding sensitive habitat areas, requiring strong measures to protect wildlife throughout each stage of the development process, and comprehensive monitoring of wildlife and habitat before, during, and after construction are essential for the responsible development of offshore wind energy.	Lessons learned from offshore wind development have been considered in the development of the DEIS, SEIS, and FEIS.
13136-018	However, as stated in our DEIS comments, despite offshore wind's rapid growth in Europe, U.S. offshore wind remains a new industry, with the nation's first commercial project – the Block Island Wind Farm (30 MW) – only coming online in December 2016, almost four years ago. As a result, BOEM needs to rigorously review the potential impacts of offshore wind development on marine wildlife and habitat here in the U.S. and develop and adopt appropriate mitigation measures.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-019	Various potential impacts that may be associated with offshore wind construction and operations have the potential to directly, indirectly, and cumulatively impact marine species and habitats in the coastal zone and offshore environment along the coast.	Potential impacts to biological species and habitats were assessed in the DEIS and SEIS, and are presented in Chapter 3 and Appendix A of the FEIS.
13136-020	In addition to a thorough examination of direct and indirect impacts, as well as mitigation measures, assessing cumulative impacts is essential to understanding the impact of offshore wind on species and ecosystems along the coast. This project is a key opportunity to provide a road map to guide future analyses and ensure that new information is gathered and incorporated in the assessment of impacts and the practices to mitigate those impacts as this industry grows.	Potential impacts to biological species and habitats were assessed in the DEIS and SEIS, and are presented in Chapter 3 and Appendix A of the FEIS.
13136-021	Critical to a proper cumulative impacts analysis is its scope. The broader scope of the cumulative impacts analysis in the SEIS is an improvement of the more limited analysis in the DEIS. BOEM's expansion of the analysis from only projects with construction and operating plans (COPs) submitted or approved (roughly 5.4GW) to the consideration of the state capacity	Since the same approach of the characterizing effects in the SEIS was used in the FEIS, not changes to the FEIS are warranted.

Index	Comment Text	Response
Number		
	planned commitment for existing Atlantic leases (21.8GW) is a more	
	reasonably foreseeable scope for offshore wind development. This is an	
	important improvement, as this SEIS will likely be used as a model for future	
	NEPA reviews of offshore wind projects. This broader scope is welcome and	
	forthcoming NEPA analyses should continue to expand the scope of the	
	cumulative impact analysis as the industry grows and additional development	
	becomes reasonably foreseeable.	
13136-022	Looking at the now ten tiers of potential scope of OSW development set forth	Each applicant is required to submit a COP with their proposed action for
	in Figure 1.2-1, Scope for Future Possible Development of Offshore Wind of	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	the SEIS (up from five tiers in the DEIS), we agree with BOEM's	require an analysis of impacts and the selection of the preferred alternative.
	conclusions that tiers seven through ten (full build out of the wind energy	
	potential (tier 10); technical resources potential of all Atlantic call, wind	
	energy, and lease areas (tier 9); pledged state capacity planned commitment	
	(tier 8); and technical resource potential of existing Atlantic resources (tier 7)	
	need not be included in the current analysis given how speculative they are at	
	present. However, for future projects, it is likely that tiers seven and eight	
	(particularly pledged state capacity planned commitment) may be reasonably	
	foreseeable. Given the on-going climate crisis and the fact that states are	
	increasingly more aggressive in their offshore renewable energy goals it	
	would be reasonable to assume that states will take the efforts necessary to	
	meet, or hopefully exceed, their current goals to develop offshore wind. As	
	such, these tiers will likely become far less speculative.	
13136-023	Additionally, it is reasonable to expect that these goals may expand, making	Each applicant is required to submit a COP with their proposed action for
	additional offshore wind development more likely and thus more foreseeable.	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	BOEM recognizes that the state pledges for offshore wind capacity is	require an analysis of impacts and the selection of the preferred alternative.
	currently about 29 GW and is divided among awarded, scheduled, and	
	planned but unscheduled procurements.27 BOEM notes that not all current	
	state commitments for offshore wind development may be met because there	
	may be a lack of available lease area or technical capacity due to certain	
	alternatives being chosen over others.28 BOEM also assumes that the	
	technology available to meet future procurements, although not currently	
	available, may be different in 10 years, which is reasonably foreseeable with	
	the new technology being created on a daily basis and is sufficiently analyzed	
	within the SEIS.	
13136-024	The existing state commitments are important to ensure that the United States	Information related to potential benefits were included in the SEIS and
	moves towards a responsibility developed clean energy initiative that will	benefits haven been updated in FEIS, where appropriate.
	have substantial benefits to society and further steer the U.S. away from	
	fossil fuels, and we urge BOEM to work with the states and stakeholders to	
	address this stated interest.	

Index	Comment Text	Response
Number 13136-025	The commenters agree with BOEM's note that "[t]he technology available to	Each applicant is required to submit a COP with their proposed action for
	meet future procurements may be quite different in [ten] or more years than what is available today." As such, in assessing how future wind sites may be	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
	constructed, operated, and sited, it is reasonable to assume that future	
	projects will likely employ higher output turbines that can generate more power with fewer physical turbines of larger size. This could change impacts	
	around hub height, rotor diameter, and total height of turbine for future	
	projects, as well as, inter alia, the number of turbines and the length of	
	interarray cables. Projects, particularly projects further on the time horizon,	
	of the operation. The SEIS notes that 14 MW turbines could be used	
	Changes in turbine size could have beneficial impacts (such as fewer turbines	
	spaced further apart) as well as potentially negative impacts (larger rotation	
	zones that could impact certain species like higher flying birds). We urge	
	with technology.	
13136-026	As we stated in our comments on the DEIS, the cumulative impact analysis	Currently there are no offshore oil- and gas-related activities ongoing in the
	in the SEIS still largely glosses over the consideration of seismic surveys for	Atlantic ocean and few concrete proposals in the foreseeable immediate or
	oil and gas and other development in the Mid- and South Atlantic, failing to	long-term future. NOAA has issued five individual harassment authorizations (IHA) under the Marine Mammal Protection Act for planned seismic surveys
	consideration of cumulative impacts to marine mammals	involving airguns on the Atlantic Outer Continental Shelf (OCS). Those
	······································	IHAs are currently set to expire in November 2020, and the surveys cannot
		take place until the Bureau of Ocean Energy Management (BOEM) would
		issue their own permits for the surveys. There are currently no active oil and
		production activities No Atlantic lease sales are included in the current 2017-
		2022 National Program. BOEM is in the process of developing the next five-
		year National Program, which is expected to be completed around the time
		the current program ends in 2022. The next stage after the National Program
		is the decision on whether and under what terms to hold a specific lease sale. Even if Atlantic lease sales are included in a future National program it
		could be several years before a decision on whether to hold an individual
		lease sale, as compliance with other laws (e.g., NEPA reviews, CZMA
		consistency determination, ESA consultation) will be necessary before any
		sale decision. Once a sale is held and leases issued, the lessee must obtain
		(if it has identified sufficient resources to enter into oil and gas production)
		After these plans are approved, additional permit approvals are required
		before any individual exploration or production well can be drilled. Given
		this multistage process, it would likely be several years after inclusion in a

Index	Comment Text	Response
Number		
		National Program before oil and gas leasing or exploration and production activities, could be expected in the Atlantic. In addition to no oil and gas leasing reasonably expected to occur in the Atlantic, provided the current IHAs are set to expire in November 2020, BOEM does not find these survey activities to be reasonable foreseeable future actions in the Atlantic at this time.
13136-027	It is paramount that BOEM take strong action to advance adaptive management and robust monitoring to assess impacts as offshore wind is developed. As previously noted, offshore wind remains a relatively nascent technology in the U.S. and, as such, it is imperative that we closely monitor the impact of offshore wind operations on marine wildlife and the ocean ecosystem to guide its adaptive management and future development.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-028	It is vital that we gain an understanding of baseline environmental conditions prior to large-scale offshore wind development in the United States. To this end, BOEM must establish and fund a robust, long-term scientific plan to monitor the effects of offshore wind development on marine mammals and other species before, during and after the first large-scale commercial projects are constructed. Without strong monitoring in place, we risk losing the ability to detect and understand potential impacts and set an under- protective precedent for future offshore wind development. Such monitoring must inform and drive future mitigation as well as potential practical changes to existing operations to reduce any potential impacts to natural resources and wildlife.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Post-construction monitoring requirements are being developed with researchers, environmental NGOs, State, and Federal agencies. The results of monitoring could be applied to adaptive requirements if the results show certain actions may be warranted.
13136-029	It is also imperative that BOEM work collaboratively with state efforts (e.g. the New York State Energy and Research Development Authority (NYSERDA) Environmental Technical Working Group (ETWG)), scientists, NGOs, the wind industry, and other stakeholders to use information from monitoring and other research, and evolving practices and technology to	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and
	inform cumulative impacts analyses moving forward.	State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of

Index	Comment Text	Response
INUITIDEI		Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-030	The current best management practices listed in Table A-5 are extremely general. It is important these evolve as monitoring informs impacts and the adaptive management practices needed to account for impacts. Likewise, analyses should include more specific information as it becomes available and management practices advance.	Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-031	It is also important that as monitoring informs management practices, that BOEM requires continuing monitoring and that adaptive management practices be employed by offshore wind projects.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-032	While BOEM's discussion of the climate and air quality impacts of the proposed action is directionally correct, BOEM understates the magnitude of the benefits of building out the full 22 GW of offshore wind in the Atlantic and fails to identify the environmental justice implications of the avoided emissions impacts.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
13136-033	In addition, BOEM understates the adverse climate and air quality consequences of selecting Alternative F (which would establish a two to four nautical mile transit lane in the Vineyard Wind and other lease areas off of Massachusetts and Rhode Island) or the No Action alternative.	As noted in the SEIS, Alternative F would result in slightly higher emissions due to increased travel routes and distance for construction and maintenance vessels. Section A.8.1 of the FEIS has been updated to state that implementation of Alternative F would have diminished benefits in comparison to other action alternatives. The health and climate benefits associated with Alternative F would be less than Alternative A and result in diminished health and climate benefits and premature deaths avoided commensurate with the reduction in future offshore wind capacity

Index	Comment Text	Response
Number		
13136-034	BOEM correctly identifies that climate change will result in a wide range of	Thank you for your comment.
	significant adverse environmental impacts in the study area, including to	
	fisheries[These impacts include:] "reduced growth or decline of some	
	types of coastal habitats, the widespread loss of shoreline habitat from rising	
	seas and erosion, and alterations to ecological relationships"	
13136-035	BOEM correctly identifies that climate change will result in a wide range of	Thank you for your comment.
	significant adverse environmental impacts in the study area, including to	
	fisheries[These impacts include:] ocean acidification, "contribut[ing] to	
	reduced growth or the decline of reefs and other habitats formed by shells"	
	and to "the reduced growth or decline of invertebrates that have calcareous	
	shells, alterations in migration patterns, and increased disease frequency."	
13136-036	BOEM correctly identifies that climate change will result in a wide range of	Thank you for your comment.
	significant adverse environmental impacts in the study area, including to	
	fisheries[These impacts include:] ocean warming "influenc[ing] the	
	distributions and migrations of benthic resources" and "the frequencies of	
	various diseases" and affecting coastal habitats	
13136-037	BOEM correctly identifies that climate change will result in a wide range of	Thank you for your comment.
	significant adverse environmental impacts in the study area, including to	
	fisheries[These impacts include:] sea level rise affecting coastal habitats	
13136-038	BOEM correctly identifies that climate change will result in a wide range of	Thank you for your comment.
	significant adverse environmental impacts in the study area, including to	
	fisheries[These impacts include:] cumulative impacts on terrestrial and	
	coastal fauna.	
13136-039	These climate impacts will affect species utilizing coastal and marine	The impacts of climate change on marine resources have been considered in
	ecosystems including marine mammals, turtles, and fish.	Sections 3.3.2, 3.4.2, and 3.5.2, of the FEIS. The commenter has not provided
		any new information that should be considered to revise the FEIS analysis.
13136-040	BOEM also correctly observes that offshore wind generation is likely to	Thank you for your comment.
	directly displace fossil generationMoreover the No Action Alternative	
	without implementation of other future offshore wind projects is likely to	
	delay the retirement of existing fossil fuel generation resources, which are	
	typically even less efficient and more polluting than new fossil resources.	
13136-041	Due to offshore wind's ability to displace more highly polluting fossil	Thank you for your comment.
	resources, the climate impacts of the proposed offshore wind buildout would	
	be net climate beneficial, as BOEM recognizes in the SEIS.	
13136-042	BOEM notes that "[i]ncreasing energy production from offshore wind	While some beneficial impacts to sea turtles will be realized, as discussed in
	projects will likely to decrease GHGs emissions by replacing energy from	Section 3.3.8.3 of the DEIS and Sections 3.5.1 and 3.5.2 of the FEIS, the
	fossil fuels. This reduction will more than offset the very limited GHG	proposed Vineyard Wind 1 Project would also result in temporary to
	emissions from offshore wind projects." Consequently, cumulative effects of	permanent adverse impacts that are expected to range from negligible to
	offshore wind development will result in long-term, low-intensity beneficial	moderate.

Index	Comment Text	Response
Number	cumulative impacts on marine mammals and sea turtles and long-term	
	beneficial impacts on demographics, employment and economics.	
13136-043	a full quantification of emissions benefits, however. A simple calculation shows that the adverse climate impact of the No Action Alternative and failure to move forward with the full 22 GW of Atlantic wind alternative are considerable. BOEM provided an analysis of greenhouse gas (GHG) impacts	BOEM has updated Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an
	analysis area. For that approximately 6 GW of offshore wind capacity, it found total carbon dioxide (CO2) emissions of around 2 million tons. This 6 GW of offshore wind would displace an equivalent amount of fossil generation. Assuming a 50 percent capacity factor, if this wind were displacing coal, it would displace approximately 24 million metric tons of CO2 annually. Vineyard Wind has a designated lifespan of 30 years. Extrapolating that lifespan to the full 6 GW of offshore wind projects, over a 30-year period these wind turbines operating at a 50 percent capacity factor would displace approximately 716 million metric tons of CO2. To put these numbers in perspective, the Massachusetts Department of Environmental Protection estimates that statewide GHG emissions in 2017 were less than 78 million short tons, so the wind generated over the course of in the study area would have the capability to be could displace approximately 1/3rd of	hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS.
	Massachusetts' total land-based GHG emissions each year.	
13136-044	Even if the generation being displaced were exclusively gas, the climate benefits would still be massive. Direct combustion emissions from gas plants in lb CO2/MWh vary greatly, but are roughly half of those for coal plants, indicating a 360 million metric tons of CO2 benefit from the 6 GW of offshore wind over 30 years. But the actual climate benefits of displacing this gas generation would be much greater because combustion emissions represent only a piece of the lifecycle GHG emissions of gas generation. High global warming potential methane (84 times that of CO2 on a 20-year time frame) is leaked into the atmosphere at the point of extraction and in the transmission and compression of gas resulting in far greater lifecycle GHG impacts, closer to those of coal plants.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS. Additionally, an analysis of extraction, transmission, and compression of gas and its lifecycle greenhouse gas impacts is outside the scope of this NEPA document.
13136-045	Moreover, the climate benefits are far greater when the full 22 GW of offshore wind is considered. Indeed, if the full 22 GW of offshore wind displaced coal generation, over a 30-year period, this would result in a net reduction in CO2 emissions of 2.89 billion tons.57 If it were displacing gas,	The SEIS included a discussion of what projects would overlap with the proposed Project within the geographic analysis area. As noted in the SEIS, the geographic analysis area was defined as the airshed within 15.5 miles (25 kilometers) of each area potentially impacted by the proposed Project, including the lease area, the on-land construction areas, and the mustering

Index	Comment Text	Response
Number		
	it would still be displacing nearly 1.5 billion tons of CO2 emissions and, as discussed above, significant methane emissions as well.	port(s). Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS.
13136-046	These climate benefits can also be monetized using the social cost of carbon to show the relative social cost of the alternatives. The social and environmental costs of GHG emissions are readily quantifiable and BOEM should consider them in evaluating project impacts and impacts of alternatives. For example, the Interagency Working Group on Social Cost of Carbon has produced estimates for the social cost of carbon in order to "allow agencies to incorporate the social benefits of reducing carbon dioxide (CO2) emissions into cost-benefit analyses of regulatory actions that impact cumulative global emissions."58 The working group presents values for social costs from 2015 to 2030, assuming discount rates of 5 percent, 3 percent, 2.5 percent and the 95th percentile of the 3 percent discount rate.59 These values range from \$11 to \$212 (in 2007 dollars per metric ton of CO2).60 These values could be used to monetize the costs imposed by the net greenhouse gas emissions associated with failing to procure the full 22 GW of offshore wind contemplated by this SEIS. Using the working group values, annual climate costs of procuring electricity from 22 GW of coal rather than 22 GW of offshore wind range (assuming a 50% capacity factor in both cases) ranges from just over \$1 billion/year (in 2007\$) using a 5. percent discount rate and the 2020 social cost of carbon61 to more than \$8.3 billion/year (in 2007\$) using a 2.5 percent discount rate and the 2050 social cost of carbon of \$95/ton.	Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS.
13136-047	Even absent direct quantification through the social cost of carbon, the SEIS correctly identifies adverse economic impacts from climate change— including adverse impacts to commercial fishing—associated with the No Action Alternative. As the SEIS explains, "[c]limate change could have impacts on demographics, employment, and economics."	Thank you for your comment.
13136-048	These impacts include: Property or infrastructure damage and increased insurance costs and reduced economic viability of coastal communities resulting from sea level rise and increased storm severity/frequency	Section 3.7.1.1 of the SEIS addressed economic impacts of property or infrastructure damage under the Climate Change IPF; therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
13136-049	[These impacts include:] New taxes or diversion of existing tax revenues required to construct protective barriers and sea walls	Section 3.7.1.1 of the SEIS addressed economic impacts resulting from the need for protective barriers and sea walls under the Climate Change IPF; therefore, no change to the FEIS is warranted.
13136-050	[These impacts include:] Damage to structures, infrastructures, beaches, and	Section 3.7.1.1 of the SEIS addressed economic impacts erosion and
	coastal land, with numerous economic impacts resulting from erosion and	deposition of sediments under the Climate Change IPF; therefore, no change
	deposition of sediments	to the FEIS is warranted.
13136-051	[These impacts include:] Adverse impacts on commercial and for-hire	Thank you for your comment.
	fishing, individual recreational fishing, and sightseeing resulting from ocean	
	acidification, altered habitats, altered migration patterns and increased	
	disease frequency in marine species.	
13136-052	Given the degree to which it would reduce the capacity of offshore wind off	Section 2.5 of the FEIS has been added which includes the agency-preferred
	the coast of Massachusetts and Rhode Island, Alternative F raises particular	alternative.
	concerns from a climate perspective, and the adverse climate impacts of	
	Alternative F are greater than suggested in the SEIS. The addition of all six	
	Di the 4-nautical mile transit lanes would reduce the technical capacity of the	
	MW 65 Loging the shility to displace 2 200 MW of fossil fuel concertion	
	with offshore wind would have large advarge alimete remifications. If the	
	3 300 MW of non-displaced generation were coal the forgone climate henefit	
	would be nearly 400 million metric tons of CO2 over the 30-year lifetime of	
	the wind projects Moreover implementation of Alternative F "could further	
	erode project economics and viability." Consequently, the lost GHG benefits	
	could be even larger if the large vessel lanes preclude swaths of the lease	
	areas from being commercially developed altogether.	
13136-053	Air emissions present a similar story to climate emissions, but with the	Section A.8.1 of the FEIS has been updated to include additional information.
	additional dimension of locational benefits to pollution impacts. Air quality	BOEM has updated Section A.8.1 of the FEIS to include an analysis using
	impacts associated with offshore wind projects within the air quality	EPA's AVERT and COBRA tools to assess air quality and health benefits.
	Geographic Analysis Area are "anticipated to be small relative to larger	AVERT uses information about the historical patterns of power generation
	emission sources such as fossil fuel facilities." The largest air quality impacts	throughout the year to evaluate the potential for emissions avoided on an
	are anticipated during construction with smaller and more infrequent impacts	hourly basis throughout the year in a specific region, for a given category and
	anticipated during decommissioning, but the cumulative air quality impacts	size of renewable energy or energy efficiency project. The avoided emissions
	even during those periods are projected to be minor. Moreover, a "net	output can then be analyzed with COBRA. The annual potential avoided
	improvement" in air quality is expected on a regional scale as projects come	emissions calculated by AVERT for an 800 MW offshore wind facility in the
	online and offset emissions from fossil fuel-type sources. Due to	New England AVERT region are included in Table A.8.1-3 of the FEIS.
	displacement of fossil fuel generation, the SEIS projects that once Vineyard	Additionally, the FEIS has been updated to state that, in context of
	wind 1 is operational, that project alone would result in annual avoided	reasonably foreseeable environmental trends, combined emission impacts on
	emissions of 1,040 tons of nitrogen oxides and 855 tons of sulfur dioxide.	air quality from ongoing and planned actions within the geographic analysis
		area, including Anernative A, would help reduce lossif-luel emissions and
13136-051 13136-052 13136-053	[These impacts include:] Adverse impacts on commercial and for-hire fishing, individual recreational fishing, and sightseeing resulting from ocean acidification, altered habitats, altered migration patterns and increased disease frequency in marine species. Given the degree to which it would reduce the capacity of offshore wind off the coast of Massachusetts and Rhode Island, Alternative F raises particular concerns from a climate perspective, and the adverse climate impacts of Alternative F are greater than suggested in the SEIS. The addition of all six of the 4-nautical mile transit lanes would reduce the technical capacity of the Rhode Island and Massachusetts Lease Areas by approximately 3,300 MW.65 Losing the ability to displace 3,300 MW of fossil fuel generation with offshore wind would have large adverse climate ramifications. If the 3,300 MW of non-displaced generation were coal, the forgone climate benefit would be nearly 400 million metric tons of CO2 over the 30-year lifetime of the wind projects. Moreover, implementation of Alternative F "could further erode project economics and viability." Consequently, the lost GHG benefits could be even larger if the large vessel lanes preclude swaths of the lease areas from being commercially developed altogether. Air emissions present a similar story to climate emissions, but with the additional dimension of locational benefits to pollution impacts. Air quality impacts associated with offshore wind projects within the air quality geographic Analysis Area are "anticipated to be small relative to larger emission sources such as fossil fuel facilities." The largest air quality impacts are anticipated during construction with smaller and more infrequent impacts even during those periods are projected to be minor. Moreover, a "net improvement" in air quality is expected on a regional scale as projects come online and offset emissions from fossil fuel-type sources. Due to displacement of fossil fuel generation, the SEIS projects that once Vineyard Wind 1 is operatio	Thank you for your comment. Section 2.5 of the FEIS has been added which includes the agency-preferre alternative. Section A.8.1 of the FEIS has been updated to include additional information BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category a size of renewable energy or energy efficiency project. The avoided emission output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in t New England AVERT region are included in Table A.8.1-3 of the FEIS. Additionally, the FEIS has been updated to state that, in context of reasonably foreseeable environmental trends, combined emission impacts c air quality from ongoing and planned actions within the geographic analysis area, including Alternative A, would help reduce fossil-fuel emissions and would result in an overall moderate beneficial impact on air quality.

Index	Comment Text	Response
Number		
13136-054	Although the SEIS helpfully quantifies the magnitude of project air emissions and notes the displacement effect of offshore wind, it fails to consider the locational dimension of these emission benefits. Power plants are frequently located in or close to population centers and disproportionately located in or near environmental justice communities. The ability of offshore wind to displace fossil fuel generation thus has a potentially important environmental justice benefit. This is especially true for offshore wind facilities, whose generation often coincides with afternoon peak demand. Offshore wind may be especially helpful in displacing the dirtiest peaking units, providing especially large air quality benefits and benefits to environmental justice communities.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
13136-055	Under current regulations, an EIS must "inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." This requirement has been described in regulation as "the heart of the environmental impact statement." The courts describe the alternatives requirement equally emphatically, citing it as the "linchpin" of the EIS. The agencies must therefore "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." Consideration of alternatives is required by (and must conform to the independent terms of) both sections 102(2)(C) and 102(2)(E) of NEPA. In addition, agencies must discuss measures designed to mitigate their action's impact on the environment. In this Section, our comments further address the concept of the design envelope approach.	In addition to the Proposed Action and the No Action alternative, BOEM has considered a range of other action alternatives as described in Section 2.1 of the FEIS that meet the purpose and need and the screening criteria established. BOEM also considered a range of other alternatives that were not carried forward for detailed analysis. An explanation of those alternatives considered but not analyzed in detail is provided in Section C.5 in Appendix C of the FEIS. Last, resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-056	At the outset, we would like to again reiterate our prior comments to BOEM as a general matter on how to interpret the design envelope approach in the context of NEPA for offshore wind projects as a whole. As background, and as noted herein and in our DEIS comments, as organizations we are eager to see responsibly developed offshore wind power advance in the Atlantic and recognize that a carefully implemented project design envelope (PDE) approach could provide both environmental and economic benefits. Offshore wind energy technology and construction practices are evolving rapidly, and project design and planning takes years. A flexible permitting system that ensures developers can capitalize on new opportunities for environmental impact mitigation or cost reduction is beneficial for both the industry and wildlife. It is critical that project developers not be discouraged from pursuing opportunities to take advantage of technologies and practices currently progressing through the research and development process that	The development of the DEIS, SEIS, and FEIS has been based on Vineyard Wind's utilization of the PDE. The FEIS assesses the impacts of the reasonable range of Project designs that are described in the Vineyard Wind COP and presented in Appendix G by using the "maximum-case scenario" process.

Index	Comment Text	Response
Number		
	could help facilitate the increasingly responsible development of offshore	
12126.057	wind energy.	
13136-057	However, to ensure BOEM can perform a sufficient NEPA review of a	The development of the DEIS, SEIS, and FEIS has been based on Vineyard
	project, a project's COP must provide enough specifics on each possible	wind's utilization of the PDE. The FEIS assesses the impacts of the
	configuration covered by the proposed envelope to evaluate impacts on	reasonable range of Project designs that are described in the vineyard wind
	affected species and to fully evaluate the proposal. For example, it would be	COP and presented in Appendix G by using the "maximum-case scenario"
	insufficient to simply identify the total number of turbines that might be built,	process.
	because the timing of pile driving is also critical to evaluating holse-related	
	impacts to marine mammals and other species. Additionally, to encompass	
	ine full range of reasonably foreseeable impacts, BOEM's analysis must	
	include an alternative that combines the most disruptive components for each	
	option included in the envelope. The design envelope alternative also cannot	
	offectively "inform decision melons and the nublic of the reasonable	
	alternatives which would evoid on minimize impacts " as NEDA requires	
12126 059	We appreciate that the SEIC conductor the material impacts, as NEPA requires.	The development of the DEIC CEIC and EEIC has been been down Winsered
15150-058	alternative using the maximum ease secondria. By definition, the maximum	Wind's utilization of the DDE. The FEIS assesses the impact of the
	decign scenario "focus[ec] on the design parameters that represent the	while's utilization of the TDE. The TETS assesses the impacts of the
	greatest notential impact to each resource [a g marine mammals fish]" We	COP and presented in Appendix G by using the "maximum asse scenario"
	caution however that care be taken to ensure that impacts resulting from	process. After publication of this FEIS as required by law, there is a
	eventual construction and operations fall within the maximum design	minimum 30-day mandatory waiting period during which BOEM is required
	scenario identified in this SFIS. If work entails impacts that extend beyond	to nause before issuing a Record of Decision (ROD). The ROD will state
	the full spectrum of this SEIS's maximum design assumptions then a further	clearly whether BOEM intends to approve approve with conditions or deny
	supplemental environmental review could be necessary, which would negate	the Vinevard Wind Construction and Operations Plan (COP) for construction.
	the efficiency benefits of the PDE process.	operation, and eventual decommissioning of the proposed Project.
13136-059	As detailed further above, cumulative impact analysis is a critical and legally	Each applicant is required to submit a COP with their proposed action for
	required part of an EIS, and our comments are provided to make sure that the	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	Vineyard Wind SEIS is robust and complete. We also offer these comments	require an analysis of impacts and the selection of the preferred alternative.
	so that the cumulative impact analysis, once updated with the	
	recommendations provided herein, can provide a template for all other	
	offshore wind projects. However, the process by which BOEM arrived at this	
	important analysis was unnecessarily protracted and has delayed the	
	development of offshore wind.	
13136-060	BOEM has stated that the basis for developing this SEIS was the need for a	Thank you for your comment.
	"revised cumulative impacts analysis," emphasizing that "this more robust	
	analysis will inform decisions for other offshore wind projects moving	
	forward." We share that hope and expectation. BOEM's recognition that	
	"wind energy is a growing industry" and that "the existing lease areas are	
	sufficient to support development of 22 GW of offshore wind" is appropriate	

Index	Comment Text	Response
Number		
	and overdue. Going forward, a robust cumulative impacts framework should	
	be included at the outset in a draft EIS. If any limitations of these initial	
	analyses subsequently come to light, they should ideally be remedied when	
	finalizing the EIS. Once finalized, the Vineyard Wind EIS will provide a	
	model for more thoroughly assessing the cumulative impacts of reasonably	
	foreseeable Atlantic offshore wind development, and future projects should	
	not be subject to the delays of SEIS preparation simply because of continued	
	adjustments to regional commitments concerning offshore wind.	
13136-061	BOEM did not demonstrate that the other issues newly addressed in this	Thank you for your comment.
	SEIS created an independent need for supplementation. The SEIS analyzes	
	"changes to the proposed Project since the publication of the Draft EIS," but	
	states that these are "minor changes to allow for the possibility of using	
	WTGs of higher capacity," resulting only "in slight changes in the possible	
	outcomes under each alternative when compared to the Draft EIS." We note	
	that minor, slight changes do not trigger the need for an SEIS under NEPA	
	regulations. On the contrary, agencies "need not supplement an EIS every	
	time new information comes to light," given that "to require otherwise would	
	render agency decision making intractable."	
13136-062	The SEIS also adds consideration of a "new alternative" for a "transit lane	Section 2.5 of the FEIS has been added which includes the agency-preferred
	proposed to intersect the Wind Development Area." As we argue in in	alternative.
	Section I.G below, this alternative should be rejected. Moreover, analysis of	
	this alternative arose "in response to the January 3, 2020, Responsible	
	Offshore Development Association (RODA) layout proposal," submitted	
	months after the August 2019 decision to delay the final EIS and prepare an	
	SEIS.	
13136-063	We reiterate the importance of a robust cumulative impact analysis and stress	Each applicant is required to submit a COP with their proposed action for
	that BOEM should not initiate a protracted SEIS process unless the draft EIS	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	truly cannot be cured in the process of finalizing it. We urge BOEM to follow	require an analysis of impacts and the selection of the preferred alternative.
	our recommendations made in these comments, finalize the Project's Final	
	EIS, and allow the industry to advance using this new cumulative impact	
	analysis, once updated with our recommendations, as a template for future	
	projects.	
13136-064	We urge BOEM to reject Alternative F, because: (1) it could preclude	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Massachusetts, Rhode Island, and New York from achieving the expected	alternative.
	generation capacity from offshore wind and the ability of those states to	
	achieve their legislated clean energy goals; (2) it appears that the addition of	
	such transit lanes to the leased areas is unnecessary given the conclusions of	
	the United States Coast Guard's (USCG) Final Massachusetts and Rhode	
	Island Port Access Route Study (Final MARIPARS Report), dated May 14,	

Index	Comment Text	Response
Number	2020, and (2) as explained above in Section I.D. it would be less effective in	
	reducing climate impacts than other alternatives	
12126 065	Einst Alternative Encage significant shallon goe to the commencial visbility.	Section 2.5 of the EEIC has been added which includes the accounty maternal
13130-005	of offshore wind projects off the coast of southern New England and could	section 2.5 of the FEIS has been added which includes the agency-preferred
	bi offshore while projects off the coast of southern New England and could	
	renewable energy targets. According to the SEIS "if all six transit lange	
	nenewable chergy largets. Accoluting to the SEIS, If an Six transit larges	
	implemented the technical canacity of offshore wind nower generation	
	assumed" by the projects in the leased areas "would not be met." The transit	
	lange could result in insufficient "space to develop power generation capacity	
	to meet demand in Massachusetts, Rhode Island, and New York," The SEIS	
	observed that while the magnitude of the diminished technical conacity	
	would vary depending on the width of transit lanes, ultimately the transit	
	lanes would result in less clean energy being produced in the region	
13136-066	More specifically, the SEIS noted that if all 6 of the 4-nautical mile transit	Thank you for your comment
15150 000	lanes were implemented, it "would reduce the technical canacity of the	Thank you for your comment.
	Rhode Island and Massachusetts (RI and MA) Lease Areas by approximately	
	3 300 MW which is 500 MW less than the current state demand for offshore	
	wind in the area " Thus the SEIS determined that "[i]f all the proposed	
	transit lanes were implemented one or more reasonably foreseeable offshore	
	wind projects may not be able to deliver the expected power generation	
	capacity and/or may no longer be commercially viable because wind turbine	
	generators (WTGs) would not be placed in the area designated by the transit	
	lanes."	
13136-067	As we've stated herein, responsible offshore wind development along the	Thank you for your comment.
	Atlantic seaboard is essential in order to transition to a clean energy economy	
	and combat the deleterious effects of climate change. Alternative F and the	
	incorporation of transit lanes into the Vineyard Wind project and other	
	projects would significantly diminish the expected power generation capacity	
	of offshore wind in southern New England and potentially result in several	
	offshore wind projects no longer being commercially viable.	
13136-068	Additionally, given the findings of the USCG's Final MARIPARS Report,	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative F is unnecessary for navigational safety.	alternative.
13136-069	In establishing its recommendation, the USCG considered the inclusion of six	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS
	additional transit lanes but concluded that such lanes would be unnecessary if	and that Alternative D2 is consistent with the study.
	ottshore wind developers adopted its recommended layout.	
13136-070	The Dratt MARIPARS Report, which preceded the Final MARIPARS	Section 2.1.3 of the FEIS has been updated to reflect the Final MARIPARS
	Report, contained nearly identical recommendations. Based on the Draft	and that Alternative D2 is consistent with the study. Section 2.5 of the FEIS
	MARIPARS Report, BOEM concluded in the SEIS that the Alternative D2	has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
	layout proposed by Vineyard Wind—a 1-by 1-nautical mile layout arranged	
	in east-to-west rows and north-to-south columns, with 0.7-nautical mile	
	transit lanes oriented northwest-southeast—"meets the layout rules set forth	
	in the Draft MARIPARS [R]eport recommendations." The SEIS also found	
	that Alternative D2 was "consistent" with the USCG's Draft MARIPARS	
	Report recommendation.97 Finally, with respect to Alternative F, BOEM	
	found that the transit lanes could "lead to increased conflict between	
	fishermen due to the orientation of the transit lanes not matching the east-	
	west fishing orientation and increased impacts on vessel movement and	
	navigation by adding choke points and funneling navigation."98 Because the	
	USCG, an authority on navigational safety in coastal waters, concluded that	
	Alternative D2 meets its criteria for navigational safety and that additional	
	transit lanes are unneeded, and BOEM found that transit lanes could, in fact,	
	increase navigational risks, Alternative F is unwarranted.	
13136-071	In sum, because adding transit lanes to the leased areas could reduce the	Section 2.5 of the FEIS has been added which includes the agency-preferred
	viability of several proposed offshore wind developments, could impede	alternative. BOEM is evaluating Vineyard Wind's COP and decisions on
	Massachusetts, Rhode Island, and New York from meeting their renewable	other projects and whether or not those projects would have transit lanes
	energy targets and, hence, from mitigating the impacts of climate change, and	would be reviewed at that time. The decision for transit lanes would be
	is not needed for navigational safety purposes, BOEM should reject	determined on a COP by COP basis.
	Alternative F. In general, the provisions of Alternative D2, which best fulfills	
	state commitments for renewable energy development and accommodates	
	commercial fishing, can also be acceptable for addressing impacts to other	
	resources, in accordance with additional suggested improvements discussed	
	in these comments.	
13136-072	BOEM has made some improvements to the assessment of impact-producing	Thank you for your comment.
	factors (IPF) in the SEIS relative to the Draft EIS. The definitions of both the	
	negative and positive impact levels (i.e., negligible, minor, moderate, and	
	major) in the DEIS and SEIS are similar in meaning, but the SEIS includes	
	clarifying language that provides minimal guidance on how impacts may be	
	quantified. For example, negative moderate and major impact levels in the	
	SEIS now include "notable and measurable" and "regional or population-	
	level impact," respectively. In addition, the definitions of negative factors in	
	the SEIS also include language that specifies "habitat" and "species common	
	to the proposed Project area," which places the impact analyses in an	
	ecosystem context instead of a species-by-species context. For example:	
	"The extent and quality of local habitat for both special-status species and	
	species common to the proposed Project area," and "The richness or	
	abundance of local species common to the proposed Project area." The terms	
	"richness" and "abundance" are both quantifiable ecological terms that have	
	been described in decades of ecological literature.	

Index	Comment Text	Response
Number		
13136-073	More transparent information on how the level of an IPF is quantitatively or qualitatively assessed is still needed in the Final EIS. However, as a general matter, the impact analysis should be undertaken in an objective, transparent, and, where possible, quantitative manner. In the absence of available data, BOEM should acknowledge that an IPF is indeterminate and that additional research is needed. Many of the criteria are also hard to measure (e.g., "Improvement in local ecosystem health"). BOEM should provide detail on how IPFs and associated criteria have been quantitatively or qualitatively measured in the Final EIS.	The SEIS included a detailed analysis of potential impacts and included the use of the impact levels applied to the adverse and beneficial impacts. The resource specific sections included information related to the magnitude, duration, geographic extent, and/or frequency of potential impacts, as appropriate, to support impact determinations.
13136-074	The SEIS should not use value-laden terms (e.g., "beneficial") to describe changes in ecosystems or species. It should instead be objectively described as ecosystem change. For example, the SEIS states: "Recent studies have found increased biomass for benthic fish and invertebrates, and possibly for pelagic fish, marine mammals, and birds as well indicating that offshore wind farms can generate beneficial permanent impacts on local ecosystems, translating to increased foraging opportunities for marine mammal species." Also, the IPF "increase in individuals or populations of species common to the proposed Project area" is considered to be "beneficial." While we agree that some offshore wind activities may result in a change in the ecosystem and, in some cases, an increase in the abundance of certain species or in overall diversity, we caution against the Supplemental EIS representing these changes as "beneficial," particularly as it is unclear what implications these changes may have on the wider ecosystem. We recommend that the Supplemental EIS remain objective in language used in its impact analysis (e.g., by using terminology such as "increase," "decrease," and "change").	Thank you for your comment.
13136-075	BOEM should adopt a precautionary approach to account for fundamental gaps in our understanding of species and their behavioral responses and employ the best available scientific methods to monitor and, if necessary, design mitigation strategies. BOEM provides commentary on "incomplete or unavailable information" for each biological resource; however, this assessment does not appear to be carried forward for consideration in the impacts analysis. It is unclear in the SEIS how BOEM reached the conclusion regarding the adequacy of the information when a number of parameters key to carrying out an adequate impact assessment are lacking. We recommend BOEM take a more open approach to the appraisal of data gaps and uncertainties in the Final EIS and carry that forward to the impact assessment.	Appendix C of the SEIS included a discussion on incomplete or unavailable information, in accordance with Section 1502.22 of the CEQ regulations. Appendix H of the FEIS has been updated where appropriate on the incomplete or unavailable information, in accordance with Section 1502.22 of the CEQ regulations.
13136-076	In this vein, as a general matter throughout the development and operation of offshore wind projects, BOEM should ensure the necessary research and monitoring is carried out to address the substantial uncertainties regarding	Appendix C of the SEIS included a discussion on incomplete or unavailable information, in accordance with Section 1502.22 of the CEQ regulations. Appendix H of the FEIS has been updated where appropriate on the

Index	Comment Text	Response
Number	offshore wind and wildlife interactions, for instance, interaction of seabirds, shorebirds and migratory songbirds including nocturnal migrants with the turbines, potential turbine interactions of bats, many species of which are facing stressors on land that may make their populations more vulnerable to additional take. Based on this research, mitigation options may be needed to ensure species' health and provide the certainty that will allow for further ramp up of the industry.	incomplete or unavailable information, in accordance with Section 1502.22 of the CEQ regulations.
13136-077	Improved and sustained data compilation before and after construction as well as during operation would also advance understanding of species' occurrence in the Project area and region.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-078	As the U.S. offshore wind industry moves forward, we recommend BOEM support the comprehensive analysis of these baseline data and ongoing data compilation and analyses, and undertake a regional approach to data analysis to enhance collaboration across developers, scientists, managers, and other stakeholders.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-079	Again, as a general matter, BOEM should also take immediate measures to address data uncertainty related to the influence of climate change on coastal and marine species and habitats (e.g., range shifts). While global climate change is acknowledged as a potential cumulative impact in the SEIS, this is not enough. BOEM should act expeditiously to obtain additional empirical data on current shifts in species and habitat distributions and work to improve its predictive modeling of future species distributions and factor this information into offshore wind project siting, construction, el and operations to account for uncertainty related to climate-induced dynamic shifts in distribution (e.g., marine mammals, birds, forage fish, and sharks).	Thank you for your comment.
13136-080	BOEM also retains the ability to consider adoption of supplemental mitigation measures if monitoring or the agency's data collection efforts identify an unexpected negative impact. While it would be inappropriate for BOEM to rely on an adaptive management plan to address the environmental	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring

Index	Comment Text	Response
Number	considerations highlighted in the SEIS in lieu of necessary mitigation measures, the agency is allowed and encouraged to adopt further adaptive management measures if needed.	measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13136-081	Additionally, Appendix A provides an analysis of incomplete or unavailable information for marine mammals in regard to the Vineyard Wind 1 project. Information regarding the effects of electromagnetic field (EMF) on marine mammals (submarine cables) remains unknown at both the individual level and population level; however BOEM assumes a low risk of impacts because marine mammals are highly mobile and would reduce their exposure to EMF.	Section 3.3.7.3 of the DEIS and Sections 3.5.1 and 3.5.2 of the SEIS discussed the potential impacts of EMF on marine mammals. As discussed, modeled and measured magnetic fields from AC cables buried to a depth of 3 feet would only emit detectable fields up to 82 feet above the cable and 79 feet along the sea floor. Vineyard Wind proposes to bury Project cables to a depth of 5-8 feet, providing greater shielding and reducing field detection distances. Additional discussion of the uncertainty regarding the individual and/or population level impacts of EMF on marine mammals was provided in Appendix H of the SEIS. Given the extremely localized nature of the potential EMF related impacts exposure is expected to be low. Therefore, no change to the FEIS is warranted.
13136-082	There is uncertainty regarding the response of marine mammals to new, large structures, how the structures will affect the development of the cold pool (potential impact to marine mammal prey species), and how elevated turbidity will affect marine mammals.	Section 3.5.1 of the SEIS provided a discussion of the potential impacts of WTG structures on the cold pool formation and the subsequent potential impacts to marine mammals. Additional discussion of the uncertainty around marine mammal response to WTG structures and how the structures would influence development of the cold pool was provided in Appendix H of the SEIS. Section 3.5.1 of the SEIS also discussed the potential impacts of increased turbidity on marine mammals. Therefore, no change to the FEIS is warranted.
13136-083	There is uncertainty about the cumulative acoustic impact associated with pile driving activities on baleen whales. Most of the scientific literature on the effects of pile driving on marine mammals is on harbor porpoises and seals in European waters. It is currently unclear if marine mammals in the Wind Development Area (WDA) will cease feeding, breeding, and/or migrating behaviors in response to pile driving, or if marine mammals do change these behaviors, it is unclear when they might resume normal behaviors.	Section 3.5.1.1 of the SEIS and Section 3.4 of the FEIS provides an overview of impacts to marine mammals from underwater noise associated with pile driving activities and discusses the potential consequences of those impacts. The analysis considers the Level B Harassment guidelines of 160 dB rms provided by NMFS to assess the potential behavioral impacts to baleen whales from pile driving noise. The available literature suggests avoidance of pile driving at offshore wind projects has occurred in some instances, with the duration of avoidance varying greatly, indicating that marine mammal responses to pile driving in the offshore environment are unpredictable and are likely context-dependent. However, pile driving will occur in open ocean areas where marine mammals may freely move away from the sound source; therefore, BOEM does not anticipate situations where individual marine mammals would not be able to escape from disturbing levels of noise. Further, as noted above, minimization and mitigation measures will be implemented which greatly reduces the potential for population level impacts by avoiding impacts, reducing the number of animals exposed, and

Index	Comment Text	Response
Number		
		minimizing the severity of impacts to individuals that may be exposed. The results of monitoring and reporting can be applied to future project assessments as new information may become available. Additional discussion of the uncertainty around the potential for acoustic impacts resulting from pile driving activities was provided in Appendix H of the SEIS Further details regarding acoustic effects to these species are provided in Appendix F of the FEIS and in the September 11, 2020 BO issued by NMFS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated monitoring and mitigation that has been proposed for the agency-preferred alternative. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making
13136-084	At least 13 species of cetaceans, including six large and seven small cetaceans, and three species of pinnipeds are thought to regularly occur in the Geographic Analysis Area and are included in the impact analysis. Of the six large whale species, four (NARW, sperm whale, fin whale, and sei whale) are listed as endangered under the Endangered Species Act (ESA) and as depleted and strategic stocks under the Marine Mammal Protection Act (MMPA)Since 2010, NARW distribution and habitat use has shifted in response to climate change-driven shifts in prey availability. Best available scientific information, including aerial surveys, acoustic detections, stranding data, a series of Dynamic Management Areas (DMAs) declared by NMFS pursuant to ship strike rule, and prey data, indicate that NARWs now heavily rely on the waters within, and in the vicinity of, the Vineyard Wind 1 Project Area (see Figures 1 and 2). In January 2019, an aggregation representing a quarter of the population—100 whales—was seen in this area engaged in both foraging and social activities, demonstrating that it is clearly more than a migratory corridor. Large, seasonally consistent aggregations of NARWs occur within or close to the Vineyard Wind 1 Project Area from at least December through May, resulting in scientists considering the area to be a NARW "hotspot." NARWs were observed feeding in the vicinity of the	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. Although NARWs may be found year-round, their likelihood of occurrence is greatest during the seasonal restriction on pile driving decreases. During times of year pile driving would be permitted, enhanced mitigation and monitoring measures for NARWs would be required during the entire month of May and anytime a DMA or NARW slow zone is designated in the lease area between June 1 and October 31. At all other times, standard mitigation and monitoring measures for all marine mammals are required. These conditions would be required to adaptively account for the sporadic occurrence of NARWs at any time of the year. A detailed analysis of impacts to ESA listed species of whales that concludes the Vineyard Wind 1 Project may adversely affect, but is not likely to jeopardize their continued existence is provided in the September 11, 2020 Biological Opinion issued by NMFS. Section 3.4.2 and Appendix D in the FEIS discuss all the mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW.

Index	Comment Text	Response
Number	Vineyard Wind 1 Project Area during the first half of May for the first time in 2017 and were sighted in June and July in 2017 and 2018, indicative of a broader temporal shift in distribution resulting in the occurrence of NARWs at greater densities off Rhode Island and Massachusetts into the summer months. Pregnant females are known to travel though the area in November and December and females of reproductive age are also present in the area in February and March, with April appearing particularly important for mothers and calves. Several scientific data sources demonstrate that right whales use these waters year-round.	
13136-085	Protection of NARWs during foraging, and the protection of their foraging habitat, must be one of BOEM's utmost priorities. NARWs select foraging areas based on a relatively high threshold of copepod density of approximately 3850-4000 organisms per cubic meter. Notably, foraging areas with suitable prey density are limited relative to the overall distribution of NARWs, meaning that unrestricted and undisturbed access to suitable areas, when they exist, is extremely important for the species to maintain its energy budget. Scientific information on NARW functional ecology also shows that the species employs a "high-drag" foraging strategy that enables them to selectively target high-density prey patches, but is energetically expensive. Thus, if access to prey is limited in any way, the ability of the whale to offset its energy expenditure during foraging is jeopardized. In fact, researchers have concluded: "[R]ight whales acquire their energy in a relatively short period of intense foraging; even moderate changes in their feeding behavior or their prey energy density are likely to negatively impact their yearly energy budgets and therefore reduce fitness substantially."	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. A detailed analysis of impacts to ESA listed species is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required.
13136-086	NARWs are already experiencing significant food-stress: juveniles, adults, and lactating females have significantly poorer body condition relative to Southern right whales, and the poor condition of lactating females may cause a reduction in calf growth rates. Undisturbed access to feeding grounds must be ensured to adequately protect the species.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required.
13136-087	Further, ongoing UMEs exist for other whales in the Geographic Analysis Area. There have been UMEs for the Atlantic population of minke whales since January 2017 and humpback whales since January 2016. Alarmingly, 92 minke whales have stranded between Maine and South Carolina from January 2017 to July 2020. Elevated numbers of humpback whales have also been found stranded along the Atlantic Coast since January 2016 and, in a	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including Minke and humpback whales. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak

Index	Comment Text	Response
Number	little over four years, 126 humpback whale mortalities have been recorded (data through July 16, 2020), with strandings occurring in every state along the East Coast. The declaration of these UMEs by the agency in the past few years for three large whale species for which anthropogenic impacts are a significant cause of mortality demonstrates an increasing risk to whales from human activities along the U.S. East Coast.	NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures.
13136-088	Given concerns regarding the health of the region's whale species, and the critically endangered status of the NARW in particular, BOEM is obligated to protect this species from additional harmful impacts of human activities. The agency is also obligated by NEPA to consider the full range of potential impacts on all marine mammal species, including minke and humpback whales, which are known to utilize the Geographic Analysis Area.	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. A detailed analysis of impacts to ESA listed species, including the NARW, Minke, and humpback whales is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures.
13136-089	Considering the elevated threat to federally protected large whale species and populations in the Atlantic, and emerging evidence of dynamic shifts in the distribution of large whale habitat, BOEM must ensure that any potential stressors posed by the proposed surveys on affected species and stocks are avoided, minimized, mitigated, and monitored to the fullest extent possible.	Section 3.3.7.3 of the DEIS and Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. A detailed analysis of impacts to ESA listed species, including the NARW is provided in the September 11, 2020 Biological Opinion issued by NMFS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures.
13136-090	BOEM has improved the scope of the impact analysis in the SEIS compared to the DEIS. Specifically, the SEIS includes four new IPFs, or subfactors, relevant for marine mammals that were not included in the DEIS: However, additional IPFs or considerations still need to be factored into BOEM's analysis. In particular, it is imperative that BOEM afford more detailed consideration of seismic surveys for oil and gas development in the Final EIS. While it is true that the issuance of permits for these activities by BOEM is still pending at the time of this letter, incidental harassment authorizations have already been issued by the National Marine Fisheries Service and therefore this action should be considered "reasonably foreseeable" by BOEM. While the "addition of possible future oil and gas	Currently there are no offshore oil- and gas-related activities ongoing in the Atlantic ocean and few concrete proposals in the foreseeable immediate or long-term future. NOAA has issued five individual harassment authorizations (IHA) under the Marine Mammal Protection Act for planned seismic surveys involving airguns on the Atlantic Outer Continental Shelf (OCS). Those IHAs are currently set to expire in November 2020, and the surveys cannot take place until the Bureau of Ocean Energy Management (BOEM) issue their own permits for the surveys. There are currently no active oil and gas leases on the Atlantic OCS, so there are currently no drilling or production activities. No Atlantic lease sales are included in the current 2017-2022 National Program. BOEM is in the process of developing the next five-year

Index	Comment Text	Response
Number		
	exploration surveys" is acknowledged in the SEIS, BOEM should more clearly recognize the serious risks posed to NARWs and other marine mammals by seismic surveys and that these surveys would result in a serious additional and long-term stressor for marine mammals and, concerningly, for NARWs throughout much of their migratory range, and would interact cumulatively with other stressors, including those potentially arising from offshore wind development.	National Program, which is expected to be completed around the time the current program ends in 2022. The next stage after the National Program is the decision on whether and under what terms to hold a specific lease sale. Even if Atlantic lease sales are included in a future national program, it could be several years before a decision is made on whether to hold an individual lease sale, as compliance with other laws (e.g., NEPA reviews, CZMA consistency determination, ESA consultation) will be necessary before any sale decision. Once a sale is held and leases issued, the lessee must obtain approval of its exploration plan and then its development and production plan (if it has identified sufficient resources to enter into oil and gas production). After these plans are approved, additional permit approvals are required before any individual exploration or production well can be drilled. Given this multistage process, it would likely be several years after inclusion in a National Program before oil and gas leasing or exploration and production activities, could be expected in the Atlantic. In addition to no oil and gas leasing reasonably expected to occur in the Atlantic, provided the current IHAs are set to expire in November 2020, BOEM does not find these survey activities to be reasonable foreseeable future actions in the Atlantic at this time.
13136-091	In addition, the SEIS underestimates the quantity and potential impact of G&G surveys undertaken as part of site assessment and characterization activities, describing them as "infrequent" and concluding their undertaking having "negligible" impact. On the contrary, G&G surveys associated with site assessment and characterization are frequent within the Geographic Analysis Area and multiple offshore wind projects are currently permitted, or projected to seek permits, to carry out these activities. A number of offshore wind projects intend to carry out those surveys over multiple years and in many areas, including in the vicinity of the Vineyard Wind 1 Project Area, multiple offshore wind developers are permitted to carry out surveys in overlapping geographic areas at the same time of year. The cumulative impacts of these survey activities that generate noise potentially harmful to marine mammals need to be carefully assessed by BOEM in the Final FIS	Section 3.4.3 of the FEIS provides an updated discussion the potential impacts of HRG site assessment and characterization surveys. Additionally, Appendix D of the FEIS provide updated discussion and descriptions of these measures, including but not limited to, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. BOEM is also consulting with the NMFS for all surveys on the Atlantic OCS and implementation of similar measure will be required.
13136-092	We agree with the approach suggested in the SEIS that "identifying the locations and schedules of wind energy G&G and construction/installation activities as well as ongoing and future non-offshore wind G&G surveys could avoid overlapping noise impacts by scheduling activities to avoid cumulative impacts on marine mammals," and we urge BOEM to undertake this analysis for G&G survey activity associated with offshore wind development and factor the resulting findings into future planning decisions.	Thank you for your comment.

Index	Comment Text	Response
13136-093	Finally, in the absence of clear regulations on required measures to avoid, minimize, and mitigate noise impacts from G&G on marine mammals, BOEM must not make assumptions that survey protocols and underwater mitigation procedures will be effective in reducing harassment to a level that could be considered "negligible."	Section 3.4.3 of the FEIS provides an updated discussion the potential impacts of HRG site assessment and characterization surveys. Additionally, Appendix D of the FEIS provides updated discussion and descriptions of these measures, including but not limited to, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. BOEM is also consulting with the NMFS for all surveys on the Atlantic OCS and implementation of similar measure will be required.
13136-094	As discussed above, NEPA requires that BOEM's review be thorough and abide by the legal standards for fair and objective review. Yet the only quantitative study cited in the SEIS that directly assesses the exposure of development activities for the Vineyard Wind 1 Project Area on marine mammals was first presented in the Construction and Operation Plan and is also cited in the updated Vineyard Wind Offshore Wind Energy Project Biological Assessment, the DEIS, and the SEIS, as Pyć et al. (2018). This study was commissioned to address BOEM's request for further information on acoustic and non-acoustic IPFs to marine megafauna during Vineyard Wind 1 project construction. The study used a modeling approach to characterize the sound source, determine how the sound propagated in different construction scenarios and in multiple seasons, and quantify the number of baleen whales, sperm whales, and sea turtles that would be exposed to levels above injury exposure criteria and behavioral disruption exposure criteria. The study used abundance and distribution data as well as animal movement modeling scenarios	The modeling undertaken and reported in the COP was completed in coordination between Vineyard Wind, NOAA, and BOEM. State of the art modeling has been used to quantify the amount of exposure of marine mammals to underwater sound, but is not the only information that is used in the impact assessments completed for the DEIS and SEIS. Therefore, no change to the FEIS is warranted.
13136-095	The marine mammal density estimates (animals/km2) used in the Pyć et al. (2018) analysis came from the Duke University Marine Geospatial Ecology Laboratory habitat-density model results published in 2016 and for the NARW, an unpublished and updated density model that incorporated additional sightings data from the Atlantic Marine Assessment Program for Protected Species (AMAPPS) 2010–2016, which included some aerial surveys over the MA WEA and MA/RI WEA undertaken by the NOAA Northeast Fisheries Science Center between 2011 and 2016. Density estimates for pinnipeds were calculated using Roberts et al. (2015) density data. The Roberts' models were assessed with data from visual surveys conducted by BOEM in the Vineyard Wind 1 Project Area between October 2011 and June 2015.	The modeling undertaken and reported in the COP was completed in coordination between Vineyard Wind, NOAA, and BOEM. State of the art modeling has been used to quantify the amount of exposure of marine mammals to underwater sound, but is not the only information that is used in the impact assessments completed for the DEIS and SEIS. Therefore, no change to the FEIS is warranted.
13136-096	The Pyć et al. (2018) study is now outdated and does not reflect the best available scientific information on the potential sound exposure to marine mammal populations in the Vineyard Wind 1 project area. Importantly, the analysis does not incorporate significant new data collected from 2016 onwards, which indicates new year-round habitat use of the area within, and	The commenter has not provided any new information regarding new density estimate for marine mammals that has not been included in the acoustic modeling. Modeling has been completed with best available density estimates for NARWs. BOEM is also aware of other sightings information and DMAs that have been established in waters off Massachusetts and the potential

Index	Comment Text	Response
Number		
	in the vicinity of, the Vineyard Wind 1 Project Area by NARWs. As stated above in Section II.D.1, since 2010, NARW distribution and habitat use has shifted in response to climate change-driven shifts in prey availability. Best available scientific information, including aerial surveys, acoustic detections, stranding data, a series of DMAs declared by NMFS pursuant to ship strike rule, and prey data, indicate that NARWs now rely heavily on the waters within, and in the vicinity of, the Vineyard Wind 1 Project Area year-round (see Figure 1).	occurrence of NARWs year-round. The analysis completed and mitigation measures that would be required accounts for the potential occurrence of NARWs at any time of year. Although climate change may be responsible for these recent changes is distribution, the exact mechanisms driving this occurrence patterns are not well understood yet and no new information has been provided by the Commenter. However, the mitigation and monitoring strategy does account for the potential occurrence of NARWs occurring at any time of year. Section 3.4.1 of the FEIS was updated in coordination with the NMFS and technical discussion regarding acoustic impacts on marine mammals was provided in Appendix F of the FEIS. Further discussion of these impacts was provided in the September 11, 2020 Biological Opinion issued by NMFS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss all the mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. As outlined in the updated Appendix D, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced
13136-097	While further iterations of the Duke University habitat-density model have since been published in 2017 and 2018, and should be included in an updated analysis, these models still exclude data obtained through additional sightings databases (e.g., NOAA Right Whale Sighting Advisory System; NEFSC Monthly DMA analysis), and passive acoustic monitoring (e.g., Robots4Whales detections; NEFSC Acoustic Indicators of Right Whale Occurrence).	The modeling undertaken and reported in the COP was completed in coordination between Vineyard Wind, NOAA, and BOEM. State of the art modeling has been used to quantify the amount of exposure of marine mammals to underwater sound, but is not the only information that is used in the impact assessments completed for the DEIS and SEIS. Therefore, no change to the FEIS is warranted.
13136-098	From February 2017 through June 2018, monthly standardized marine mammal aerial surveys were flown in the Massachusetts and Rhode Island and Massachusetts WEA by the New England Aquarium. Right whales were seen in every season and 14 of the 18 months surveyed. As part of the New England Aquarium Study, a digital acoustic monitoring instrument (DMON) at Nomans Land station detected right whales throughout the sampling period. During the 2018 AMAPPS ship-based surveys, two foraging right whales were sighted within the WEA by NMFS researchers studying the potential linkages between biological and physical oceanography and marine mammal sightings on April 7. Additional sightings in the NARW consortium database document 47 right whales in the WEA from March 18, 2018 to April 11, 2018. A BOEM-funded study using autonomous vehicles for real-	The modeling undertaken and reported in the COP was completed in coordination between Vineyard Wind, NOAA, and BOEM. State of the art modeling has been used to quantify the amount of exposure of marine mammals to underwater sound, but is not the only information that is used in the impact assessments completed. For example, Vineyard Wind has intensive protected species observer data from the WDA and other best information available at the time of that application that is being considered in the Incidental Harassment Authorization under the Marine Mammal Protection Act. The commenter provided information that sightings in the NARW consortium database document 47 right whales in the WEA from March 18, 2018 to April 11, 2018 and a BOEM-funded study detected whales in the area between December and March. The mitigation that would be

Index	Comment Text	Response
Number		
	time monitoring of marine mammals from December 2019 through March 2020 on Cox's Ledge acoustically detected right whales in all months of the study. These new data highlight the need for the Pyć et al. (2018) study to be reanalyzed with updated data.	required included a seasonal restriction on pile driving from January 1 to April 30 that covers this period. The Commenter has not provided any new information on whale densities that would require the analysis be revised or relevant to the times of year pile driving would be allowed. Section 3.4.2 and Appendix D of the FEIS discuss all the mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW at all times of year pile driving is permitted. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. As outlined in the updated Appendix D, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required.
13136-099	Therefore, the Duke University habitat-density models do not fully reflect the current distribution and density of marine mammals for the U.S. East Coast and must not be used as the sole information source when estimating impact. We recognize that a number of the data sources we recommend above are not yet published or publicly available. In light of the rapidly diminishing NARW population, however, BOEM must require that all data are used to ensure that any potential shifts in NARW habitat usage are reflected in Vineyard Wind 1's sound exposure models. We suggest one approach to achieving this would be to convene all data holders (e.g., New England Aquarium, Northeast Fisheries Science Center, Woods Hole Oceanographic Institution) with the acoustic modeling team (i.e., JASCO in the case of Vineyard Wind 1) to collate an updated data set of best available scientific information in a format compatible with undertaking an updated acoustic impact analyses.	The modeling undertaken and reported in the COP was completed in coordination between Vineyard Wind, NOAA, and BOEM. State of the art modeling has been used to quantify the amount of exposure of marine mammals to underwater sound. The best available density estimates for NARWs have been accepted by BOEM and NMFS under NEPA, the ESA, and the MMPA, but is not the only information that has been considered in the development of mitigation measures. The sightings information referenced by the Commenter does not provide any new substantial density information available that was not already considered in the acoustic modeling. The Commenter suggests the project permitting schedule be delayed while sightings information be analyzed through stakeholder meetings to derive new density information that is not available. This information since it is unavailable. Modeling has been completed with best available density estimates that were available for NARWs and no new modeling is required. The recent sightings referenced by the Commenter validate information already considered in the FEIS regarding the presence, not density, of NARWs in all seasons. BOEM is aware of other sightings information and DMAs that have been considered in addition to density information and the potential occurrence of NARWs year-round in the WDA. Appendix D of the FEIS discusses all the mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW at all times of year. These measures include, but are not limited to avoidance of peak NARW presence from January 1 to April 30, and when a NARW Slow Zone or DMA overlap the proposed Project area between June 1 and October 31.

Index	Comment Text	Response
Number		
		At all permitted times of year, standard mitigation measures for all marine mammals would be required including use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures.
13136-100	As a general matter, integration of local data sources that collect fine-scale information on marine mammal distribution (e.g. opportunistic sightings data) with those gathered through systematic broad-scale surveys will better reflecting current marine mammal presence, relative abundance and density, and will provide a more accurate impact assessment. BOEM should take steps now, in coordination with NOAA, to collate and integrate these different data sets to more accurately reflect marine mammal presence for future environmental impact statements and other work.	BOEM has funded substantial number of visual and acoustic surveys with the National Marine Fisheries Service (NMFS) through the AMAPPS program and other studies with our partners to conduct surveys and share that information with stakeholder such as the Duke Marine Spatial Ecology Laboratory. BOEM has coordinated and continues to coordinate with NMFS and the scientific community to obtain, analyze, and apply the best available scientific information in its environmental assessments.
13136-101	We also note that Appendix A (Underwater Acoustic Modeling of Construction Noise) and Appendix B (Animal Movement and Exposure Modeling) of Pyć et al. (2018) have been redacted, severely limiting the study's reproducibility and comparison to other research in this area. To comply with the NEPA standards of "scientific integrity" and the requirement to "evaluate indeterminate adverse impacts based upon approaches or methods "generally accepted in the scientific community,"" we request that the Appendices of Pyć et al. (2018) be published in full in the Final EIS.	The report contains confidential business information at the time of the DEIS, we are currently waiting on a response from Vineyard Wind to determine if the information is publicly discloseable.
13136-102	The measures set forth in the agreement reflect the commitment of Vineyard Wind to undertake these steps, beyond existing federal requirements, to provide additional protections for the NARW. The intent of the agreement is to minimize the disruption of normal feeding, breeding, and migratory behaviors and prevent injury to right whales. Many of the mitigation measures agreed to by the parties have been incorporated into the SEIS impact analysis, as described in Pyć et al. (2018). It is therefore our expectation that the mitigation measures reviewed in the SEIS similarly meet the goal of lowering risk from injury to a level approaching zero and to significantly reduce other effects caused by marine noise.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures.
13136-103	Including the mitigation measures into the impact assessment does not, however, provide the same level of certainty and accountability as would be the case if they were included as requirements in the COP, Final EIS, and other agency permits (e.g., NMFS Incidental Harassment Authorizations). BOEM must include details of these mitigation measures in the "the Final EIS.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Additionally, pile driving activities will be conducted in accordance with a Project Specific

Index	Comment Text	Response
Number		IIIA As anota of NADW during a superior Theory manine () ()
		IHA to protect NARW during construction. These requirements are reflected
12126 104	The mitigation measures agreed to by the parties and included in the impact	III Appendix D. Section 3.4.2 and Annendix D of the FEIS discuss undeted mitigation and
13130-104	analysis include:	monitoring measures that would be implemented to avoid minimize and
	1 Seasonal restriction on nile driving activities between January 1 and April	mitigate adverse impacts to marine mammals specifically the NARW These
	30 to reflect periods of most likely presence of NARWs.	measures include, but are not limited to avoidance of neak NARW presence.
	2. Enhanced mitigation protocol for pile driving and geophysical survey	use of sound attenuation technologies, use of PSOs, PAM, soft start
	activities scheduled during times of likely presence of NARWs, including:	procedures, shut down procedures, and other measures. Additionally, pile
	a. An extended clearance zone of 10 km between May 1-May 14 and	driving activities will be conducted in accordance with a Project Specific
	November 1-December 31;	IHA to protect NARW during construction. These requirements are reflected
	b. Monitoring of the extended clearance zone by continuous passive acoustic	in Appendix D.
	monitoring and, from May1-14, aerial or vessel-based surveys prior to pile	
	driving; and	
	c. A 60 minute pre-piling monitoring time period from between May 1 and	
	December 31.	
	3. Comprehensive monitoring protocol during the construction window using	
	a combination of visual monitoring by protected species observerMNFS'ss	
	and passive acoustic monitoring.	
	4. Vessel speed restrictions and additional monitoring measures by vessels	
	during periods of likely presence of NARWs and within Dynamic	
	Management Areas (DMA), including:	
	a. A vessel speed limit of 10 knots for vessels transiting to and from the WDA	
	unless visual or passive acoustic monitoring indicates the transit route is clear	
	of NARWs; and	
	c. A speed limit of 10 knots within DMAs unless visual surveys or passive	
	acoustic monitoring indicates that the transit route within the DMA is clear of	
	NARWs or that the animals can be avoided.	
	5. Underwater noise reduction and attenuation measures to reduce sound	
	levels by a target of 12 dB.	
13136-105	In addition, Vineyard Wind has made a \$3 million commitment to support	Thank you for your comment.
	development and demonstration of innovative methods and technologies to	
	enhance marine mammal protection. Since the agreement was signed,	
	Vineyard Wind has partnered with Greentown Labs to support advances in	
	marine mammal monitoring, specifically for data collection and real-time	
	transmission or data analysis, and will be issuing a Request for Proposals for	
	une advancement of a non-invasive permanent and mobile passive acoustic	
	and operation of Vinevard Wind 1	

Index	Comment Text	Response
13136-106	While some of the measures in the agreement also convey benefits to other species of endangered and protected large whales, we note the importance of requiring strong mitigation measures to protect all species of marine mammals. This is particularly important in light of recent UMEs, the unpredictable climate-driven shifts in marine mammal habitat use and particularly foraging areas, and the expanding scale of reasonably foreseeable offshore wind development planned for the U.S. East Coast.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Additionally, pile driving activities will be conducted in accordance with a Project Specific IHA to protect NARW during construction. These requirements are reflected in Appendix D and will provide protections for all marine mammals during project construction.
13136-107	On January 31, 2020, Vineyard Wind submitted an update to its project design envelope in an updated COP that increased the maximum WTG size up to 14 MW from 10 MW. This update was transmitted to BOEM and NMFS on May 11, 2020, as supplemental information for the Vineyard Wind 1 Project Biological Assessment. The increase in WTG size resulted in a decrease in the number of pile-driven foundations from 100 under the maximum-case scenario to 57, leading to a 43 percent reduction in takes of federally listed whales and sea turtles. We note our support for the use of larger WTGs as a means to reduce the number of individual pile driving events, which benefits marine mammals and other marine species by: (i) reducing the total number of hours required for Project pile driving; and (ii) increasing the feasibility of limiting the construction window to times when endangered and protected species may be less likely to be present (but see Sections II.F and II.G for concerns for birds and bats).	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13136-108	Notwithstanding the reduction in pile driving events, reduction of underwater noise during pile driving is of critical importance and BOEM should require Vineyard Wind to take every measure to meet the 12 dB noise reduction target.	BOEM reviewed information provided in the COP regarding the effectiveness of sound reduction systems during the pile driving of offshore wind farm foundations. The 6 dB was chosen for the analysis level for the least effective level in order to evaluate the maximum-case scenario impact that may occur. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met.
13136-109	To best account for the impacts of the simultaneous development of multiple lease areas on the North Atlantic right whale, we stress that the agency take steps to prepare a full Programmatic EIS encompassing all U.S. East Coast renewable energy development as soon as possible to inform future offshore wind development. Currently, impact analyses are undertaken, and mitigation	Preparation of a full Programmatic EIS as described is outside of the NEPA process for the proposed Project.

Index	Comment Text	Response
Number		
	measures prescribed, on a project-by-project basis leading to inconsistency	
	and inefficiency. It would be highly beneficial to collectively consider	
	available information on North Atlantic right whales in U.S. Atlantic waters	
	to build a picture of responsible development accounting for the lifespan and	
	migratory movements of the species, which have the potential to overlap with	
	every WEA along the U.S. East Coast on a twice-yearly basis (i.e., northern	
	and southern migration).	
13136-110	A Programmatic EIS is also particularly timely given the climate-driven	Preparation of a full Programmatic EIS as described is outside of the NEPA
	shifts in North Atlantic right whale habitat use observed over the past decade	process for the proposed Project.
	as well as significant changes in their conservation status and major threats.	
	Such an approach will ensure that alternatives and mitigation measures are	
	considered at the scale at which impacts would occur and may potentially	
	help increase the pace of environmentally responsible offshore wind	
	development along the U.S. East Coast.	
13136-111	Vessel collisions remain one of the leading causes of large whale injury and	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and
	mortality and are a primary driver of the existing UMEs. Serious injury or	monitoring measures that would be implemented to avoid, minimize, and
	mortality can occur from a vessel traveling above 10 knots irrespective of its	mitigate adverse impacts to marine mammals. These measures include, but
	length. The number of recorded vessel collisions on large whales each year is	are not limited to avoidance of peak NARW presence, use of PSOs, vessel
	likely to grossly underestimate the actual number of animals struck, as	speed restrictions, injury and mortality reporting, and other measures. As
	animals struck but not recovered, or not thoroughly examined, cannot be	discussed in the Biological Opinion issued by NMFS on September 11, 2020,
	accounted for. NARWs are particularly prone to vessel strike given their	no take of marine mammals as a result of vessel strikes are expected to occur
	slow speeds, their occupation of waters near shipping lanes, and the extended	due to the implementation of mitigation and monitoring measures outlined in
	time they spend at or near the water's surface. The agency should therefore	Section 3.4.2 and Appendix D of the FEIS.
	act conservatively and implement mitigation measures to prevent any further	
	vessel collisions for other species of large whale currently experiencing an	
	UME (i.e., humpback whales and minke whales), as well as other species	
	such as fin whales, which, in light of the broad distributional shifts observed	
	for multiple species, may be at potential future risk of experiencing an UME.	
13136-112	BOEM significantly downplays the risk of vessel strike to endangered whales	As described in BOEM's National Environmental Policy Act Documentation
	in the SEIS. The agency notes that up to an additional 230 vessels associated	for Impact-Producing Factors in the Offshore Wind Cumulative Impacts
	with offshore wind development may be operating within the Geographic	Scenario on the North Atlantic Outer Continental Shelf (BOEM 2019a), more
	Analysis Area at the peak of project construction from 2022 to 2023 and	than 12,000 vessel calls were made at ports in the North Atlantic. The
	acknowledges that "increased collision risk has the potential to result in	expected peak of 125-230 vessels associated with offshore wind
	injury or mortality to individuals" and "the relative risk of vessel strikes from	development, as described in Section 3.5.1 of the SEIS, would represent an
	wind industry vessels is dependent upon the stage of development, time of	approximate 1.0 to 1.9 percent increase in vessel traffic. In reality the
	year, number of vessels, and speed of vessels during each stage." Yet,	increase would be even smaller as the 12,000 vessel calls represent only
	without further quantitative analysis of relative risk, BOEM states that	commercial vessels and does not include recreational vessel trips. In addition,
	["[0]ffshore wind development will result in only a small incremental increase	there is currently a high degree of uncertainty regarding the number of
	in vessel traffic volume relative to ongoing and future non-offshore activities,	vessels, ports to be used, and primary transit routes that future offshore wind
	and no measurable cumulative impacts would be expected as result." This is	developments use. Section 3.4.1 of the FEIS has been updated to reflect this

Index	Comment Text	Response
Number	entirely speculative. Data are readily available (e.g., on the Mid-Atlantic Data Portal and the Northeast Ocean Data Portal) to undertake a quantitative analysis of additional vessel strike risk posed by vessels associated with the offshore wind industry (i.e., total number of vessels, proportion of vessels associated with reasonably foreseeable offshore wind activities, locations of the primary route between ports and WEAs, and marine mammal occurrence and density).	information. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no take of marine mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS. These measures include, but are not limited to, use of PSOs, PAM, vessel speed restrictions, and other measures
13136-113	Further, BOEM adds support to the no cumulative impact finding by stating that "collision risk would only be expected when Project vessels are transiting to and from the WDAs." While there is no reason to believe that vessel collisions would only occur during vessel transits, the vessel transits in and of themselves are exceptionally frequent, with scores of vessels potentially undertaking transits on a daily basis for months or years, including throughout the operational period of a wind project. In addition, wind development activities taking place from 2022 to 2023 will primarily occur in the RI/MA and MA wind energy areas, meaning that vessel activity associated with construction, including vessel transits, will be similarly concentrated in that region. As previously discussed (see Section II.D.1), the RI/MA and MA wind energy areas now represent an important year-round foraging and migratory habitat for the NARW, a species for which vessel strike in a leading factor in its trajectory towards extinction. Vessel strikes therefore pose an unacceptable risk and BOEM simply cannot conclude that no measurable cumulative impact would be expected.	As described in BOEM's National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf (BOEM 2019a), more than 12,000 vessel calls were made at ports in the North Atlantic. The expected peak of 125-230 vessels associated with offshore wind development, as described in Section 3.5.1 of the SEIS, would represent an approximate 1.0 to 1.9 percent increase in vessel traffic. In reality the increase would be even smaller as the 12,000 vessel calls represent only commercial vessels and does not include recreational vessel trips. In addition, there is currently a high degree of uncertainty regarding the number of vessels, ports to be used, and primary transit routes that future offshore wind developments use. Section 3.4.1 of the FEIS has been updated to reflect this information. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of PSOs, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no take of marine mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS.
13136-114	Moreover, beyond vessel speed restrictions within SMAs and DMAs, there are currently no federal requirements to reduce the speed of vessels associated with offshore wind development to 10 knots or less. Nor is there currently another example of an agreement between NGOs and an offshore wind developer regarding mitigation of construction impacts (see Section II.D.2.c) that would, by necessity, include enhanced mitigation and monitoring requirements to reduce vessel collision risk (or risks related to noise exposure and other impacts)).	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of PSOs, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a SMA or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. As discussed in the Biological Opinion issued by NMES on September 11, 2020, no take of marine

Index Number	Comment Text	Response
		mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS.
13136-115	BOEM acknowledges that, even with mitigation measures in place, increased potential interactions would be expected in lease areas during construction and also operations and decommissioning. As demonstrated by the documented death of a NARW calf in July as a result of multiple vessel strikes and the likely death of a second calf in January, an addition of even a single vessel traveling at speeds over 10 knots poses an unacceptable risk. Vessel speed restrictions and additional mitigation and monitoring measures must therefore be explicitly required as part of the permitting process. In the Final EIS, BOEM should acknowledge the significant risk vessel strikes pose to NARWs and other large whales and require the industry to reduce vessel speeds to 10 knots or less and take further measures to mitigate vessel collision risk.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of PSOs, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a SMA or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no take of marine mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS.
13136-116	By adding IPFs and sub-IPFs for long-term avoidance/displacement of marine mammals from the WDAs into the SEIS, BOEM acknowledges the potential hazards of physical structures in the water column to marine mammals. However, BOEM justifies a finding of "minor" and "negligible" impact for this IPF based on the fact there is no data available to carry out a meaningful assessment. BOEM should instead take a precautionary approach and acknowledge that this IPF is not possible to assess at the current time and commit to an explicit monitoring plan that will allow for future assessment (i.e., pre-, during-, and post-construction monitoring).	Section 3.5.1 and Table 3.5-1 of the SEIS discussed the potential impacts on marine mammals due to novel physical structures in the water. Additional discussion of the uncertainty around marine mammal response to WTG structures was provided in Appendix H of the SEIS. Therefore, no change to the FEIS is warranted. Post-construction monitoring requirements are being developed with researchers, environmental NGOs, State, and Federal agencies. The results of monitoring could be applied to adaptive requirements if the results show certain actions may be warranted. Appendix D of the FEIS provides an updated discussion of mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including the Use PAM buoys or autonomous PAM devices to record ambient noise in the lease area (before, during, and immediately (within 2 year of operation) after construction), record marine mammal vocalizations, and monitor Project noise including vessel noise, pile driving, and WTG operation. Results must be provided within 90 days of construction completion and again within 90 days of the 1-year and 2-year anniversary of commissioning.
13136-117	The report, "A framework for studying the effects of offshore wind development on marine mammals and turtles," outlines detailed recommendations for monitoring the potential impacts of offshore wind on marine mammals, including long-term avoidance/displacement, by the top scientists and experts working in this field.	Appendix D of the FEIS provides and updated discussion of mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including the Use PAM buoys or autonomous PAM devices to record ambient noise in the lease area (before, during, and immediately (within 2 year of operation) after construction), record marine mammal vocalizations, and monitor Project noise including vessel noise, pile driving, and WTG operation. Results must

Index	Comment Text	Response
Number		
		be provided within 90 days of construction completion and again within 90 days of the 1-year and 2-year anniversary of commissioning.
13136-118	Given the acute vulnerability of the NARW, it is essential that, at minimum, BOEM conduct a technical, quantitative analysis of the cumulative impacts of offshore wind development, against a baseline of other reasonably foreseeable actions, on the NARW population. This analysis should be incorporated into the agency's NEPA compliance documents. We note that the analysis proposed below is also relevant for other species of large whale found within the Geographic Analysis Area.	Section 3.3.7 of the DEIS and Section 3.5.1 of the SEIS analyzed the current NARW baseline and contemplated the potential overall impacts on NARW due to offshore wind development in within the geographic analysis area. A detailed analysis of potential impacts on NARW and other ESA-listed species was provided in the revised BA submitted to NOAA which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation- Documents/. Additional information regarding impacts to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Future offshore wind projects will require separate ESA Section 7 consultation, and a cumulative effects analysis will be completed based on the best available information and will include a discussion of all IPFs that could result in impacts to marine mammals. Therefore, no change to
		the FEIS is warranted.
13136-119	We recommend that the analysis quantify the percentage of the NARW population potentially exposed to conceivable impacts from offshore wind development on an annual basis and, as a worst-case scenario, the potential impact on population viability of a permanent loss of foraging and other habitat within all lease areas expected to be developed. The analysis should also examine the additional energetic expenditure experienced if right whales were to avoid all lease areas expected to be developed during their migration. This is particularly important in light of new scientific information indicating the need for NARWs to undertake efficient and uninterrupted foraging in order to maintain their energy budget. The energetic implications for displacement of pregnant females during their southern migration (e.g., offshore into the Gulf Stream) should also be taken into consideration.	As discussed, in Section 3.5.1.1.3 of the SEIS, the use of bioenergetic models to assess the population-level consequences is available for only a few mysticete species. BOEM currently working on establishing a study to develop a bioenergetic model to look at the potential population level impacts offshore wind may have on NARW. A detailed discussion of current marine mammal distribution and occurrence in and around the Vineyard Wind 1 WDA was provided in Appendix E of the SEIS. A discussion of current marine mammal distribution as well as population size and trends are also provided in the Biological Opinion issued by NMFS on September 11, 2020. A detailed analysis of impacts to ESA listed species, including the NARW, is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation- Documents/. Additional information regarding impacts to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other

Index	Comment Text	Response
Number		
13136-120	Habitat avoidance may also result in NARWs being displaced into shipping lanes, thereby increasing their risk of vessel strike. The analysis should therefore estimate the additional potential risk that habitat displacement into shipping lanes and the increased vessel traffic resulting from wind development itself may pose in terms of serious injury and mortality along the East Coast and evaluate that risk against that of species extinction. Such an analysis will allow BOEM to determine if existing mitigation measures are adequate or if potential impacts need to be managed as projects are developed concurrently and sequentially. For example, considering vessel collision risk for the entire East Coast may illuminate that more comprehensive vessel speed mitigation measures need to be in place at the project level in order to reduce the overall cumulative risk.	take of marine mammals, including NARW, is expected to occur as a result of the project. The Biological Opinion also discusses the potential consequences of displacement. In the FEIS, BOEM has considered that the cumulative impacts that may be expected by future offshore wind projects in addition to Vineyard Wind would have similar, but not exactly the same impacts depending on differences in project details, location, and other factors. Additionally, BOEM assumes that future COP approvals will include project-specific mitigation and monitoring measures developed through NEPA, ESA consultations, and ITAs that will be implemented by each future project that will be designed to avoid exposure of individuals to injurious levels of noise and minimize and monitor effects of exposure that would result in behavioral responses. As described in BOEM's National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf (BOEM 2019a), more than 12,000 vessel calls were made at ports in the North Atlantic. The expected peak of 125-230 vessels associated with offshore wind development, as described in Section 3.5.1 of the SEIS, would represent an approximate 1.0 to 1.9 percent increase in vessel traffic. In reality the increase would be even smaller as the 12,000 vessel calls represent only commercial vessels and does not include recreational vessel trips. In addition, there is currently a high degree of uncertainty regarding the number of vessels, ports to be used, and primary transit routes that future offshore wind developments use. Section 3.4.1 of the FEIS has been updated to reflect this information. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of PSOs, vessel speed restrictions, in
		enhanced monitoring/mitigation measures for NARW would be required.
13136-121	BOEM should conservatively assess the potential loss to the NARW of	Section 3.5 of the SEIS provided a discussion of acoustic impacts to marine
	communication and listening range and assume that any substantial	mammal species, including the NAKW. Further details regarding acoustic
	other vital behavior. A conservative approach is justified given the species'	submitted to NOAA which can be found at the following link:
	extreme vulnerability, where any additional stressor may notentially result in	https://www.boem.gov/Vinevard-Wind-Consultation-Documents/
	population-level impacts, and the difficulty in obtaining empirical data on	Additionally. Section 3.4.2 and Appendix D of the FEIS discuss undated
	population-level impacts on wild animals.	mitigation and monitoring measures that would be implemented to avoid.
		minimize, and mitigate adverse impacts to marine mammals, specifically the

Index	Comment Text	Response
Number		
		NARW. These measures include, but are not limited to avoidance of peak NARW presence, enhanced measures including expanded PAMJ coverage for NARWs during the entire month of May, use of sound attenuation technologies, use of Protected Species Observers (PSOs), Passive Acoustic Monitoring (PAM), soft start procedures, shut down procedures, and other measures.
13136-122	Finally, BOEM acknowledges that "entanglement in fishing gear is a substantial ongoing threat to marine mammals" and is "one of the leading causes of mortality in NARWs (Eubalaena glacialis, NARW), and may be a limiting factor in the species recovery (Knowlton et al. 2012)." However, BOEM's stance is that: "These ongoing impacts on marine mammals, especially fisheries interactions, would continue regardless of the offshore wind industry." While this is true, until more scientific information becomes available on the nature of habitat displacement, if any, caused by offshore wind development, BOEM should be precautionary and factor entanglement risk into the impact analysis in the Final EIS. This issue is particularly pertinent to reasonably foreseeable wind projects in the RI/MA and MA wind energy areas, as they directly overlap with or neighbor management areas for the American lobster fishery that pose a significant entanglement risk to NARWs and other large whales. The American lobster fishery is currently the target of new regulations being developed by NOAA to reduce the risk of mortality and serious injury of NARW caused by entanglement.	Section 3.3.7.3 of the DEIS discussed the potential for exclusion of fishing vessels or marine mammals from the Project area. Furthermore, Sections 3.5.1 and 3.5.2 of the SEIS discussed displacement of fishing effort and marine mammals from all wind development areas on the Atlantic OCS. Additional discussion of commercial fisheries displacement was provided in Section 3.4.5 of the DEIS and Section 3.11.1 and 3.11.2 of the SEIS. Therefore, no change to the FEIS is warranted. Sections 3.4.2 and Appendix D of the FEIS discusses mitigation relative to the monitoring and removal of ghost fishing gear in the WDA, which would minimize the risk of entanglement
13136-123	As a general matter and distinct from this particular SEIS, in determining the potential impact of noise from geophysical surveys, and construction and operations activities, BOEM should request new guidelines on thresholds for marine mammal behavioral disturbance from NMFS that are sufficiently protective and consistent with the best available science. Multiple marine species have been observed to exhibit strong, and in some cases lethal, behavioral reactions to sound levels well below the dB threshold defined by NMFS for Level B take, leading to calls from the scientific community for the Agency to revise its guidelines. Acceptance of the current NMFS' acoustic threshold for Level B take will result in BOEM's significant underestimation of the impacts to marine mammals and potentially the permitting, recommendation, or prescription of ineffective mitigation measures (e.g., under-protective exclusion zones).	On September 11, 2020, the NMFS issued a Biological Opinion for the construction, operation, maintenance, and decommissioning of the proposed Vineyard Wind 1 Project. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), using the best available science, NMFS has determined that no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. As discussed in the Biological Opinion (NMFS 2020), the consequences of Level A harassment as a result of exposure to pile driving noise would be "minor degradation of hearing capabilities" and the PTS anticipated is considered a "minor auditory injury." Level B harassment is expected to result in "low-level, temporary behavior modifications" NMFS expects exposures to be brief and that behavior responses would be temporary, with behavior returning to as baseline state after the pile driving stops or the individual swims far enough away to avoid exposure to disturbing levels of noise (NMFS 2020). Further,

Index Number	Comment Text	Response
		NMFS (2020) concluded that these behavior responses are not expected to impact individual health, survival, or reproduction.
13136-124	BOEM should re-run its sea turtle regional density estimates and exposure models and update the Final EIS accordingly. The Final EIS should include updated sea turtle density estimates and related acoustic exposure models. As stated in previous comments, the most recent survey data incorporated into the DEIS sea turtle density surface models are from 2009 and do not reflect current knowledge of sea turtle occurrence in the Project Area. Re-running the density models with more recent data collected from the Project Area and immediate vicinity – for example, the Northeast Large Pelagic Survey data (e.g., Atlantic Marine Assessment Program for Protected Species [AMAPPS] data) – would more accurately represent the current status quo and, in turn, provide more accurate estimates of acoustic exposures. We recommend new density surface models and accompanying abundance estimates – which are often easier for public understanding (e.g., 10 loggerhead turtles as opposed to a density of 0.1117 loggerhead turtles per 100 km2) – be generated and includes along and a companying abundance estimates and provide along a state of a part of the period perio	Section 3.3.8.3 of the DEIS included a discussion of acoustic impacts on sea turtles. A detailed discussion of acoustic impacts to sea turtles was also provided in the revised BA (BOEM 2019b). The BA submitted to NOAA can be found at the following link: https://www.boem.gov/Vineyard-Wind- Consultation-Documents/. The FEIS was developed with the best available science at the time of publication. Sea turtle density estimates are derived from Strategic Environmental Research and Development (SERDP) Spatial Decision Support System (SDSS) and represent the best data set to be used for animal movement modeling, as agreed to by BOEM and NMFS on July 24, 2018. The referenced reports do not contain density estimates but rather sighting per unit efforts (SPUEs). These data sources were however considered as supplemental information in the DEIS, SEIS, and the BA. Therefore, no change to the FEIS is warranted.
13136-125	Additionally, and similarly as a general matter, fundamental gaps remain in our knowledge of the sensory (e.g., hearing and navigation) ecology of sea turtles. It has been determined that sea turtle hearing sensitivity overlaps with the frequencies and source levels produced by many anthropogenic sources; however, more research is needed to determine the potential physiological and behavioral impacts of these noise sources on sea turtles. Currently, BOEM's standard operating conditions for activities such as pile driving are based on a 180 dB (RMS) re 1 uPa exclusion zone, which is the original generic acoustic threshold for assessing permanent threshold shift onset for cetaceans.	As discussed in the NMFS Biological Opinion, NMFS relied upon the available literature to evaluate the effects of noise on sea turtles. NMFS considers the acoustic thresholds developed by the US Navy to represent the best available data as it they rely upon all available information on sea turtle hearing and thresholds were derived using similar methodology as the NMFS technical guidance for auditory injury of marine mammals (NMFS 2018, 2020). Based upon studies of sea turtle behavioral responses to air gun noise summarized in the Biological Opinion, NFMS expect that sea turtles would exhibit behavioral response when exposed to received levels of 166 dB re 1uPa and significant behavioral disruption and avoidance behavior when exposed to received levels of 175 dB re: 1uPa (rms) and higher. Although the 180 dB (RMS) threshold level was previously recommended by NMFS, it is no longer applicable and not used to determine impacts to sea turtles.
13136-126	As the offshore wind industry advances, studies are needed to determine critical ratios and temporary and permanent threshold shifts so that accurate acoustic threshold limits for anthropogenic sound sources can be added to NMFS's sound exposure guidelines for protected species like sea turtles, and additional monitoring and mitigation protocols can be developed to minimize impacts to sea turtles during offshore wind development and operation and other anthropogenic activities. Experiments are also needed to: (i) spatially separate acoustic pressure and intensity to determine which component(s) of sound sea turtles detect to determine if hearing sensitivity changes under	Section 3.3.8.3 of the DEIS included a discussion of acoustic impacts on sea turtles. A detailed discussion of acoustic impacts to sea turtles was also provided in the revised BA (BOEM 2019b). The BA submitted to NOAA can be found at the following link: https://www.boem.gov/Vineyard-Wind- Consultation-Documents/Section 3.5.2 and Appendix D of the FEIS have been updated to include modifications and/or additional mitigation and monitoring measures that could be implemented to avoid, minimize, and mitigate adverse impacts on sea turtles. These measures include, but are not limited to, marine debris training, use of sound attenuation technologies, use
Index	Comment Text	Response
-----------	--	---
Number	pressure; and, (ii) conduct underwater audiograms of sea turtle species of all age classes, as hearing sensitivity is known to change with age. Given this, not only should monitoring of sea turtle sensory ecology be conducted, but a conservative approach should be adopted in the EIS to guard against impacts to these threatened and endangered species.	of Protected Species Observers (PSOs), Soft Start Procedures, Shut Down procedures, and other measures. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval.
13136-127	The provisions of Alternative D2, which best fulfills state commitments for renewable energy development, can be acceptable for impacted bird species. However, in order to complete a sufficient cumulative impact analysis for the Vineyard Wind project, the Final EIS must evaluate impacts to a broader range of affected avian species, including committing to sufficient monitoring that uses improved technology as it is developed, and application of adaptive management to apply mitigation measures based on this data.	Section A.8.3.1 of the FEIS provides an updated discussion of collision model methods, but does not include all species that may encounter operating WTGs, as many species do not have the required datasets to allow for modeling. While not all species potentially present within the offshore wind lease areas were modeled, the modeling results of those species with sufficiently robust occurrence and behavioral characteristics datasets represent a variety of species with representative behaviors and flight characteristics and illustrate the overall low expected collisions rates. BOEM expects the same outcome from species that were not modeled. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision
13136-128	In this manner, the Final EIS can account for the reasonably foreseeable impacts of the Vineyard Wind project and commit to addressing those impacts. Further, best management practices and commitments to monitoring and mitigation as part of adaptive management should be included in the cumulative impacts analysis for reasonably foreseeable offshore wind development on the Atlantic OCS in relation to bird species. Incorporating monitoring requirements that will be applied as technology becomes available and providing for mitigation measures to be triggered based on the monitoring results will provide the most accurate approach to the scope of the cumulative impacts analysis contemplated in the SEIS.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13136-129	BOEM must ensure that the Final EIS retains consideration of the full range of potential impacts on all bird species known to forage or rest in or near the	Section A.8.3.1 provides a discussion of collision model methods, but does not include all species that may encounter operating WTGs, as many species

Index	Comment Text	Response
Number		
	Project Area, or migrate through the area, including those species protected under the Migratory Bird Treaty Act (MBTA) and the ESA as well as species of birds covered under obligations for conservation of birds under the Fish and Wildlife Conservation Act as amended in 1988, Executive Order (EO) 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds" (January 17, 2001), North American Waterbird Conservation Plan, the Memorandum of Understanding (MOU) between Department of the Interior U.S. Minerals Management Service and the Department of the Interior U.S. Fish & Wildlife Service (FWS) Regarding implementation of EO 13186 (June 4, 2009) and BOEM, Department of Interior (DOI), FWS, and NOAA membership in the International Union for Conservation of Nature (hereinafter collectively referred to as the "conservation obligations").	do not have the required datasets to allow for modeling. While not all species potentially present within the offshore wind lease areas were modeled, the modeling results of those species with sufficiently robust occurrence and behavioral characteristics datasets represent a variety of species with representative behaviors and flight characteristics and illustrate the overall low expected collisions rates. BOEM expects the same outcome from species that were not modeled. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13136-130	As we have commented to BOEM before, we are aware that the DOI and the FWS are now relying on a new interpretation of the MBTA that limits the scope of the Act to the purposeful take of birds. Our organizations strongly oppose this interpretation as contrary to the plain language and intent of the law, and we urge BOEM to continue to implement its MBTA responsibilities as all previous administrations have done in the past, with explicit recognition that incidental take is prohibited. This would also be consistent with the memorandum of understanding that BOEM signed with FWS in 2009 to protect migratory bird populations. If DOI's new interpretation changes BOEM's analysis and associated requirements for impacts to migratory birds in any way, a detailed description and explanation of such changes must be included in the Final EIS. We note that signatories of these comments (Natural Resources Defense Council, Defenders of Wildlife, and National Audubon Society), together with many other organizations and states, have challenged DOI's unlawful reinterpretation of the MBTA in court and expect the protections of the MBTA to be restored. The unlawful reinterpretation does not relieve BOEM or FWS from their obligations for conservation of birds under the aforementioned federal laws, EO and MOU, as well as MBTA	Section A.8.3.1 of the FEIS has been updated with a discussion of the MBTA and includes discussions of measures and Standard Operating Conditions that will be used to ensure that impacts to migratory birds are minimized.

Index	Comment Text	Response
Number		
13136-131	 At a minimum, the Final EIS should include analysis of the following priority species for fulfilling BOEM's conservation obligations: Red-throated Loon, Horned Grebe, Great Shearwater, Audubon's Shearwater, Black Skimmer, Gull-billed Tern, Hudsonian Godwit, Upland Sandpiper, Whimbrel, and Arctic Tern are all FWS Birds of Conservation Concern214 under the Fish & Wildlife Conservation Act, 1988 amendment. Black-legged Kittiwake, Horned Grebe, Leach's Storm-petrel, Long-tailed Duck are classified by the International Union for Conservation of Nature (IUCN) as Vulnerable. Black Scoter, Common Eider, Razorbill and Sooty Shearwater are classified by IUCN as Near Threatened. 	Several of these species (red-throated loon, greater shearwater, black-legged kittiwake, long-tailed duck, black scoter, common eider, razorbill, and sooty shearwater) were analyzed in the COP submitted by Vineyard Wind, and included an assessment of potential exposure to operating WTGs on the Atlantic OCS. All of these species were in the insignificant annual exposure category, with the exception of the razorbill and black-legged kittiwake, which were in the low annual exposure category. These categories represent the relative importance of the Vineyard Wind WDA for these species across an entire annual cycle. Additionally, all of these species were analyzed in Robinson Willmott et al. (2013). Per the COP, a low or insignificant exposure means that the species was predicted to occur at lower densities in WDA than in other areas. Further, the FEIS has been updated to include an analysis of the percentage of a particular species that would be exposed to Vineyard Wind 1 WTGs during each season (FEIS Table A.8.3-7). Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically.
13136-132	Further, at a minimum the Final EIS should include analysis of the following migratory species of birds that have documented migratory routes through the Atlantic OCS lease areas (see discussion of Collision-risk analyses below, for reference): • American Golden-Plover • Bicknell's Thrush • Blackpoll Warbler • Bobolink • Buff-breasted Sandpiper • Connecticut Warbler • Pectoral Sandpiper • Semipalmated Sandpiper • Solitary Sandpiper • Upland Sandpiper • Whimbrel • White-rumped Sandpiper	A review of La Sorte and Fink (2017) shows that while the 10 documented species identified by the commenter do cross the Atlantic OCS during migration, only two (Bicknell's thrush and white-rumped sandpiper) would traverse the Vineyard Wind 1 WDA during autumn migration. Additionally a review of La Sorte et al. (2016) shows that of 118 terrestrial species, only 3 population-level migration trajectories crossed the Vineyard Wind 1 WDA, and only during autumn migration. Given this information, BOEM does not expect most of these species to encounter operating WTGs associated with the Vineyard Wind 1 project. Further information regarding these species sensitivity to collision and displacement effects are discussed in Robinson Willmott et al. (2013).

Index	Comment Text	Response
Number	Given that existing survey efforts do not appear to have adequately captured.	There are inherent challenges to surveying for rare species far offshore. The
15150-155	avian use of the Project Area, BOEM should adopt a conservative approach in the Final EIS's avian impact analysis. Modeling issues stemming from	Vineyard Wind 1 WDA was sampled approximate 49 times from 2007 to 2015; 30 of those surveys were conducted by MassCEC. A discussion of the
	recent survey efforts must be addressed. For example, Vineyard Wind's	potential for Roseate Terns to encounter operating WTGs is discussed in the
	many medium-sized tern sightings into a shared "tern species" category	biological Assessment which can be found at the following link.
	which cannot be parsed out to provide detail on the number of endangered	the data used relative to the roseate tern represents the best available science
	Roseate Terns. Further, the Marine-Life Data and Analysis Team (MDAT)	on the distribution and relative abundance of the species, and no change to
	predictive models, while excellent for estimating broad-scale, relative	the FEIS is warranted.
	patterns of avian abundance along the Atlantic, are not suitable for estimating	
	range and abundance for a rare and narrowly distributed species like the	
	Roseate Tern. As a result, when these and other data deficiencies are factored	
	underestimated	
13136-134	Additionally in 2020 a new Roseate Tern colony formed on Muskeget	A revised discussion of the new roseate tern colony on Muskeget Island is
10100 101	Island. This places a Roseate Tern breeding colony within 15 miles if the	provided in the updated BA that was submitted to the USFWS in September
	Vineyard Wind lease. The development of a new colony is unusual for this	2020. As discussed in the BA, Muskeget Island is in area frequented by
	species, and is likely to increase foraging use of the Project Area. The core of	foraging and staging roseate terns (see, and for the first time in many
	the Roseate Tern's breeding range, which overlaps the Project Area, is small	decades, 40-50 pairs of roseate terns nested on Muskeget Island. However,
	and so a conservative approach for this species and others that may be	those nests failed to produce chicks due to egg predation (S. vonOettingen,
	impacted by these surveys is required by the Final EIS.	Pers. Comm., July 23, 2020). Although roseate terns may attempt to nest on
		the island in the coming years, "the duration of occupation for 'small' and
		medium size colonies is short in the majority of cases (the median and mode are 10 and 4 years respectively)" (Garaía Ouismondo et al. 2018)
		BOEM is currently coordinating with USEWS to monitor the colony site
		during the 2021 breeding season.
13136-135	The Final EIS should include a collision risk analysis on federally listed	A detailed analysis of impacts and an analysis of potential collision risk to
	species, specifically Roseate Tern, Piping Plover and Red Knot, and the	ESA-listed species (including roseate tern, piping plover, and Rufa red knot)
	cumulative impacts on these species of the reasonably foreseeable future	is provided in the revised BA that was submitted to the USFWS, which can
	development of 16 offshore wind projects currently contemplated in the	be found at the following link: https://www.boem.gov/Vineyard-Wind-
	Atlantic OCS, including the risk to the birds as they migrate through the	Consultation-Documents/. In all cases BOEM determined that the Vineyard
	projects. The analysis in the Biological Assessment should be a starting place	Wind 1 Project "may affect, but is not likely to adversely affect" any of the
	for this analysis, not an end point and the most recent data must be used.	ESA-listed species that may occur in the Project Area. Project-specific ESA
		BOEM is currently working to USEWS to develop programmatic
		consultation for future offshore wind development. This consultation will be
		informed by a currently ongoing BOEM study, which can be found at the
		following link: https://www.boem.gov/environment/environmental-
		studies/transparent-modeling-collision-risk-three-federally-listed-bird

Index	Comment Text	Response
Number		
13136-136	The SEIS uses Winship et al, 2018, as a baseline and to compare relative abundance of 47 species of seabirds that may be in the projected cumulative OCS WDA compared to the abundance of a study area that ranges outside the OCS WDA areas to conclude that "Generally, only a small percentage of a species seasonal population would potentially encounter operating WTGs." The Final EIS must explain how it relies on this conclusion from models in the Winship data. The author reports "[g]enerally speaking, the estimated uncertainty in the model predictions was high, and the study does not include the variables of high concentrations of birds seasonally or in short periods of time. The COP, Volume III recognizes this variability when it states: Petrels and shearwaters that breed in the southern hemisphere visit the northern hemisphere during the austral winter (boreal summer) in vast numbers. These species use the US Atlantic Outer Contintental Shelf ("OCS") region so heavily that, in terms of sheer numbers, they easily swamp the locally breeding species and year-round residents at this time of year (Nisbet et al., 2013).	As described by the author, Winship et al. (2018) provides "broad-scale spatial information" that can be used to inform marine spatial planning on the Atlantic OCS, and represents spatial distributions of birds averaged over time. Further, the project was specifically not designed to predict the actual number of a particular species in a specific location and time, but rather a relative abundance. The DEIS and SEIS used the Winship data as such. Table A.8.3-7 is provided to illustrate that the expected overall low percentage of a particular species that have been historically observed, or would be expected to occur in the Vineyard Wind 1 WDA. BOEM used this data to help avoid areas where there are large numbers of birds. Further, BOEM did not fully rely on Winship models, but also used survey data of the MA WDAs. As shown by Viet et al. (2016) only 25 species have been identified in the MA WDAs during the course of surveys conducted during all seasons between November 2011 and January 2015. Additionally, the mean densities of the 15 most commonly observed species were relatively low (Veit et al. 2016).
13136-137	Additionally, "many species continue to congregate outside the breeding season in areas of high productivity, such as upwellings. Huge flocks of Sooty and Greater Shearwaters have been seen in these areas." "For most development sites, the statistical variation in the data derived from survey is likely to mask any within-site variations in bird density." The Final EIS should include this variability of large concentrations of birds even in short periods of time in its analysis of seasonal abundance when calculating risk to birds.	While the comment regarding the potential for large flocks to congregate in areas of high productivity is correct, the Vineyard Wind 1 Project area is not located in one of these areas of no large flocks of birds would be expected. As depicted in Figure A.8.3-1 in the FEIS the lease areas for offshore wind development were selected due to the general absence of bird resources, and areas with higher bird abundance were avoided. This is also depicted at a finer scale in Figures A.8.3-2 and A.8.3-3 in the FEIS. Further, as shown by Viet et al. (2016) only 25 species have been identified in the MA WDAs during the course of surveys conducted during all seasons between November 2011 and January 2015. Additionally, the mean densities of the 15 most commonly observed species were relatively low (Veit et al. 2016).
13136-138	The Final EIS must also explain why BOEM omitted their own analysis of the vulnerability of 177 species of birds that could come into contact with the WTGs in the cumulative OCS WDAs in the foreseeable future and why it reached such an important cumulative impacts conclusion on such a comparatively small group of species.	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. As discussed, 177 species of birds may be present on the OCS from the Gulf of Maine to Florida. However, not all of these species would be expected to encounter operating WTGs. As discussed, there are only 55 species of birds that are expected be exposed to WTGs. Further, as shown by Viet et al. (2016) only 25 species have been identified in the MA WDAs during the course of surveys conducted during all seasons between November 2011 and January 2015. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level

Index	Comment Text	Response
Number		
		determination, but were provided to explore the potential for collision
		mortality associated with the anticipated development on the Atlantic OCS
		generally, and the proposed Vineyard Wind 1 Project, specifically.
13136-139	The SEIS uses the Band model and the Avian Stochastic Collision Risk	Section A.8.3.1 includes and updated discussion regarding the species that
	Model to conclude:However, neither model includes modeling for	have some potential to encounter operating WTGs associated with the
	population level impacts or accounts for variations in concentrations of birds	anticipated development of offshore wind facilities on the Atlantic OCS
	or impacts of wind or wave variations on flight behavior, especially pelagic	generally, and the Vineyard Wind 1 WDA specifically. As discussed, 177
	birds in the summer. The Final EIS must explain why BOEM chose to use	species of birds may be present on the OCS from the Gulf of Maine to
	the Band model on such a limited sample size of only 12 species when 177	Florida. However, not all of these species would be expected to encounter
	species could potentially come in contact with the cumulative WTGs in the	operating WTGs. As discussed, there are only 55 species of birds that are
	OCS WDAs.	expected be exposed to WTGs. Further, as shown by Viet et al. (2016) only
		25 species have been identified in the MA WDAs during the course of
		surveys conducted during all seasons between November 2011 and January
		2015. Section A.8.5.1 of the FEIS also includes an updated discussion of
		consion risk modeling. The estimates of potential consion mortality
		determination but were provided to explore the notential for collision
		martelity associated with the anticipated development on the Atlantic OCS
		generally and the proposed Vineword Wind 1 Project specifically
13136-140	The Final FIS should also provide the inputs to the Band collision risk model	Section A 8.3.1 of the FEIS has been undated to include model inputs (see
13130-140	used by BOFM instead of only their outputs for public comment and	Tables A 8 3-2 through A 8 3-5 For the Vinevard Wind 1 Project the
	transparency. Those inputs would show whether BOFM followed the	Biological Assessment has the input and output spreadsheets from the Band
	guidance provided by Band in assessing collision risk including their inputs	model for the ESA species
	on avoidance behavior. flight height, flight activity, flux rate, corpse	
	detection rate, rotor speed, bird speed, day and night flights, and collision	
	risk for migrants as recommended in Band's 2012 guidance and model.	
13136-141	Importantly, a study by Cook et al. (2014) found that estimations of	The FEIS has been updated to use the Avian Stochastic Collision Risk
	avoidance and collision risk from Band models were highly sensitive to the	Model, which incorporates variability into model inputs and as a result
	flux rate (total number of birds passing through the wind farm), corpse	provides collision predictions with estimated variability. The FEIS has also
	detection rate, rotor speed, and bird speed. Factors such as weather (i.e. wind	been updated to include all model inputs. As the pointed out by the
	speed and visibility) and habitat use would also affect the accuracy of these	commenter, there is uncertainty around the output from collision risk
	estimates, as such factors would greatly influence avian flight patterns and	modeling. However, modeling represents the best available science to
	behavior.	address the potential for birds to collide with operating WTGs on the Atlantic
		OCS.
13136-142	Additionally, Band himself comments on the sensitivity of the model and the	The FEIS has been updated to use the Avian Stochastic Collision Risk Model
	importance to include these elements in the inputs of the model:	which incorporates variability into model inputs and as a result provides
	• "For some species typical flight heights are dependent on the season, and in	collision predictions with estimated variability around the variables identified
	such a case it will be best to use seasonally dependent typical flight heights in	by the commenter. The FEIS has also been updated to include all model
	assessing collision risk for each month, rather than average flight heights	inputs, including a measure of nocturnal activity (FEIS Table A.8.3-2). The

Index	Comment Text	Response
Number	 across the year." "Flight activity estimates should allow both for daytime and night-time activity. Daytime activity should be based on field survey. Night-time flight activity should be based if possible on night-time survey; if not on expert assessment of likely levels of nocturnal activity." "Figures used in the collision model should take both day and night flights into account. Where there is no night-time survey data available, or other records of nocturnal activity, for the species in question, (or for other sites if not at this site), it should be assumed that the Garthe and Hüppop/King et al. 1-5 rankings apply. These rankings should then be translated to levels of activity at night which are respectively 0%, 25%, 50%, 75% and 100% of daytime activity. These percentages are a simple way of quantifying the rankings for use in collision modelling, and they may to some extent be precautionary." 	collision risk modeling presented in the FEIS relied upon flight height data from Johnson et al. (2014) that was derived from thousands of observations, likely under varying weather and wind speed conditions, and thereby capturing many of the conditions identified by the commenter. Section A.8.3.1 of the FEIS includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically.
13136-143	Band 2012 provides a spreadsheet for use in calculating this model that shows calculations from inputs to outputs in an open and transparent manner. BOEM should present this spreadsheet as part of the Final EIS to illustrate how BOEM reached its outputs on collision risk, even on only the 12 species on which risk was calculated.	Section A.8.3.1 of the FEIS has been updated to include model inputs (Tables A.8.3-2 through A.8.3-5). For the Vineyard Wind 1 Project, the Biological Assessment has the input and output spreadsheets from the Band model for the ESA species.
13136-144	Additionally, collision risk models are not found to be reliable in predicting mortality: Siting and permitting decisions for many European offshore wind facilities are informed by collision risk models, which have been created to predict the number of avian collisions for offshore wind energy facilities. However, these models are highly sensitive to uncertainties in input data. The few empirical studies at land-based wind facilities that have compared model- estimated collision risk to actual mortality rates found only a weak relationship between the two, and due to logistical difficulties, the accuracy of these models has not been evaluated in the offshore environment.	As the suggested by the commenter, there is uncertainty around the output from collision risk modeling. However, modeling represents the best available science to address the potential for birds to collide with operating WTGs on the Atlantic OCS. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13136-145	The SEIS uses a cumulative estimate of 2,021 WTGs and uses a 6.9 birds/turbine mortality rate from a study by Loss et al., 2013 to conclude that "an estimated 13,945 birds could be killed annually under the build out	As outlined by the commenter, Loss et al. (2013) provides an estimation of Collison mortality as a result of collisions with operating WTGs. The FEIS provides an updated discussion of land based WTG mortality studies and

Index	Comment Text	Response
Number		
	described under the cumulative impact scenario." But that mortality rate of 6.9 birds/turbine in Loss et al., 2013 is for average turbine capacity of less than 2MW. Loss et al., 2013 in the same table (Table 2, p. 204) calculates the ratio of birds/MW, the standard in the industry, and calculates the mean ratio of annual rate of mortality of birds in the East to be 3.58 birds/MW (Lower bounds of estimate 95 percent confidence interval is 3.05. Upper bounds of estimate 95 percent confidence interval is 4.68). Using the SEIS statistic of 2,021 WTGs of turbines which are expected to have the capacity of 12 or 14 MW that is a cumulative MW of 24,252MW with 12 MW turbines or 28,294MW with 14 MW turbines. Using Loss et al. 2013's mean estimate of the annual rate of mortality of birds in the Eastern U.S. at onshore wind projects of 3.58 birds/MW/year, an estimated 86,822 birds (under the 12 MW turbine scenario) to 101,292 birds (under the 14 MW turbine scenario) would be killed annually under the buildout of the cumulative impact scenario. Over the thirty-year life of the cumulative impact scenario an estimated 3,038,760 birds would be killed under the 14MW scenario. The Final EIS must adjust this calculation and consider revising the cumulative impact level on birds	includes an additional reference (Erickson et al. 2014) that reported similar findings to Loss et al. (2013). These studies represent the best available science for estimating the potential for collision mortality of North American bird species. To date, no studies have addressed the cumulative mortality of North American bird species at operating onshore wind facilities. The analysis in the SEIS, and subsequently in the FEIS, based on the Loss et al. (2013) was provided to illustrate what the potential mortality associated with the full offshore wind build out could be, not what the expected mortality could be. Further, the mortality range provided in the SEIS used values of the number of mortalities per turbine, and not per MW, because there is not a linear relationship between turbine nameplate capacity (MWs) and turbine size, particularly when comparing onshore older onshore WTGs with new, highly efficient offshore WTGs expected to be used on the Atlantic OCS.
13136-146	from Moderate and the direct and indirect impacts from Negligible to Major. The DEIS states that "Johnston et al. 2014a has documented that the use of fewer WTGs with higher hub heights is an effective method to reduce avian collision risk." However, this study used smaller turbines than are planned for Vineyard Wind which anticipates turbines of up to 12 or 14 MW. GE cites statistics on their 12MW Haliade-X turbine as a 220 meter rotor swept area and 260 meter height, making the hub height 40 meters. For their study, Johnson et al. (2014) states, "[t]he outputs of the three turbine designs were 2, 3 and 5 MW, and the diameter of the rotor-swept areas was 80, 90 and 126 m, respectively," and "to remove the effect of height in the comparison of different designs, the hub heights of each turbine were set such that the lower limit of the rotor-swept area was 20 m above sea level." The study also provides the caveat that "mitigation by use of larger turbines or higher hubs must also take into account the greater altitudes used by migrating birds (Newton 2010; Krijgsveld et al. 2011), which may experience an increased collision risk as a result of the use of larger turbines.". Additionally Loss et al. (2013) "found support for an increase in mortality with increasing turbine hub height." The Final EIS should re-calculate the risk to migrating birds of using larger turbines calculated by altitude of the turbines and total rotor swept area of the turbines and hub height compared to flight height of migratory birds especially during inclement weather, variable wave activity and other elements, and the risk to nocturnal migrants in particular.	As discussed in Section A.8.3.1 in the FEIS, model inputs into the Avian Stochastic Collision Risk Model included WTG parameters, including nameplate capacity (12 MW was used) in addition to rotor radius, blade width, and rotor swept zone height from the top of the water, and tidal offset. Additionally, as suggested by Johnson et al. (2014) and Krijgsveld et al. (2011) flight heights of modeled species were also included as model inputs (Table A.8.3-2). As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014).

Index	Comment Text	Response
Number		
13136-147	La Sorte Fink (2017) document 10 species of migratory birds that migrate over the Atlantic Ocean: "There is evidence at the individual-level (see Table S1, Supporting Information) and broader evidence at the population-level (La Sorte et al., 2016a) that these 10 species cross the Atlantic Ocean during autumn migration." Those species are American Golden-Plover, Bicknell's Thrush, Blackpoll Warbler, Bobolink, Buff-breasted Sandpiper, Connecticut Warbler, Pectoral Sandpiper, Semipalmated Sandpiper, Solitary Sandpiper, and White-rumped Sandpiper. Two species classified by FWS as Birds of Conservation Concern—Upland Sandpiper and Whimbrel, also cross the Atlantic Ocean during migration. A fuller picture of migratory pathways of migratory songbirds and shorebirds could be realized with the addition of satellite tracking information from Movebank and NASA's Icarus project or additional research and tagging of priority species of birds. The Final EIS should use this data to calculate the risk to these migratory birds, especially in regard to the higher turbine height, and provide for tracking these migratory birds during the life of the project and over all the cumulative projects in the Atlantic OCS.	Section A.8.3.1 of the FEIS provides an updated discussion of the potential for avian species to encounter operating offshore wind turbines. As discussed in the FEIS, 75 percent of the documented onshore mortality is composed of groups (small passerines, diurnal raptors, doves, pigeons, and upland game birds) that would not be expected to frequently encounter offshore operating WTGs associated with offshore wind development in large numbers. Second, factors such as landscape features and weather patterns that influence collision risk are different on the OCS compared to onshore wind facilities. Within the Atlantic Flyway, much of the bird activity is concentrated along the coastline concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014).
13136-148	In addition to better accounting for potential avian impacts in the Final EIS, as we have reiterated repeatedly herein, BOEM should require Vineyard Wind to undertake long-term Project monitoring before, during, and after construction for endangered species like Roseate Terns, Red Knots, and Piping Plover, for other species with a suspected high collision risk (such as shearwaters and petrels), for species of conservation obligation and at a minimum for the 10 species of migratory birds that cross the Atlantic through the OCS WDA area.	A detailed analysis of impacts to ESA-listed species (including roseate tern, piping plover, and Rufa red knot) is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. In all cases BOEM determined that the Vineyard Wind 1 Project "may affect, but is not likely to adversely affect" any of the ESA-listed species that may occur in the Project Area and no take of these species is anticipated. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. There are currently ongoing, extensive monitoring program for ESA-listed species that will continue

Index	Comment Text	Response
Number		
		outside of the construction of the Vineyard Wind 1 project. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants, including the species identified by the commenter, only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014).
13136-149	Post-construction fatality monitoring onshore is a key component of Tier 4 of the FWS Land-Based Wind Turbine Guidelines and many wind projects onshore conduct post-construction monitoring, especially on public lands managed by Department of Interior's Bureau of Land Management. The methodology of determining mortality rates at onshore wind projects consists of protocol level surveys around turbines to search for carcasses. The data are adjusted for searcher efficiency and carcass persistence among other extrapolations. While this protocol is challenging at sea for obvious reasons today, that is not reason enough to relieve the offshore wind industry from post-construction fatality monitoring, an obligation that the onshore wind industry has committed to and is required to fulfill. There is ongoing, rapid development of imaging and bird strike technologies used in the European Union and the United Kingdom, and such technologies are also being developed in the United States. Grant funding from the Department of Energy Office of Energy Efficiency and Renewable Energy (EERE), state energy agencies, and others supports technical and economic advancement of offshore and onshore wind. The Department of Energy Wind Energy Technologies Office invests in energy science research and development activities that enable the innovations needed to advance U.S. wind systems, reduce the cost of electricity and accelerate the deployment of wind power	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13136-150	These [bird strike] technologies are being tested at Block Island Wind Project and other offshore locations in the EU and UK and are making rapid gains in being effective, officially verified, commercially available, and affordable at scale in the near future, possibly at the same time as Vineyard Wind would be ready for construction and operation. The incorporation of these new monitoring technologies, and hopefully a standardized technology, should be a required element in the post-construction monitoring plan for Vineyard Wind, even if it must be phased in when available if not immediately upon operation. BOEM should standardize the methodology of using these new technologies across all projects in the Atlantic OCS in order to feed in mortality data, and possibly displacement data, into ongoing cumulative effects analyses, adaptive management strategies, to validate Collision Risk	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. Vineyard Wind has drafted a framework for their Bird Monitoring Plan which is included in Appendix F of the FEIS. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA- listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from

Index	Comment Text	Response
Number		
	Models, and to measure impacts on Endangered-listed species and species of conservation obligation by augmenting tracking data with data from on-site detection technology.	consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. As additional monitoring methods and technologies become available, BOEM could require their use in subsequent approval processes for future offshore development. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process. Additionally, cumulative impact analyses will be completed for each future development project, and updated information will be used.
13136-151	Currently the approved COP promises only that "Vineyard Wind is developing a framework for a post-construction monitoring program for birds. Using a standardized protocol, the Project will document any dead or injured birds found on vessels and structures during the O&M phase." This is contrary to the standard protocol for post-construction monitoring at onshore wind projects, where a radius from the turbine is proscribed as the search area and includes where birds may be expelled or thrown from the actual turbine structure and blades. The offshore structures anticipated to be installed by Vineyard Wind have very little available structure on which a dead or injured bird could land. Defining the structure as a search area, if it means the turbine base or nacelle (since no injured or dead birds could be found on the blades) is woefully inadequate. Only updated technology will detect bird strikes or mortalities in the appropriate range established by onshore post-construction mortality studies.	As suggested by the commenter, documenting dead birds on Project structures is included as part of the proposed monitoring framework. Vineyard Wind has drafted a framework for their Bird Monitoring Plan which is included in Appendix F of the FEIS. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA- listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures that can refine our understanding of impacts arising from the presence of WTGs on the Atlantic OCS. Post- construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13136-152	The Final EIS and the Record of Decision (ROD) for Vineyard Wind should specifically include the adoption of these monitoring technologies when they are verified and commercially available as part of the Vineyard Wind monitoring framework and protocol as well as monitoring frameworks for future projects permitted by BOEM, and support and encourage their development and funding for their development and testing beginning at Vineyard. The shared cost of development and implementation of these technologies encourage and with POEM if standardized would avail	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction
	an undue economic burden on individual projects.	and will be used to validate the collision risk modeling. Additionally, annual

Index	Comment Text	Response
Number		
		monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision.
13136-153	Without the data collected at onshore wind projects through mortality monitoring, for instance, BOEM would not be able to make even inexact statements in the SEIS, such as "[i]n the contiguous United States, bird collisions with operating WTGs are a relatively rare event, with an estimated 234,000 birds killed annually by 44,577 onshore turbines" and will not be able to update cumulative impacts analysis for future projects or analyses.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process. Additionally, cumulative impact analyses will be completed for each future development project, and undated information will be used
13136-154	The Final EIS should also correct the mistaken quote of Loss et al. (2013).	Section A.8.3.1 of the FEIS includes an updated discussion of Loss et al. (2013) BOEM intends to make the results of the post-construction
	= 234,000) birds are killed annually by collisions with monopole turbines in the contiguous U.S." Additionally, this data is seven years old and followed by rapid growth of the wind industry. We note that the Loss et al. (2013) report also states: "[d]espite measures taken to increase analytical rigor, the studies we used may provide a non-random representation of all data; requiring industry reports to be made publicly available would improve understanding of wind energy impacts." We support the requirement that industry mortality reports should be made publicly available and this requirement should be incorporated into the Final EIS and ROD.	monitoring available to the public, either by posting monitoring reports on Project-specific websites or making them available upon request.
13136-155	The Final EIS should provide more certainty that Lessees will use adaptive management for birds in the Best Management Practices in Table A-5 and collect "sufficiently robust" data.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of

Index	Comment Text	Response
Number		
		digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by devision makers and incorrected into the Record of Devision
12126 156	According to FWS Wind Turbing Guidelines (2012) DOI has adopted the	The referenced EWS Wind Turbing Guidelines are provided for onshore wind
13136-156	According to FWS Wind Turbine Guidelines (2012), DOI has adopted the National Research Council's 2004 definition of adaptive management, which states: Adaptive management promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an iterative learning process. Adaptive management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a 'trial and error' process, but rather emphasizes learning while doing. Adaptive management does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social, and economic goals, increases scientific knowledge, and reduces tensions among stakeholders.	The referenced FWS Wind Turbine Guidelines are provided for onshore wind turbines and are not applicable to offshore development. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. Vineyard Wind has drafted a framework for their Bird Monitoring Plan which is included in Appendix F of the FEIS. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post- construction monitoring will be developed in coordination with applicable stakeholders and will be finalized prior to Project commissioning. Additionally, annual monitoring reports will be used to assess the need for reasonable adjustments and revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory
	Further, the SEIS acknowledges that: Adaptive management could be used for many resources, particularly regulated fisheries and wildlife resources (including birds, benthic resources, finfish, invertebrates, essential fish habitat, marine mammals, and sea turtles), which would be closely monitored for potential impacts. If data collected are sufficiently robust, BOEM or other resource agencies could use the information obtained to support potential regulation changes, or new mitigation measures for future projects. (emphasis added). The Best Management Practice is stated vaguely as, "Lessees and grantees shall develop a monitoring program to ensure that environmental conditions are monitored during construction, operation, and decommissioning phases. The monitoring program requirements, including adaptive management	mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision. BOEM has worked with USFWS to develop standard operating conditions (SOCs) for commercial leases and as terms and conditions of plan approval and are intended to ensure that the potential for adverse impacts on birds is minimized. The SOCs have been analyzed in recent EAs and consultations for lease issuance and site assessment activities, and BOEM's recent approval of the Coastal Virginia Offshore Wind Technology Advancement Project (CVOW; http://www.boem.gov/Approval-of-VOWTAP-Research-Activities-Plan/). Some of the SOCs originated from Best Management Practices adopted in the Record of Decision for the 2007 Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate

Index	Comment Text	Response
Number	adverse impacts are mitigated."	BOEM and USFWS work with the lessees to develop post-construction plans
	Since the DEIS and SEIS are a project level analysis of the Vineyard Wind project, and there will be no other opportunity for the public to comment on the monitoring program methodology, the adaptive management strategies, or the mitigation (avoidance, minimization and compensatory mitigation) of "potential adverse impacts," the specific methodologies of the frameworks for monitoring, adaptive management and mitigation should all be outlined in the Final EIS.	aimed at monitoring the effectiveness of measures considered necessary to minimize impacts to migratory birds with the flexibility to consider the need for modifications or additions to the measures.
13136-157	The framework for adaptive management should include operational adjustments that are reasonable and cost effective and include advances in detection and avoidance technology. For example, the adaptive management framework should include "smart curtailment" to contain reasonable loss of energy production, seasonal adjustments based on mortality data as needed to compare with defined thresholds, and other operations that are proven to be effective in case of a rare event of mortality of a significant species or number of birds. These are practices used in adaptive management at some onshore wind facilities and in EU offshore wind facilities. Their incorporation into the Final EIS will permit BOEM to require their adoption as new technologies become available.	Given the low expected use of the WDA, the expected level of impacts does not warrant analyzing curtailment as a mitigation measure at this time. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for adjustments or reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision. The monitoring that is being proposed for The Vineyard Wind 1 Project will provide the necessary data to better assess avoidance and minimization
13136-158	Compensatory mitigation is another tool that should be used to offset adverse impacts of the Vineyard Wind project. Given the current technology, there are no viable options for effectively minimizing the impacts of the project to the extent needed to protect birds from harmful and long-term impacts. Furthermore, migratory birds pose significant conservation challenges, as many originate from other regions and actions to increase their populations require significant investment of time and resources to restore equivalent habitat. The breadth of species potentially affected, and the migratory nature of these species will require such environmental compensatory mitigation.	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource

Index	Comment Text	Response
Number		
		agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision. As additional monitoring methods and technologies become available, BOEM could require their use in subsequent approval processes for future offshore development.
13136-159	As we note above, the SEIS provides an inadequate analysis in quantifying the number of birds likely to be lost in collisions with turbines, and neglects to evaluate such impacts on ESA-listed species and nocturnal migrants. Further, the SEIS does not consider impacts to many of the species occurring in the area that are likely to be affected, resulting in what is likely a gross underestimate of the potential losses of birds. The number of birds affected is uncertain due to the lack of available technology to accurately measure impacts (e.g., collisions) on a species level or the fate of those birds after a collision event (e.g., injury, morbidity, or mortality).	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. As discussed, 177 species of birds may be present on the OCS from the Gulf of Maine to Florida. However, not all of these species would be expected to encounter operating WTGs. As discussed, there are only 55 species of birds that are expected be exposed to WTGs. Further, as shown by Viet et al. (2016) only 25 species have been identified in the MA WDAs during the course of surveys conducted during all seasons between November 2011 and January 2015. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. A detailed analysis of impacts to ESA-listed species (including roseate tern, piping plover, and Rufa red knot) is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. In all cases BOEM determined that the Vineyard Wind 1 Project "may affect, but is not likely to adversely affect" any of the ESA-listed species that may occur in the Project Area and no take of these species is anticipated. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey

Index	Comment Text	Response
Number		
		and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. As additional monitoring methods and technologies become available, BOEM could require their use in subsequent approval processes for future offshore development.
13136-160	We further note that in this interim period where incidental take of bird species protected by the MBTA is not being considered illegal, the agencies still have conservation obligations under frameworks apart from ESA and MBTA, as discussed above. Based on studies of ESA-listed species alone (discussed above), it seems likely that birds protected by federal laws will be killed in collisions with turbines under the currently anticipated industry build-out scenario. As such, compensatory mitigation should be provided for bird mortality resulting from this development, and particularly for species of conservation concern.	A detailed analysis of impacts to ESA-listed species (including roseate tern, piping plover, and Rufa red knot) is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. In all cases BOEM determined that the Vineyard Wind 1 Project "may affect, but is not likely to adversely affect" any of the ESA-listed species that may occur in the Project Area. Additionally, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on migratory birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision. These measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13136-161	Directed mitigation can result in meaningful beneficial outcomes. For example, the Montrose restoration, a \$63 million mitigation package	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not

Index	Comment Text	Response
Number		
	compensated for migratory seabirds in Mexico, efforts in part which led to the recovery and de-listing of Pacific Brown Pelican.	limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
13136-162	Mitigation more effectively compensates for impacts when conducted on a project-species and population-specific basis. This model is encouraged for offshore wind energy development impacts. However, if a project-by-project approach proves difficult to operationalize, a compensatory mitigation fund could be developed and administered by trustees of federal agencies. Following the model of other forms of development, this would most appropriately be funded by the developers whose actions are resulting in the impacts, with funding amounts based on likely or actual impacts (see below).	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to validate the collision risk modeling. Additionally, annual monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
13136-163	Quantifying compensatory mitigation for birds should initially be based on a revised estimate of the number of birds that will be killed in collisions with turbines (i.e., Table A-9 in the SEIS), including ESA-listed species and nocturnal migrants. Evaluating mitigation necessary to effectively compensate for these losses should utilize resource equivalency analysis, which accounts for the fact that birds at different life stages do not functionally equate in conservation importance (e.g., one additional hatchling does not functionally replace a breeding adult bird). This approach has been used extensively for addressing bird losses resulting from losses of birds to oil spills and contaminants in California. For example, under NEPA, the Damage Assessment and Restoration Plan / Environmental Assessment for the Luckenbach Spill called for a number of mitigation projects to	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. A detailed analysis of impacts to ESA-listed species (including roseate tern, piping plover, and Rufa red knot) is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.beom.gov///ingugred.Wind_Consultation_Documents/_ In all

Index	Comment Text	Response
Number		
Number	species originate, such as Mexico, Canada and New Zealand, in the amount of \$21M. Quantities and supporting analyses should be re-evaluated as collision monitoring data become available and additional mitigation provided as necessary.	cases BOEM determined that the Vineyard Wind 1 Project "may affect, but is not likely to adversely affect" any of the ESA-listed species that may occur in the Project Area and no take of these species is anticipated. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Robinson Willmott and Forcey 2014). Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the
13136-164	Seabirds are long lived, have delayed maturity and low fecundity; these unique life-history traits require substantial and long-term commitment to reach the offset needed. Given that compensatory mitigation is time- consuming from concept to success, we urge the developers and agencies to commit to this, and initiate action as soon as possible.	If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision.
13136-165	Little data exist on bats and offshore wind energy, although research over the last decade has shown that bat fatalities are common at land-based wind facilities. How bats use the offshore environment is not well understood and therefore BOEM should be conservative in its analysis, as a lack of available information on impacts to bats from offshore wind does not indicate impacts are unlikely. In fact, in Europe, in recognition that continued offshore wind build out in the North Sea has the potential to affect the population of a species of migratory bat (Pipistrellus nathusii), the Dutch Minister of Economic Affairs, in agreement with the Minister of Infrastructure and the Environment, issued a decree that all future wind farms in the Borssele Wind Energy Area must implement bat mitigation measures.	While there is little current literature regarding bat use of the OCS, the best available information, including Hatch et al. (2013), Pelletier et al. (2013), Stantec (2016), and Dowling et al. (2017) was used in the analysis. Further, comparison of the proposed offshore wind development on the Atlantic OCS with offshore wind development in the North Sea is not valid. The North Sea is generally surround by land and bats cross it during migration. However, on the Atlantic OCS, bats must originate from the Atlantic Coast and return to the Atlantic Coast. Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our

Index	Comment Text	Response
Number		_
		understanding of bat use of the OCS and WDA. Deployment configuration
		and number of detectors would be determined in consultation with applicable
		stakeholders. Additional mitigation and monitoring measures may arise from
		consultations and coordination with Federal and State resource agencies.
		These additional mitigation measures, including the use of thermal cameras
		to monitor bat collision, installation of radio telemetry receivers, or other
		measures, could be considered by decision makers and incorporated into the
		Record of Decision.
13136-166	The Vineyard Wind COP and SEIS do not reference the most comprehensive	The referenced publication (cited as Stantec 2016) is used throughout Section
	and recent survey of bats offshore in the United States, which was prepared	A.8.4.1 of the SEIS. As discussed in Section A.8.4.1 of the SEIS, existing
	for the Department of Energy (DOE) in 2016. This research found bats	data from meteorological buoys provide the best opportunity to further define
	present at all surveyed locations in the mid-Atlantic, Gulf of Maine, and	bat use of open-water habitat far from shore where Vineyard Wind 1 would
	Great Lakes, with bats detected up to 130 kilometers from the mainland,	site the proposed Project WTGs. Despite significant distance from any
	though bat activity generally declined with increased distance from shore.	suitable terrestrial habitat, all five meteorological buoys in the Gulf of Maine
	BOEM should update their analyses using this research as it contradicts some	detected bats; however, detection rates were the lowest at these sites and use
	of the assumptions and statements about bats' use of the offshore	was sporadic when compared to sites located on offshore islands (Stantec
	environment presented in the SEIS and updated COP.	2016). Therefore, no change to the FEIS is warranted.
13136-167	Vineyard Wind's COP states that the federally endangered Indiana bat	Early coordination with applicable resource agencies, including the USFWS,
	(Myotis sodalis) would not be exposed to the Project because it is not found	identified the threatened and endangered species that may be potentially
	in eastern Massachusetts, and, as such, it is excluded from further analysis in	affected by the proposed Vineyard Wind 1 Project. Pursuant to ongoing
	the DEIS and SEIS. However, data submitted to Motus indicates that, in	consultation with the USFWS regarding ESA listed species, Indiana bats
	2015, a tagged Indiana bat was detected on Cape Cod and Nantucket (see	were not included in the BA, DEIS, or the SEIS due to a lack of verified
	Figure 3). Given the proximity of this detection to the Project Area and the	occurrences. Therefore, no change to the FEIS is warranted. A detailed
	cross-water movements made by the tagged bat (between Cape Cod and	analysis of impacts to ESA listed species, including the northern long-eared
	Nantucket), BOEM should consult with U.S. Fish and Wildlife Service	bat is provided in the revised BA that was submitted to the USFWS, which
	(USFWS) about potential impacts to Indiana bats and these impacts should	can be found at the following link: https://www.boem.gov/Vineyard-Wind-
	be analyzed in the Final EIS.	Consultation-Documents/.
13136-168	Assumptions that the COP and SEIS make about bat use of the offshore	Section A.8.4.1 of the SEIS included a discussion of bat use of offshore
	environment, exposure risk, and avoidance are not based on the best available	habitats and is based on currently available literature. Therefore, no change to
10105150	science and lead to a likely underestimation of risk for bats.	the FEIS is warranted.
13136-169	The COP and SEIS describe the risk of turbine strikes for bats as low, with	As discussed in Section A.8.4.1 of the SEIS, existing data from
	the impacts from Vineyard Wind being negligible, because cave-hibernating	meteorological buoys provide the best opportunity to further define bat use of
	bats, such as Myotis species, are generally not observed offshore and have	open-water habitat far from shore where Vineyard Wind 1 would site the
	never been observed more than 11.5 km offshore in the mid-Atlantic. This	proposed Project WTGs. Despite significant distance from any suitable
	characterization is likely downplaying the risk to cave bats, as they seem to	terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected
	be more commonly found offshore and at further distances from the mainland	bats; however, detection rates were the lowest at these sites and use was
	than described in the COP and SEIS. Bat acoustic survey efforts in the mid-	sporadic when compared to sites located on offshore islands (Stantec 2016).
	Atlantic identified Myotis calls at 63% of sites surveyed and Myotis species	Of the relatively few (372) bat passes recorded at offshore buoys, only 14 (4
	were present at 89% of sites surveyed across the Gulf of Maine, mid-	percent) were attributed to cave bats (Stantec 2016), confirming the very

Index	Comment Text	Response
Number		
	Atlantic, and Great Lakes. Data in Motus also indicate that Indiana bats, little brown bats (M. lucifugus), and eastern small-footed bats (M. leibii) have made crosswater flights near Cape Cod.	limited use of open water habitats by cave bats. Therefore, no change to the FEIS is warranted.
13136-170	Recent survey efforts on Martha's Vineyard also detected little brown bats making offshore movements, with one bat traveling from Martha's Vineyard to Cape Cod. The presence of the federally threatened northern long-eared bats (M. septentrionalis) on both Martha's Vineyard and Nantucket indicates that this species can cross open water and the species has been tracked making long distance flights over water in the Gulf of Maine. However, citing research by Dr. Dowling, BOEM claims offshore movements of northern long-eared bats have not been detected and so exposure to the project area would be insignificant. Although none of Dr. Dowling's tracked northern long-eared bats were detected making flights between Martha's Vineyard and the mainland, she cautions that "[f]urther study is warranted to determine whether northern long-eared bats are making offshore movements, particularly during late summer and early fall when little brown bats appear to depart the island."	As discussed in Section A.8.4.1 of the SEIS, all five meteorological buoys in the Gulf of Maine detected bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Of the relatively few (372) bat passes recorded at offshore buoys, only 14 (4 percent) were attributed to cave bats (Stantec 2016), confirming the very limited use of open water habitats by cave bats. Section A.8.4.1.1 of the FEIS has been updated to include this information. Further, as discussed in Section A.8.4.1 of the SEIS, offshore movements documented by Dowling et al. (2017) were consistent with the migratory chronology of the species, and all movements were towards the mainland and away from the offshore portions of the Vineyard Wind 1 Project area. While Dowling et al. (2007) suggests that further "study is warranted" to detect offshore movements of northern long-eared bats during late summer and early fall, these movements, if any, would be towards shore, and not towards the Vineyard Wind 1 WDA and would change the assessment provided in the FEIS
13136-171	Furthermore, Myotis calls have been repeatedly detected further offshore than the stated 11.5 km in the mid-Atlantic. Peterson et al. (2016), in the aforementioned research contracted by DOE, identified Myotis calls at three mid-Atlantic survey sites more remote than 11.5 km, including at the Chesapeake Light Tower, 24.8 km from the mainland. In the Gulf of Maine, Myotis calls were repeatedly recorded at the most remote site surveyed, Mount Desert Rock, a 0.8 ha island 41.6 km off the mainland. Not only were Myotis present at the most remote sites monitored, they were less affected by distance from the mainland than eastern red bats (Lasiurus borealis), which are long-distance migrants.	As discussed in Section A.8.4.1 of the SEIS, existing data from meteorological buoys provide the best opportunity to further define bat use of open-water habitat far from shore where Vineyard Wind 1 would site the proposed Project WTGs. Despite significant distance from any suitable terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Of the relatively few (372) bat passes recorded at offshore buoys, only 14 (4 percent) were attributed to cave bats (Stantec 2016), confirming the very limited use of open water habitats by cave bats. Therefore, no change to the FEIS is warranted.
13136-172	More research is needed to better understand how cave bats are using the offshore environment but the current available science does not support dismissing cave bat exposure to the wind development area.	As discussed in Section A.8.4.1 of the SEIS, existing data from meteorological buoys provide the best opportunity to further define bat use of open-water habitat far from shore where Vineyard Wind 1 would site the proposed Project WTGs. Despite significant distance from any suitable terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Of the relatively few (372) bat passes recorded at offshore buoys, only 14 (4 percent) were attributed to mytois species (Stantec 2016), confirming the very limited use of open water habitats by cave bats. Therefore, no change to

Index	Comment Text	Response
Number		
		the FEIS is warranted. Further, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision
13136-173	Both the COP and the SEIS rely on the seasonal use of the offshore	Section A 8 3.1 of the SEIS discussed the use of offshore habitats and is
13136-173	Both the COP and the SEIS rely on the seasonal use of the offshore environment by migratory tree bats for their rationale that impacts to these bats would be negligible. The extrapolation that exposure to WTGs being limited to spring and fall migration period means that fatalities would not be significant ignores the best available science on bats and wind energy interactions from both land-based wind energy in North America and from offshore wind energy in Europe. The majority of migratory tree bats fatalities from land-based wind energy occur during the spring and fall migration period. Despite this predominantly seasonal exposure, recent demographic modeling for hoary bats (Lasiurus cinereus), the bat species most frequently killed by land-based wind turbines in North America, shows that the 2014 land-based wind energy build out is sufficient to cause a 90% decline in hoary bat populations over the next 50 years—population-level declines that could occur during the lifetime of Vineyard Wind—and these declines are associated with a 22 percent risk of extinction if widespread mitigation measures are not adopted. Although this research focused on hoary bats, the study authors caution that other migratory tree bats, such as eastern red (Lasiurus borealis) and silver-haired bats (Lasionycteris noctivagans), which also experience high levels of fatalities at land-based wind facilities, might also experience population-level declines. With limited research available on bats offshore, BOEM cannot dismiss the evidence from land-based wind that seasonal interactions with turbines can cause significant impacts on migratory tree bats.	Section A.8.3.1 of the SEIS discussed the use of offshore habitats and is based on currently available literature. Given the limited expected use of offshore habitats and the limited number of individuals that would be expected to encounter operating WTGs, population-level declines would not be expected to occur. Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-174	Although migratory tree bats are less prevalent over the OCS than land and	As discussed in Section A.8.4.1 of the SEIS, existing data from
	their presence seems to decrease with distance from shore, there is not	meteorological buoys provide the best opportunity to further define bat use of
	enough research to support the claims in the SEIS that use of offshore habitat	open-water habitat far from shore where Vineyard Wind 1 would site the
	is thought to be limited and "very few individuals would be expected to	proposed Project WTGs. Despite significant distance from any suitable
	encounter operating WTGs" and that the "likelihood of collisions is expected	terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected

Index	Comment Text	Response
Number	to be low." In offshore bat surveys of the Great Lakes, Gulf of Maine, and mid-Atlantic, migratory tree bats were widespread, with eastern red bats detected at 97 percent of all surveyed sites (and 100 percent of sites in the mid-Atlantic), including the most remote fixed site (41.6 km from mainland) and potentially on shipboard surveys over 100 km offshore. Eastern red bats alone accounted for 40 percent of all detected bat activity offshore. Hoary	bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our
	bats and silver-haired bats had less total activity offshore but were still widespread, found at 95 percent and 89 percent of all sites, respectively. Data in Motus also indicate eastern red bats and hoary bats have made cross-water flights near Cape Cod. Furthermore, seasonal exposure of Nathusius's pipistrelle (Pipistrellus nathusii) to expected build out of turbines in the North Sea during their late summer/autumn migration was considered sufficient exposure as to affect Nathusius's pipistrelle populations, triggering operational curtailment measures between August 15 and October 1. This further belies claims that seasonal exposure of bats precludes significant impacts.	understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-175	The SEIS relies on bats avoiding turbines in their impact analysis, claiming This reliance on avoidance to minimize impacts does not reflect the best available science on bats and wind energy interactions from both land-based wind energy in North America and from offshore wind energy in Europe.	Section A.8.4.1 of the FEIS includes an updated discussion and associated citations relating to the lack of landscape features that would serve to funnel bats and increase exposure to operating WTGs. Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional required measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be included in the Record of Decision.
13136-176	The assumption that bats will avoid turbines offshore does not align with their behavior at land-based wind facilities. Bats, especially migratory, tree- roosting species like the eastern red, hoary, and silver-haired bats, are believed to be attracted to land-based wind turbines and have been recorded altering flight paths to approach turbines. Although no scientific consensus exists on why bats are attracted to onshore wind facilities, theories include that bats may perceive turbines as trees to roost in and bats may seek insect prey that congregate near turbines. This attraction behavior puts bats at increased risk for collision with turbine blades and whether such behavior could occur at offshore wind turbines merits careful consideration.	Section A.8.4.1.1 of the FEIS has been updated to include a discussion of bats being attracted to WTGs. As discussed, there appears to be some level of attraction to onshore WTGs, and several authors (e.g. Kunz et al. 2007, Cryan and Barclay 2009, and Cryan et al. 2014) have provided some hypothesis as to why this the case. However, to date, no definitive conclusion regarding this apparent attraction has been documented, despite extensive studies at onshore wind facilities. Section A.8.4.1 of the FEIS includes an updated discussion and associated citations relating to the lack of landscape features that would serve to funnel bats and thereby increase exposure to operating WTGs. Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats,

Index	Comment Text	Response
Number		
13136-177	Limited research from Europe suggests that bats may be attracted to offshore wind turbines as foraging and roosting habitat, with the caveat that this research was for nearshore wind facilities and a different suite of bat species. However, the COP dismisses that similar behavior could be observed in the WDA because the turbines are further offshore and not near landing areas, like islands, which means that there are likely fewer bats in the WDA ("no nearby landing areas, e.g. islands, which might otherwise increase the presence of bats in the WDA"). There is no research presented to support this claim and, alternatively, bats could be attracted to these remote turbines from greater distances if they represent a sparse roosting resource or concentrate insect prey.	including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional required measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be included in the Record of Decision. The monitoring that is being proposed for the Vineyard Wind 1 Project will provide the necessary data to better assess avoidance and minimization measures for future offshore wind development. As discussed in Section A.8.4.1 of the SEIS, existing data from meteorological buoys provide the best opportunity to further define bat use of open-water habitat far from shore where Vineyard Wind 1 would site the proposed Project WTGs. Despite significant distance from any suitable terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Section A.8.4.1 of the FEIS includes an updated discussion and associated citations relating to the lack of landscape features that would serve to funnel bats and increase exposure to operating WTGs. Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional required measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be included in the Record of Decision. The monitoring that is being proposed f
		assess avoidance and minimization measures for future offshore wind
13136 179	Although more research is needed to characterize how hots are using areas in	development.
13136-1/8	Although more research is needed to characterize how bats are using areas in the WDA and the OCS, it would be reasonable to assume that bats—	bats being attracted to WTGs. As discussed, there appears to be some level of
	particularly migratory, tree-roosting species that seem to be attracted to land- based wind turbines—may experience a similar attraction to turbines offshore	attraction to onshore WTGs, and several authors (e.g. Kunz et al. 2007, Cryan and Barclay 2009, Cryan et al. 2014) have provided some hypothesis
	and that these turbines might be particularly attractive due to representing	as to why this the case. However, to date, no definitive conclusion regarding
	sparse resources, which could put bats at increased risk for collision. If	this apparent attraction has been documented, despite extensive studies at
	offshore wind turbines are attractive to bats, their potential impact to bats	onshore wind facilities. Section A.8.4.1 of the FEIS includes an updated
	may be dramatically underestimated in the COP and SEIS.	discussion and associated citations relating to the lack of landscape features
		that would serve to funnel bats and increase exposure to operating WTGs.

Index	Comment Text	Response
Number		
13136-179	The COP and SEIS do not adequately reflect the risk to bats offshore, given that cave bats are found more often and further offshore than described, seasonal exposure to WTGs does not preclude serious impacts, and that bats may be attracted to offshore wind facilities. Determining risk and adaptively managing to minimize impacts relies on monitoring, but traditional fatality monitoring is not feasible offshore. Given the challenges of conducting fatalities assessments at offshore sites, many dead or injured bats would most likely go unrecorded, either falling into the water or becoming prey to marine scavengers or predators. BOEM's assessment of the impacts to bats should, therefore, be conservative, and employ the best available scientific methods, such as autodetection, acoustic monitoring at nacelle height, targeted tagging of bats, and thermal imaging technology. BOEM should also support research into monitoring methods for bats that are better suited to the offshore environment. (Monitoring and research needs are discussed further herein, see e.g. Section I.C.)	Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional required measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be included in the Record of Decision. The monitoring that is being proposed for the Vineyard Wind 1 Project will provide the necessary data to better assess avoidance and minimization measures for future offshore wind development. As discussed in Section A.8.4.1 of the SEIS, existing data from meteorological buoys provide the best opportunity to further define bat use of open-water habitat far from shore where Vineyard Wind 1 would site the proposed Project WTGs. Despite significant distance from any suitable terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation fradic telemetry receivers, or other measures could be considered by decision makers
12126 100		Record of Decision.
13136-180	The revised project design envelope (PDE) for Vineyard Wind allows for	Section A.8.4.2 of the FEIS has been updated to acknowledge the uncertainty
	larger 14 MW turbines but the SEIS claims that "[c]hanges to the design	around the degree to which bat mortality could increase with increasing
	capacity of the WTGs proposed in the Vineyard Wind COP (Epsilon 2020)	WTG height. While Barclay et al. (2007) stated that bat mortality increases
	would not alter the maximum-case scenario of potential impacts on bats for	exponentially with tower height, a recent review by Thompson et al. (2017)
	the Proposed Action and all other action alternatives because the maximum-	tound no evidence that turbine height has any effect on bat mortality in a
	case scenario involves the maximum number of WTGs in the PDE".	review of 40 studies/wind facilities in the United States. Additionally,
	Although no research has been done on tower height and bat fatalities in the	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and
	offshore environment, research onshore has shown that bat mortality	monitoring measures that would be implemented to avoid, minimize, and
	increases with tower height, meaning that development approaches that favor	mitigate adverse impacts on bats, including deployment of acoustic bat

Index	Comment Text	Response
Number		
	fewer, larger turbines may be detrimental to bats. A study on northwestern European wind facilities found that bat fatalities increased with tower height and rotor diameter and a meta-analysis of North American wind facilities found that bat fatalities increased exponentially with tower height (although this study did not find that rotor diameter affected fatalities). Insufficient data exist to determine where (if any) a tradeoff exists between decreasing the number of towers vs. increasing their height, but current research does not support the claim that Alternative E (discussed in §A.8.4.2.3), changes to the PDE to allow fewer, larger turbines, or cumulative build out scenarios with fewer, larger turbines would have decreased impacts on bats. Therefore the final EIS should note the scientific uncertainty surrounding the degree to which bat mortality may increase with tower height and should adjust the language accordingly regarding bat impacts.	detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-181	Because there is so little research on bats offshore, impacts to bats are often only given cursory consideration. However, bat species on the east coast are facing stressors on land that may make their populations more vulnerable to additional take offshore. The northern long-eared bat and the Indiana bat are listed as threatened and endangered under the Endangered Species Act (ESA) due, in part, to high rates of mortality from white-nose syndrome, a highly pathogenic fungus. A judge recently ruled that the USFWS's decision to list the northern long-eared bat as threatened (rather than endangered) was arbitrary and capricious and failed to consider the best available scientific evidence; that listing decision has been remanded to the agency so the status of the northern long-eared bat could change in the near future.	A detailed analysis of impacts to ESA listed species, including the northern long-eared bat is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additionally, Section A.8.4.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation fradio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-182	Similarly, numerous other east coast bat species, such as the little brown bat, eastern small-footed bat, big brown bat (Eptesicus fuscus), and tricolored bat (Perimyotis subflavus) are all affected by white-nose syndrome. Due to white-nose syndrome mortality, the USFWS recently issued a positive 90-day finding for the petition to list the tricolored bat and USFWS staff have communicated their intent to assess the little brown bat for potential ESA-listing.	The species identified by the commenter are all cave bat species. As discussed in Section A.8.4.1 and A.8.4.2 of the SEIS these species are not expected to encounter operating WTGs and mortality, if any, would be expected to be negligible based on the expected absence of these species on the Atlantic OCS.
13136-183	The three migratory bat species on the east coast, the silver-haired, eastern red, and hoary bat, are the bat species most highly impacted by land-based wind energy development, representing almost 80% of all bats killed at wind facilities in North America. Recent and ongoing research has implicated wind	As discussed in Sections 3.3.3 of the DEIS, A.8.4 of the SEIS, some possibility of silver-haired, red, Seminole, and hoary bats (all tree bats) encountering operating WTGs on the Atlantic OCS exists. However, as described in these sections, use is expected to be low. Given the limited

Index	Comment Text	Response
Number		
	energy as causing potential population-level declines for hoary bats and eastern red bats, and the two species are expected to be recommended for listing in Canada in the near future. East coast bat species, such as little brown bats, tricolored bats, big brown bats, northern long-eared bats, Seminole bats (Lasiurus seminolus), and Indiana bats have also been documented killed by wind turbines.	expected use of offshore habitats and the limited number of individuals that would be expected to encounter operating WTGs, population-level declines would not be expected to occur. The remaining species identified by the commenter (little brown, tricolored, big brown and northern long-eared bats) are all cave bat species. As discussed in Section A.8.4.1 and A.8.4.2 of the SEIS these species are not expected to encounter operating WTGs and mortality, if any, would be expected to be negligible based on the expected absence of these species on the Atlantic OCS. A detailed analysis of impacts to ESA listed species, including the northern long-eared bat is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation- Documents/. Additionally, Section A.8.4.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-184	Because of these existing stresses on bat species, accurately accounting for how offshore wind could affect their populations is critical. The cumulative impacts analysis in the SEIS has many of the issues discussed above, including the need to update the analysis to include the best available science, that cave bats are likely more common offshore than the COP and SEIS represent, that seasonal use of the offshore environment by migratory bats does not imply low exposure and low impact, the failure to account for bat attraction to turbines, and that larger turbines may kill more bats than smaller turbines. Accordingly, BOEM should update their cumulative impacts analysis for bats to reflect the issues discussed above in Section II.G.3.	While there is little current literature regarding bat use of the OCS, the best available information, including Hatch et al. (2013), Pelletier et al. (2013), Stantec (2016), and Dowling et al. (2017) was used in the analysis. As discussed in Section A.8.4.1 of the SEIS, existing data from meteorological buoys provide the best opportunity to further define bat use of open-water habitat far from shore where Vineyard Wind 1 would site the proposed Project WTGs. Despite significant distance from any suitable terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Of the relatively few (372) bat passes recorded at offshore buoys, only 14 (4 percent) were attributed to cave bats (Stantec 2016), confirming the very limited use of open water habitats by cave bats. Section A.8.4.1.1 has been updated to include this information. Section A.8.4.1.1 of the FEIS has been updated to include a discussion of bats being attracted to WTGs. As discussed, there appears to be some level of attraction to onshore WTGs, and several authors (e.g. Kunz et al. 2007, Cryan and Barclay 2009, Cryan et al.

Index	Comment Text	Response
Number		
		2014) have provided some hypothesis as to why this the case. However, to date, no definitive conclusion regarding this apparent attraction has been documented, despite extensive studies at onshore wind facilities. Section A.8.4.1 of the FEIS includes an updated discussion and associated citations relating to the lack of landscape features that would serve to funnel bats and thereby increase exposure to operating WTGs. Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-185	The Geographic Analysis Area for cumulative impacts to bats is defined as 100 mi offshore and 5 mi inland, which was revised down from the cumulative impact scenario provided in the DEIS, which extended 100 mi inland. The rationale provided for this change was that "individuals that would potentially be exposed to the proposed Project during migration would not be expected to utilize habitats far inland, and projects that occur far inland are not expected to affect the same individuals as the proposed Project." BOEM presents no research in the SEIS to support the assumption that bats found offshore exclusively use near-coast habitat on land to support this more limited geographic scope.	Given that bats typically follow a relatively straight line path from winter hibernacula to summer maternity sites (Roby et al. 2019), BOEM believes it is reasonable to assert that individuals that would potentially be exposed to the proposed Project during migration would not be expected to utilize habitats far inland, and projects that occur far inland are not expected to affect the same individuals as the proposed Project. However, BOEM has reverted the inland geographic scope to 100 mines in FEIS for purposes of providing a more precautionary analysis.
13136-186	Hoary bats, which are capable of long distance flights over water, have been recorded traveling over 1,000 km and are thought capable of migrations in excess of 2,000 km. Furthermore, in addition to little brown bats, data in Motus tracks movements of individual silver-haired bats, eastern red bats, hoary bats, eastern small-footed bats, and Indiana bats from coastal areas on the east coast to areas in excess of 100 mi inland. These movements seem to refute BOEM's assertion that bats that could be exposed to offshore wind energy projects would not be found far inland (and therefore exposed to land-based wind energy facilities) and instead support that the original geographic scope of 100 mi inland was more appropriate.	Given that bats typically follow a relatively straight line path from winter hibernacula to summer maternity sites (Roby et al. 2019), BOEM believes it is reasonable to assert that individuals that would potentially be exposed to the proposed Project during migration would not be expected to utilize habitats far inland, and projects that occur far inland are not expected to affect the same individuals as the proposed Project. However, BOEM has reverted the inland geographic scope to 100 mines in FEIS for purposes of providing a more precautionary analysis.
13136-187	BOEM should conduct a thorough review of the literature on bat migration and radio- and GPS-tagged bats and select a boundary that better reflects the	Given that bats typically follow a relatively straight line path from winter hibernacula to summer maternity sites (Roby et al. 2019), BOEM believes it

Index	Comment Text	Response
Number		
	potential habitat use of exposed bats. This revised boundary will likely require an updated analysis to reflect that bats exposed to offshore wind projects could not only be exposed to multiple offshore wind facilities but also be exposed to land-based wind energy projects.	is reasonable to assert that individuals that would potentially be exposed to the proposed Project during migration would not be expected to utilize habitats far inland, and projects that occur far inland are not expected to affect the same individuals as the proposed Project. However, BOEM has reverted the inland geographic scope to 100 miles in FEIS for purposes of providing a more precautionary analysis.
13136-188	For the reasons discussed earlier, the cumulative impacts assessment likely seriously underestimates risk to bats. While these comments provide some additional resources on bat movement offshore and bat interactions with wind turbines for BOEM to include in their analysis, there remains insufficient research on bats and offshore wind to accurately assess cumulative risk and impact from the described 22 GW buildout scenario.	While there is little current literature regarding bat use of the OCS, the best available information, including Hatch et al. (2013), Pelletier et al. (2013), Stantec (2016), and Dowling et al. (2017) was used in the analysis. As discussed in Section A.8.4.1 of the SEIS, existing data from meteorological buoys provide the best opportunity to further define bat use of open-water habitat far from shore where Vineyard Wind 1 would site the proposed Project WTGs. Despite significant distance from any suitable terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Additionally, Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-189	Because of this knowledge gap, it is imperative that BOEM require offshore wind facilities to commit to pre, during, and post-construction monitoring and to integrate novel technology for monitoring as it becomes available. Although we now know that population-level impacts to bats are possible from land-based wind, these impacts to bats from onshore wind energy were not anticipated and were only discovered because of required monitoring for avian impacts. While post-construction monitoring should occur at the project-level, BOEM and their partner agencies should support more programmatic surveys of bat use of the OCS and WEAs. Should further monitoring and research efforts reveal that impacts to bats are non-negligible, BOEM and other agencies should support the development and deployment of minimization strategies and deterrent technologies	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision. The monitoring that is being proposed for the Vineward Wind 1

Index	Comment Text	Response
Number		Project will provide the necessary data to better assess avoidance and minimization measures for future offshore wind development.
13136-190	The following is a list of recommendations for BOEM and its partner agencies to support successful understanding of offshore wind's impact on bats, modified and expanded upon from Peterson et al. (2016). BOEM and its partner agencies should: Support supplemental field surveys for bats on the OCS, using similar methodology as described in Peterson et al. (2016).	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation that would be implemented to avoid, minimize, and mitigate adverse impacts on bats as well as monitoring measures, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision. Data collection and analysis can be conducted similarly to Stantec 2016 (cited as Peterson et al. 2016 in the comment) to allow comparison to previous efforts to determine bat use of the Atlantic OCS and BOEM will consider this during the development of the monitoring plan.
13136-191	[BOEM and its partner agencies should:] BOEM should require acoustic detectors to be placed at nacelle height on a subset of turbines constructed along the Atlantic OCS and require that the data be made publicly available.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation that would be implemented to avoid, minimize, and mitigate adverse impacts on bats as well as monitoring measures, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision. BOEM intends to make the results of the post-construction monitoring available to the public, either by posting monitoring reports on Project-specific websites or making them available upon request.
13136-192	[BOEM and its partner agencies should:] Support research to determine whether it is possible to improve acoustic monitoring to enable better species identifications, such being able to differentiate calls between the ESA-listed northern long-eared bat and other Myotis species.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat

Index	Comment Text	Response
Number		
		collision, installation of radio telemetry receivers, or other measures, could
		be considered by decision makers and incorporated into the Record of
12126 102		
13136-193	[BOEM and its partner agencies should:]	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and
	Support continued advances in radio telemetry equipment, nanotag	monitoring measures that would be implemented to avoid, minimize, and
	transmitters, and GPS tags so that more bats can be tracked offshore (e.g.	mitigate adverse impacts on bats, including deployment of acoustic bat
	support the development of smaller GPS tags with longer battery lives).	detectors on a subset of WTGs and/or ESP, to refine our understanding of bat
		use of the OCS and WDA. Deployment configuration and number of
		detectors would be determined in consultation with applicable stakeholders.
		Additional mitigation and monitoring measures may arise from consultations
		and coordination with Federal and State resource agencies. These additional
		mitigation measures, including telemetry studies to further refine bat use of
		offshore environments, or other measures, could be considered by decision
12126 104		makers and incorporated into the Record of Decision.
13130-194	[BOEM and its partner agencies should:]	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and
	Support deploying Motus tower and/or other nanotag receiving towers in the	monitoring measures that would be implemented to avoid, minimize, and
	coastal and olishore environment, including on structures in the wDA.	detection and a sub-st of WTC and a ESP to refuse survey denotes the office
		detectors on a subset of wirds and/or ESP, to refine our understanding of bat
		use of the OCS and wDA. Deployment configuration and number of
		Additional mitigation and monitoring maggings may arise from consultations.
		Additional mitigation and monitoring measures may arise from consultations
		mitigation measures, including the use of thermal comerces to monitor bet
		collision installation of radio telemetry receivers and/or towers, or other
		measures, could be considered by decision makers and incorporated into the
		Record of Decision
13136-105	[BOFM and its partner agencies should:]	Section A 8.4.2 and Annendix D of the FEIS includes undated mitigation and
15150-195	Support efforts to tag additional individual bats with nanotag transmitters and	monitoring measures that would be implemented to avoid minimize and
	GPS tags	mitigate adverse impacts on bats including deployment of acoustic bat
	010 mgs.	detectors on a subset of WTGs and/or ESP to refine our understanding of bat
		use of the OCS and WDA. Deployment configuration and number of
		detectors would be determined in consultation with applicable stakeholders
		Additional mitigation and monitoring measures may arise from consultations
		and coordination with Federal and State resource agencies. These additional
		mitigation measures, including the deployment of nametags or gps tags on
		individual bats, or other measures, could be considered by decision makers
		and incorporated into the Record of Decision.

Index	Comment Text	Response
Number		
13136-196	[BOEM and its partner agencies should:] Support the development of bat monitoring technology for offshore WTGs, such as strike detection technology and thermal video.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-197	[BOEM and its partner agencies should:] Support research on and testing of bat deterrent devices for offshore WTGs, such as ultraviolet lighting or ultrasonic noise emitters.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use bat deterrent devices, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-198	[BOEM and its partner agencies should:] Require offshore wind projects to support testing and deployment of best available monitoring and deterrent technologies, once developed.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, the use of bat deterrent technologies, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-199	The Final EIS and the ROD for Vineyard Wind should specifically include the adoption of monitoring technologies when they are verified and commercially available as part of the Vineyard Wind monitoring framework and protocol as well as monitoring frameworks for future projects permitted by BOEM, and support and encourage their development and funding for their development and testing beginning at Vineyard. The shared cost of development and implementation of these technologies across all lessees and	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations

Index	Comment Text	Response
Number	with BOEM, if standardized, would avoid an undue economic burden on individual projects.	and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of
13136-200	Many of the above listed recommendations are aimed at filling in knowledge gaps about bats' use of the offshore environment. These survey efforts will likely provide critical information about bats' use of these WEAs which will be necessary for effective mitigation. However, bat activity in the WEAs prior to turbine construction may not accurately predict bat fatalities during turbine operation: At land-based wind facilities, pre-construction bat activity surveys are poorly correlated with post-construction fatalities. Because of this, the commitment to post-construction monitoring is critical to yielding better understanding about how bats interact with offshore wind turbines. An important component to this will be programmatically supporting the tagging of individual bats, such as through Motus, requiring receiving towers in the WDAs, and requiring installation of acoustic detectors, preferably at nacelle height.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation that would be implemented to avoid, minimize, and mitigate adverse impacts on bats as well as monitoring measures, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-201	Data of bat activity and calls within the rotor-swept zone of offshore WTGs would allow better understanding of which bat species are at risk and during what environmental conditions, which can inform mitigation measures. Because bat activity offshore seems to be predominantly restricted to warm, slow wind speed nights and is highly seasonal, if bat minimization measures are needed and targeted curtailment is shown to be effective in the offshore environment, periods of operational curtailment could be restricted to these highest risk times to decrease loss in energy generation.	While there is little current literature regarding bat use of the OCS, the best available information, including Hatch et al. (2013), Pelletier et al. (2013), Stantec (2016), and Dowling et al. (2017) was used in the analysis. As discussed in Section A.8.4.1 of the SEIS, existing data from meteorological buoys provide the best opportunity to further define bat use of open-water habitat far from shore where Vineyard Wind 1 would site the proposed Project WTGs. Despite significant distance from any suitable terrestrial habitat, all five meteorological buoys in the Gulf of Maine detected bats; however, detection rates were the lowest at these sites and use was sporadic when compared to sites located on offshore islands (Stantec 2016). Given the low expected use of the WDA, the expected level of impacts does not warrant analyzing curtailment as a mitigation measure at this time. As Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation that would be implemented to avoid, minimize, and mitigate adverse impacts on bats as well as monitoring measures, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal cameras to monitor bat collision, installation of radio telemetry receivers, or other measures, could

Index	Comment Text	Response
Number		be considered by decision makers and incorporated into the Record of Decision. The monitoring that is being proposed for The Vineyard Wind 1 Project will provide the necessary data to better assess avoidance and minimization measures such as curtailment for future offshore wind development.
13136-202	In addition to operational curtailment, it is possible that deterrent technologies to prevent bats from approaching wind turbines could be useful in minimizing bat fatalities offshore. Deterrent technologies are being developed for land-based turbines, including turbine coatings (to counteract any attraction to smooth surfaces which might be perceived as water), ultraviolet lighting (which many bat species can see), and ultrasonic noise emitters (to possibly 'jam' bats' radars and make wind facilities unappealing to bats). One of the ultrasonic deterrent technologies, NRG Systems, has been commercially deployed at land-based wind facilities. None of these technologies have been assessed yet in the offshore environment nor on turbines with such large swept areas, which may present a challenge for effective deterrent use offshore.	Section A.8.4.2 and Appendix D of the FEIS includes updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on bats, including deployment of acoustic bat detectors on a subset of WTGs and/or ESP, to refine our understanding of bat use of the OCS and WDA. Deployment configuration and number of detectors would be determined in consultation with applicable stakeholders. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of deterrent technologies, such as the ultrasonic deterrent that has been deployed on onshore turbines, or other measures, could be considered by decision makers and incorporated into the Record of Decision.
13136-203	The SEIS determines that the overall cumulative impacts on demographics, employment, and economics from the full development scenario would likely only qualify as "minor and minor beneficial." The Final EIS should include a more comprehensive accounting of the significant job creation and other economic benefits that will result from the development of offshore wind energy in the U.S.	Section 3.6 of the FEIS has been updated to include additional information from two additional studies projecting offshore wind employment and investment, to provide updates on improvements to port facilities within the geographic analysis area, and to include regional GDP data for comparison. Based on the additional data and analysis, the FEIS concludes that the overall cumulative impacts on employment and economics would be "minor and moderate beneficial."
13136-204	As has been demonstrated in Europe over 30 years, the construction and operation of offshore wind projects supports tens of thousands of jobs in both coastal and inland communities across the supply chain of this booming industry. To ignore these significant opportunities for the U.S. workforce results in a major underestimation of the positive economic benefits that will flow from launching a local offshore wind industry.	The SEIS and FEIS both acknowledge the positive economic benefits that will result from a local offshore wind energy industry using domestic (U.S.) projections of employment for the east coast offshore wind industry. Additional sources have been cited in the Section 3.6 of the FEIS. As a result of the additional analysis, the FEIS concludes that the Vineyard Wind 1 Project, in the context of other reasonably foreseeable offshore wind projects, would have a moderate beneficial impact on employment and economics within the geographic analysis area.
13136-205	A March 2020 study by the American Wind Energy Association analyzed the economic impacts from offshore wind and found that the industry is expected to invest \$57 billion in offshore wind energy development which is expected to contribute \$25.4 billion in annual economic output and approximately 82,500 jobs by 2030.321 This is a massive, positive economic benefit that must be included in a robust assessment of the economic impacts that will result from scaling up offshore wind energy in the U.S.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to

Index	Comment Text	Response
Number		
		have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13136-206	We urge BOEM to move forward and issue the Final EIS for the Vineyard Wind Project, incorporating our recommendations in these comments. We also urge BOEM to undertake the broader suite of actions outlined in these comments to ensure that the U.S. offshore wind industry as a whole advances in a sustainable manner. Again, we applaud Vineyard Wind on its commitment to North Atlantic right whale protection and look forward to reviewing the Final EIS.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13138-001	The Alliance remains concerned about future development in Nantucket Sound and is actively pursuing federal legislation to secure permanent protection for this unique body of water. This legislation would designate Nantucket Sound as a National Historic Landmark and improve the consistency of federal and state law with respect to existing requirements of the Commonwealth of Massachusetts under the Act to Promote Energy Diversity and the Massachusetts Ocean Sanctuaries Act. This is critical because Nantucket Sound is divided between federal and state jurisdiction, yet it is one marine ecosystem.	Although this EIS assesses Coastal Habitats (Section 3.1) as defined by the Commonwealth of Massachusetts, all of the proposed Project's potential impacts to the seafloor, water column, and ecosystem of Nantucket Sound are discussed without regard to the state/federal division. Sections 3.3, 3.4, 3.5, and 3.6 of the SEIS discussed the potential impacts of the proposed Project on habitat for marine wildlife. Therefore, no change to the FEIS warranted.
13139-001	This [SEIS] will further the creation of a new maritime industry which will create quality jobs, reinvigorate port communities on the East Coast, work well with neighboring industries; all of which has been done successfully elsewhere in the world. Perhaps most importantly, it will generate vast amounts of clean electricity.	Thank you for your comment.
13141-001	BOEM's decision will set a precedent for achieving these worthy goals in a manner that preserves the ocean environment and minimizes negative impacts on the shipping and commercial fishing industries vital to the health and well-being of Virginia and the Hampton Roads region.	Thank you for your comment.
13141-002	Among the alternatives examined by the subject Supplement, Alternative D2 achieves this objective for reasons well summarized by the U.S. Coast Guard in its Port Access Route Study: The Areas Offshore of Massachusetts and Rhode Island,	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13141-003	The diagonal gap width of 0.707 nautical miles within a 1-nautical-mile square grid is ample to support one-way traffic consistent with international collision regulations (COLREGs), but would not safely support two-way traffic Consequently, it may be useful for BOEM to work with the local Coast Guard district and commercial fishing community to devise an agreed-	The Final MARIPARS study (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the International Regulations for Preventing Collisions at Sea 1972 (COLREGS) while transiting through the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study report

Index	Comment Text	Response
Number	(1, 1, 0, 1', 4', -1', 1', -1, 4, -1, -1, 0) W(4, 0) $(1, 1, -1, -1)$	
	upon method of distinguishing between outbound (Nw-to-SE) and indound	(USCG 2020), which also considered routing measures, including two-way
12141 004	(SE-to-N w) insperies transit routing within the 1-natureal-mile grid	trainic, for possible application to the MA/KI wEA.
13141-004	As diagrammed in Figure 2, below, any vessel traveling N w-to-SE that does	Section 5.11.2 discusses impacts to vessel traffic. Section 5.10 provides more
	Not want to transit within the 1-nautical mile grid can travel around the entire	information on impacts on commercial lisning and mitigations to be provided
	Massachuseus lease complex, and this would add only about 5 miles (or	by vineyard wind.
	$\sim 8\%$), as compared with a straight diagonal transit through the grid. Perhaps	
	the developer could set aside a rund that would compensate such vessels for	
12142.001	their additional time and/or consumption of fuel.	
13142-001	Oceana strongly supports the development of offshore wind when it is done	I hank you for your comment.
	in a way that is	
	environmentally sound and responsibly siled. Done appropriately, offshore	
	wind can and should	
	pray an important role in our energy paradigin moving forward while	
	Oceana is supportive of offshore wind as a renewable energy source, offshore	
	decommissioned in a manner that reduces to the maximum extent respite	
	the impacts to marine species including endengered species such as the	
	North Atlantic right whole	
12142 002	A gradient fight where Environmental Delian Act (NEDA) and	The FIS was developed to include a hard look at consequences and applyzed
13142-002	As required by the National Environmental Policy Act (NEFA) and	the notential impacts for each phase of the proposed Draiget
	using the best scientific information available, to take a "bard look" at the	the potential impacts for each phase of the proposed r toject.
	environmental consequences and to analyze the direct indirect and	
	cumulative impacts of each of the planned phases of Vineward Wind's	
	proposed project – siting construction operation and decommissioning – as	
	well as the cumulative impacts of all other activities in the region on marine	
	species including North Atlantic right whales	
13142-003	As required by the Endangered Species Act and implementing regulations	BOEM has coordinated with numerous agencies and has received a
101.2 000	conduct Section 7 consultations and complete a new Biological Opinion.	Biological Opinion for NOAA and is in active consultation
	using the best available science, that comprehensively assesses the effects of	with USFWS under Section 7 of the ESA.
	each of the planned phases of the Vinevard Ward proposed project – siting.	
	construction, operation and decommissioning – on endangered and	
	threatened marine species, including North Atlantic right whales	
13142-004	As required by the Marine Mammal Protection Act (MMPA) and	BOEM has coordinated closely with NOAA in assessing potential impacts to
	implementing regulations, ensure that marine mammal species are protected	right whales.
	from harassment, hunting, capture, or killing, using best scientific evidence	
	available, during each of the planned phases of the Vineyard Wind proposed	
	project – siting, construction, operation and decommissioning, including	
	North Atlantic right whales, which are listed as a depleted and strategic stock	
	under the MMPA.	

Index	Comment Text	Response
Number		
13142-005	As required by the National Environmental Policy Act (NEPA) and implementing regulations, BOEM, in coordination with the cooperating agencies, must conduct a thorough environmental assessment, using the best scientific information available, to take a "hard look" at the environmental consequences and to analyze the direct, indirect, and cumulative impacts of each of the planned phases of Vineyard Wind's proposed project – siting, construction, operation and decommissioning – as well as the cumulative impacts of all other activities in the region on marine species, including North Atlantic right whales. Neither the DEIS nor the SEIS adequately assess impacts of the proposed Vineyard Wind project to marine species, including: coastal fauna; birds, including coastal and seabirds; bottom-dwelling organisms and seafloor habitat (benthic) resources; finfish, invertebrates and essential fish habitat, sea turtles, and marine mammals.	The FEIS includes a discussion of impacts as well as the use of the impact levels applied to the adverse and beneficial impacts. The resource specific sections include information related to the magnitude, duration, geographic extent, and/or frequency of potential impacts, as appropriate, to support impact determinations. BOEM works closely with Cooperating Agencies on each step of the leasing and COP approval process. BOEM recognizes these agencies hold the expertise in each of their representative jurisdictions and BOEM works with them to resolve issues prior to proceeding. In addition, throughout the development of this EIS the Cooperating Agencies have provided concurrence on several steps prior to moving forward in the NEPA review
13142-006	For example, it is implausible that birds, including coastal and seabirds, will experience merely negligible to minor direct and indirect impacts and moderate cumulative impacts from the proposed Vineyard Wind project, when the project is sited squarely within the Atlantic Flyway, a migratory pathway used by many bird species.	Section A.8.3.2 provides an updated discussion of bird use of the Atlantic Flyway along the North American Atlantic Coast. Within the Atlantic Flyway, much of the bird activity is concentrated along the coastline concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). Additionally, as depicted in Figures A.8.3-1 and A.8.3-2 in the SEIS, total avian abundance for species with high collision sensitivity and displacement sensitivity are low in the proposed Vineyard Wind 1 Project area, as well as within all of the offshore wind lease areas on the Atlantic OCS. As such, collision and displacement impacts are expected to be low. Additionally, as cited in the SEIS, many of the species that exhibited high avoidance rates in the Skov et al. (2018) study are same species that were modeled as part of the analysis in the SEIS.
13142-007	Similarly, BOEM's determination that direct and indirect impacts of the proposed project on finfish, invertebrates and essential fish habitat is negligible to moderate and cumulative impacts are moderate is undermined by the fact that the project is sited in the essential fish habitat of many fish species, including Atlantic cod, winter flounder, Atlantic wolfish and yellowtail flounder.	Section 3.4 of the SEIS discussed the potential impacts on EFH. Furthermore, BOEM has consulted with NMFS on EFH and the EFH Assessment is currently under review. Final results of the EFH consultation may be incorporated into the Record of Decision on the proposed Project.
Index	Comment Text	Response
-----------	---	---
Number		
13142-008	BOEM's analysis of impacts to sea turtles is less than scientifically rigorous as it concludes that direct and indirect impacts are negligible to moderate and that cumulative impacts are moderate based, in part, on outdated sea turtle density models and fishery bycatch data that under represents the presence of sea turtles in the area.	The FEIS was developed with the best available science at the time of publication. Sea turtle density estimates are derived from Strategic Environmental Research and Development (SERDP) Spatial Decision Support System (SDSS) and represent the best data set to be used for animal movement modeling, as agreed to by BOEM and NMFS on July 24, 2018. The referenced reports do contain a density estimate for leatherbacks, but otherwise the reports only provide sighting per unit effort for the species (SPUEs). These data sources were however considered as supplemental information in the DEIS, SEIS, and the BA. NMFS provided a correction factor to account region-specific data on sea turtles from the 2016 BOEM-funded study, Northeast Large Pelagic Survey Collaborative Aerial and Acoustic Surveys for Large Whales and Sea Turtles. The analysis provided in the DEIS and SEIS is consistent and is supported by the analysis conducted by NMFS during the course of ESA Section 7 consultation. As discussed in the NMFS Biological Opinion, take of sea turtles due to pile driving activities would be limited to harassment only, and no injury would be expected. Additionally, as described in the Biological Opinion, a total of 39 sea turtles across four listed species could potentially be killed or seriously injured over the life of the proposed Project. Therefore, no change to the FEIS is warranted.
13142-009	With respect to marine mammals, BOEM's determination that the proposed project poses negligible to moderate direct and indirect impacts and moderate cumulative impacts fails to fully account for the sensitive nature of these species, including the NARW.	As defined in Section 3.1 of the DEIS and Table 3-1 in Appendix B of the SEIS, the described negligible to moderate impact rating determinations are appropriate. Additional discussion of potential impacts to marine mammals, including the NARW is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Therefore, no change to the FEIS is warranted.
13142-010	Neither the DEIS nor the SEIS provided adequate assessments of the proposed project's cumulative impacts during all planned phases, including over the projected 30 year life span, for vessel strikes, entanglement, or noise. Nor did the DEIS or SEIS fully acknowledge the fact that the proposed project is sited in what is now considered a "hot spot" for North	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. The term "hotspot" has no regulatory definition and recent sightings are not nearly a long enough time series to discern a habitat trend for the species for the future. Protective and adaptive approaches would be required for NARWs to avoid and minimize impacts. Consultation with the NMFS under the ESA has been completed. The NMFS Biological Opinion including all Terms and Conditions and

Index	Comment Text	Response
Number		
	Atlantic right whales.	Reasonable and Prudent Measures concluded that the proposed Project is likely to adversely affect, but will not jeopardize the continued existence of any listed species, including NARWs. All mitigation that would be required is in discussed Section 3.4.2 and Appendix D of the FEIS. These measures include, but are not limited to avoidance of peak NARW presence, enhanced NARW conditions during the month of May and when a NARW Slow Zone or DMA overlap the proposed Project area between June 1 and October 31, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Additionally, BOEM requires the submittal of a decommissioning plan prior to decommissioning activities and additional mitigation could be required. BOEM has fully considered the aggregate impacts of all the project phases and no additional information that
13142-011	As the impacts of proposed project – siting, construction, operation and decommissioning – are likely to be more than "moderate," BOEM must accurately analyze them in order to devise adequate mitigation measures. While the agreement between Vineyard Wind and certain environmental NGOs requires Vineyard Wind to implement additional mitigation measures to protect NARWs during the construction and operation phases, BOEM must ensure that adequate mitigation measures are also in place during the siting and decommissioning phases to fully address the need to minimize disruption to feeding, breeding, and migration and to prevent injury and mortality to the species.	could be used for the analysis was provided by the Commenter. As defined in Section 3.1 of the DEIS and Table 3-1 in Appendix B of the SEIS, the described negligible to moderate impact rating determinations are appropriate. Therefore, no change to the FEIS is warranted. Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. Appendix D requires all the conditions that would be required including those under an Incidental Take Authorization under the MMPA and the Reasonable and Prudent Measures required under the September 11, 2020 Biological Opinion issued by NMFS under the Endangered Species Act. The Biological Opinion concluded that the proposed Project may adversely affect but is not likely to jeopardize the continued existence of listed species. These measures include, but are not limited to avoidance of peak NARW presence, enhanced NARW measures during the month of May and between June 1 and October 31, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Additionally, BOEM requires the submittal of a decommissioning plan prior to decommissioning activities and additional mitigation could be required.
13142-012	These mitigation measures should include vessel speed restrictions to reduce vessel collisions with the endangered NARW. Mitigation measures should also address entanglement in fishing gear and/or nets.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to, vessel speed restrictions and measures to reduce fisheries gear interactions. Therefore, no change to the FEIS is warranted.
13142-013	And, if, as noted above, ship noise stresses whales, then surveying and pile driving,	Section 3.3.7.3 of the DEIS discussed the potential acoustic impacts to marine mammals during pile driving activities. Further details regarding

Index	Comment Text	Response
Number		
	which are louder and more forceful, will likely stress whales, including the North Atlantic right whale. Noise from survey activities and pile driving during construction phases as well as during decommissioning activities will likely adversely affect the recovery of the endangered North Atlantic right whale population; for that matter, all baleen whales in the area of the proposed Vineyard Wind project in the North Atlantic, including the endangered Blue, Sei, and Fin whales, are likely to be adversely impacted.	acoustic effects to these species are provided in Appendix F of the DEIS and in the September 11, 2020 Biological Opinion issued by NMFS that concluded that the Project may adversely affect but is not likely to jeopardize the continued existence of listed species. Section 3.4.2 and Appendix D of the FEIS discuss updated monitoring and mitigation that has been proposed for the agency-preferred alternative. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met. Section 3.4.3 of the FEIS provides an updated discussion the potential impacts of HRG site assessment and characterization surveys. Additionally, Appendix D of the FEIS provide updated discussion and descriptions of these measures, including but not limited to, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. BOEM is also consulting with the NMFS for all surveys on the Atlantic OCS and implementation of similar
13142-014	Monitoring and reporting of mitigation measures are also crucial, yet missing, in both the DEIS and the SEIS. Independent monitoring and reporting of mitigation measures should be added in the final EIS to ensure that Vineyard Wind's self-imposed and agreed upon mitigation measures as well as any additional BOEM- imposed mitigation measures are indeed implemented over the life span of the project.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13142-015	As required by the Endangered Species Act and implementing regulations, BOEM, in coordination with the National Marine Fisheries Service, must conduct Section 7 consultations and complete a new Biological Opinion, using the best available science, that comprehensively assesses the effects of each of the planned phases of the Vineyard Ward proposed project – siting, construction, operation and decommissioning – on endangered and threatened marine species, including NARWs. As BOEM acknowledges in the DEIS, the existing 2013 Biological Opinion only covers data collection activities and is	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. The NMFS Biological Opinion and Incidental Take Statement (including all Terms and Conditions and Reasonable and Prudent Measures) are reflected in Section 3.4.2 and Appendix D of the FEIS. Revised HRG survey conditions have been updated with additional consultation with NMFS and are included in Appendix D.

Index Number	Comment Text	Response
Number	outdated in light of	
	new information that has become available.	
13142-016	BOEM transmitted a Biological Assessment to the National Marine Fisheries Service on December 7, 2018, which the agency states "covers the entirety of potential effects on NMFS-listed species and designated critical habitat associated with the proposed Project," including "construction, operation, maintenance, and decommissioning on marine ESA-listed species." The National Marine Fisheries Service then initiated formal consultations on the proposed Vineyard Wind project on April 10, 2019. In the new Biological Opinion, the National Marine Fisheries Service must use the best available science to evaluate potential impacts and cumulative effects to endangered and threated marine species in the region, including NARWs. To meet the best available science standard, determinations must be based on the most recent scientific information, including the aforementioned science supporting the fact that the proposed project area is a "hot spot" for NARWs, which use the area as a feeding ground.	A detailed discussion of current marine mammal distribution and occurrence in and around the Vineyard Wind 1 WDA was provided in Appendix E of the SEIS. A discussion of current marine mammal distribution as well as population size and trends are also provided in the Biological Opinion issued by NMFS on September 11, 2020. A detailed analysis of impacts to ESA listed species, including the NARW, is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding impacts to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of PSOs, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NA PW would be required
13142-017	The National Marine Fisheries Service must determine in a new Biological Opinion whether the entire proposed project – from siting to decommissioning over the course of the next 30 years – is likely to jeopardize the existence of a species listed under the Endangered Species Act or result in the destruction or modification of critical habitat of such species. In light of the dire state of the NARW (and perhaps other listed species as well), a jeopardy or adverse modification determination is expected. Any "reasonable and prudent alternatives" the National Marine Fisheries Service then proposes to avoid jeopardy and/or adverse modification for NARWs must mitigate the proposed project's adverse impacts, including from vessels strikes, entanglements, and noise.	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. Information regarding impacts to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM,

Index	Comment Text	Response
Number		
		soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required.
13142-018	In the event that the National Marine Fisheries Service determines the proposed project does not result in jeopardy or adverse modification to the NARW (and perhaps other listed species), then any incidental take statement must mandate "reasonable and prudent measures" to minimize the proposed project's adverse impacts, including from vessel strikes, entanglements, and noise.	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. The NMFS Biological Opinion and Incidental Take Statement (including all Terms and Conditions and Reasonable and Prudent Measures are discussed Section 3.4.2 and Appendix D of the FEIS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS
13142-019	Moreover, the incidental take of a marine mammal such as the NARW must also be in accordance with the MMPA, which includes terms and conditions to ensure compliance with incidental take under the Endangered Species Act as well as the requisite MMPA authorization.	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. The NMFS Biological Opinion and Incidental Take Statement (including all Terms and Conditions and Reasonable and Prudent Measures are discussed Section 3.4.2 and Appendix D of the FEIS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS.
13142-020	The incidental take statement imposes a duty on the recipient to comply with the terms of the statement. But, the incidental take statement also imposes a duty on the National Marine Fisheries Service to monitor the activity and ensure thatincidental take remains within specified bounds; otherwise, the agency must reinitiate Section 7 consultations.	Thank you for your comment.

Index	Comment Text	Response
Number		
13142-021	As required by the Marine Mammal Protection Act (MMPA) and implementing regulations, BOEM, in coordination with the National Marine Fisheries Service, must ensure that marine mammal species are protected from harassment, hunting, capture, or killing, using best scientific evidence available, during each of the planned phases of the Vineyard Wind proposed project –siting, construction, operation and decommissioning, including NARWs, which are listed as a depleted and strategic stock under the MMPA. Vineyard Wind applied for an incidental harassment authorization under the MMPA for the take of marine mammals incidental to the proposed project's	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required.
	construction on September 7, 2019. The National Marine Fisheries Service published a proposed incidental harassment authorization on April 30, 2019; however, the agency has not yet granted the authorization.	Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS.
13142-022	Separately, the National Marine Fisheries Service issued a one-year authorization allowing Vineyard Wind to harass, but not seriously injure or kill, 14 species of marine mammals, including the NARW, during site characterization surveys of the project using high-resolution geophysical equipment; surveys were expected to begin as of June 1, 2020. As the project has been delayed, Vineyard Wind requested re-issuance of the incidental authorization from June 21, 2020 to June 20, 2021, and the agency summarily granted it. Notably, the operation and decommissioning phases of the proposed project are not included in the scope of either incidental harassment authorization. The National Marine Fisheries Service should not issue any future authorizations without additional significant analysis and mitigation of adverse impacts to marine mammals, including NARWs, from all phases of the proposed project, including adverse impacts from vessel strikes, entanglement, and noise.	Section 3.4.3 of the FEIS provides an updated discussion the potential impacts of HRG site assessment and characterization surveys. Additionally, Appendix D of the FEIS provide an updated discussion and descriptions mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on marine mammals from all proposed activities including HRG surveys associated with the construction, operation, and decommissioning of the Vineyard Wind 1 Project. These measures include, but are not limited to, use of PSOs, PAM, shut down procedures, and other measures to protected marines, particularly NARWs. All the proposed activities were considered in the September 11, 2020 Biological Opinion issued by NMFS that concluded that the Project may adversely affect but is not likely to jeopardize the continued existence of listed species. Appendix D of the FEIS also discusses all the mitigation and monitoring measures that would apply to all project phases.
13142-023	While Oceana is supportive of offshore wind as a renewable energy source, offshore wind projects must be carefully sited, constructed, operated and decommissioned in a manner that reduces, to the maximum extent possible, the impacts to marine species, including endangered species such as the North Atlantic right whale.	Potential impacts to right whales as well as measures to avoid or reduce those effects were discussed in Section 3.5 of the SEIS as well as in Section 3.4 of the FEIS.
13142-024	All marine species affected by the proposed Vineyard Wind project deserve more thorough NEPA analysis than BOEM has provided in the DEIS and SEIS. The inadequacy of NEPA analysis conducted thus far in the DEIS and SEIS is exemplified by the short shrift BOEM has given North Atlantic right whales, an endangered species on the brink of extinction that is protected under both the Endangered Species Act and the MMPA.	The SEIS included a detailed analysis of potential impacts and included the use of the impact levels applied to the adverse and beneficial impacts. The resource specific sections included information related to the magnitude, duration, geographic extent, and/or frequency of potential impacts, as appropriate, to support impact determinations.
13142-025	Similar to other marine species, the North Atlantic right whale has expanded its range into the proposed project area in search of a shifting food source due	I hank you for your comment.

Index	Comment Text	Response
Number	to climate change. For this reason, BOEM and the relevant coordinating agencies, including the National Marine Fisheries Service, must invoke broad authorities under NEPA, the Endangered Species Act and the MMPA to protect marine species, including the North Atlantic right whale, from	
	adverse impacts of all phases of the proposed project, which may place their continued existence in jeopardy, and push them closer to extinction as a result of man's activities.	
13147-001	Sustainable wild-harvest commercial fisheries are in themselves an important climate solution. A 2018 University of Washington study found that the harvest of renewable wild seafood has a lower carbon footprint than all other animal protein production methods, including livestock production and aquaculture. Now, we are being asked to put sustainable, regenerative wild-harvest fisheries at risk to give primacy to another climate solution: the buildup of offshore wind projects in East Coast waters at an unprecedented pace and scale. We cannot risk sacrificing one climate solution in order to privilege another.	The potential impacts to commercial and for-hire fisheries were evaluated in the DEIS, SEIS, and the FEIS.
13147-002	We come to the table in good faith imploring you to include all considerations when factoring the consequences of your decisions, concerned that it may set a precedent for future offshore wind siting - including marine ecosystem impacts, the disruptive impacts from the displacement of the commercial fishing sector, and also the serious safety concerns involving all mariners navigating sometimes treacherous seas between hundreds of imposing turbines.	The items referenced in the comment are assessed in the appropriate resources sections in Chapter 3 and Appendix A of the FEIS.
13147-003	There are still very few peer-reviewed scientific studies conducted around the globe on offshore wind impacts to marine ecosystems. Findings from some European studies indicate a wake effect up to 100 km from smaller turbine installations in the North Sea, affecting primary habitat and production outcomes in certain areas. We have yet to see a thorough analysis of the implications of certain siting and development strategies, including project noise effects on marine species and the siting impacts from turbines on migrating marine life.	Section 3.4.1 of the SEIS discussed the potential impacts of wakes, habitat changes productivity changes, noise, and potentially altered migration.
13147-004	In our region, we are projecting thousands of miles of cables installed over the next decade, and we have strong concerns about their disruption to marine habitat, along with the potential effects of electromagnetic fields on the behavior of certain species. As developers continue to blaze forward with planning for offshore wind projects, there remains a lack of data regarding their potential impacts on the marine environment and fisheries.	Sections 3.2 and 3.3 of the FEIS use the best available science on new cable emplacement and EMF. BOEM continues to fund studies to address concerns raised in public comments, including responses of additional species to EMF (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). Sections 3.5.1 and 3.5.2 of the SEIS discussed the potential impacts of EMF on marine mammals. As discussed, modeled and measured magnetic fields from AC cables buried to a depth of 3 feet would emit detectable fields up to 82 feet above the cable and 79 feet along the sea floor.

Index	Comment Text	Response
Number		
		Vineyard Wind proposes to bury Project cables to a depth of 5-8 feet, providing greater shielding and reducing field detection distances. Additional discussion of the uncertainty regarding the individual and/or population level impacts of EMF on marine mammals was provided in Appendix H of the SEIS. Given the extremely localized nature of the potential EMF related impacts exposure is expected to be low. Therefore, no change to the FEIS is warranted.
13147-005	We are additionally concerned about the displacement and disruption that offshore wind projects will have on the commercial fishing sector. Currently, the fisheries economy in the Northeast provides billions in revenue to local communities and tens of thousands of jobs. Our sector also supports a robust local food economy, including some of the most sustainable sources of protein that consumers can have on their dinner plates. As the world enters the second wave of a year forever altered by a global pandemic unlike anything we could have ever imagined, the necessity of investing in resilient local food security has been clearer than ever. Our industry provides significant contributions to keeping food dollars in our region, while offsetting large carbon footprints that would otherwise accrue from the importation of seafood caught elsewhere. The economic projections provided by the offshore wind industry do not include the community benefits and jobs supported by our sector that would most likely be lost as a result.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses displacement and disruption of commercial fisheries from offshore wind development, including the potential revenue exposure on commercial fisheries from future offshore wind developments. Section 3.6, Demographics, Employment and Economics, discusses the impacts on commercial fishing and onshore seafood businesses resulting from offshore wind on community employment and economic activity. Therefore, no change to the FEIS is warranted.
13147-006	As always, safety is our number one priority, and we are worried that irresponsible siting of offshore wind projects may present serious dangers to boat crews. Commercial fishing vessels have unique operational requirements while in transit, such as the need for sea room due to inclement weather and potential crew fatigue. The footprint of a vessel greatly expands, in both length and width, when fishing gear is actively towed and it dramatically reduces the maneuverability of the vessel. Insufficient spacing between turbines greatly increases the risk to fishermen's safety when traveling home during dangerous conditions, including strong winds, high seas, and poor visibility.	The FEIS addresses this comment in Section 3.10.1.1 and 3.11.2. The Final MARIPARS study report (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study report (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study report (USCG 2020). The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for
13147-007	Due to the significant concerns outlined above, we therefore respectfully urge that BOEM:	Thank you for your comment.

Index	Comment Text	Response
Number	• Supports RODA/Industry 4nm navigation safety corridor proposal ("Alternative F" as outlined in Appendix A of this letter);	
13147-008	• Establishes specific and robust requirements for baseline scientific data on marine ecosystem impacts and sustained and thorough investment in post- construction monitoring to assess the ecological impacts of development;	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13147-009	• Develops a requirement for wind developers to conduct baseline research two years prior to any geophysical and geotechnical surveys, as these surveys are proven to have environmental impacts;	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13147-010	• Conducts a study on the extent and possible remediation of wind turbine interference with marine radar used on fishing vessels;	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of marine radar. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. Further, the USCG is the leading agency on navigational matters, and BOEM defers to the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.

Index Number	Comment Text	Response
13147-011	Continues to exercise special care in conducting analyses and reflecting input from impacted fishing communities, who are currently working in the peak of their summer fishing season.	The FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS.
13147-012	it is my belief that the expanse of turbines will cause vessel displacement, economic hardship and serious safety concerns. High degree of uncertainties that can lead to degradation of the ecosystem and depletion of fish stocks. The lack of adequate transit corridors (1nm too narrow) for safe vessel transit in their project design will certainly lead to loss of vessel and life. Fishermen's navigational knowledge is enormous and thorough yet has fallen on deaf ears in determining turbine spacing and transit lanes.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses vessel displacement and financial impacts. Section 3.11.2 and 3.13.2 of the SEIS discuss the US Coast Guard's Final MARIPARS and the impact of the proposed Project on vessel maneuverability and transit lane size; therefore, no change to the FEIS is warranted.
13147-013	Offshore wind, developed quickly and on a massive scale, stands to substantially upend offshore marine environments. The economic consequences to the commercial fishing sector in Southern New England will be potentially devastating.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the economic consequences of offshore wind development on the commercial fishing industry; therefore, no change to the FEIS is warranted.
13147-014	Loss of traditional fishing grounds; also I worry about electrical current in water affecting fisheries in an adverse way. Will there be payment for lost income, 10 yrs from now?	Section 3.4 of the SEIS discusses the potential impact of electromagnetic fields on finfish and invertebrates. Section 3.11.2 of the SEIS discusses the voluntary revenue compensation funds established by Vineyard Wind and states that impacts or losses for which claims may be filed include lost revenues related to the Project's interference with fishing activities (if any). Therefore, no change to the FEIS is warranted.
13147-015	Limited access to area and consolidating user groups to smaller areas; navigational hazards after construction.	The SEIS discusses limited access to areas and consolidating user groups in Section 3.11.2 and navigational hazards in Section 3.13.2; therefore, no change to the FEIS is warranted.
13147-016	We are a fish processing company in Gloucester ma. If these projects continue to move forward in the way they have been our company and the jobs that it supports will not survive. We will lose access to the fishing grounds that keep us in business.	Section 3.7 and 3.8 of the SEIS discuss the potential impacts on shoreside fish processors and the Section 3.10.2 of the FEIS has been updated to discuss the potential impacts of disruption of fishing on shoreside fish processors.
13147-017	The millions of dollars of investment in Ma that we have made [as a fish processing company] will have been for nothing and the coastal communities that we help to support will suffer.	Section 3.10.2 of the FEIS was updated to discuss the potential impacts of disruption of fishing on shoreside fish processors and Section 3.7 of the SEIS discusses potential impacts on local economies.
13147-018	As mobile gear fishermen [for herring, mackerel, squid, and menhaden], we will not be able to safely work in these wind farm areas.	Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS discuss that some vessels may choose not to fish near the Proposed Action during its operational period due to restrictions on maneuverability from the presence of structures, the potential for hanging up on structures, and they have been updated to discuss potential mitigation measures.
13147-019	With all the regulations that we already face that carve up sections of the ocean that we cannot fish in due to habitat considerations, etc., these additional limitations will kill the industry that has thrived and provided food to the nation since its inception.	Sections 3.11.1.1 and 3.11.2 of the SEIS discuss the potential loss of area available for fishing and acknowledge that impacts on management processes would also have short-term or long-term impacts on commercial and for-hire

Index Number	Comment Text	Response
Number		recreational fisheries operations; therefore, no change to the FEIS is warranted.
13147-020	The conversation about where these industrial scale wind developments were going to be placed should have happened with the fishing industry, but once again, the hard working men and women in this industry are being left in the dust again. It's an insult to hard working Americans that they can be run roughshod over by foreign entities that will come in, take what they want, and leave again once they have made their profit at the taxpayers' expense.	The FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS.
13147-021	At the moment, my boats have been fishing [for squid, butterfish, whiting, etc.] north of Coxes Ledge and have done so for many years in Deep Hole and Pear Shape . We and some others fish there 4-5 months a year so that is a good 1/3 or more that I and 8 guys that make as a good chunk of our year's income. It's a small area for boats to pass safely while towing and at the moment, there are two wind farm survey ships there drilling samples to see if it is a good spot to put in a turbine. So if the survey boats get in our way, what's gonna happen when wind mills are put in?	The SEIS discusses impacts from the presence of structures and vessel traffic in Section 3.11.2 and 3.13.2; therefore, no change to the FEIS is warranted.
13147-022	Safety is paramount! We [scallop fishermen] traverse this area often under extreme conditions, zero visibility and mountainous seas. WE NEED SAFE TRANSIT LANES!	Thank you for your comment.
13147-023	Seafood producers have been largely excluded from the wind farm industrialization process; adverse impacts have been down-played or not adequately researched, and compensatory proposals have not been reflective of conceivable monetary damages to the industry that has utilized these waters sustainably since the inception of our nation.	Section 3.10.2 of the FEIS discusses the potential impacts of disruption of fishing on shoreside fish processors. Section 3.11.1.1 and 3.11.2 of the SEIS discusses the voluntary revenue compensation funds established by Vineyard Wind and states that companies that support fishing interests would be able to submit claims of direct impacts or losses during any phase of the Project; therefore, no change to the FEIS is warranted.
13147-024	My greatest concern is the loss of economic resiliency. Every fisherman, myself included, has had to change fishing grounds and target species frequently during their career. Whether driven by availability, regulation or markets, fishermen must constantly modify their strategy to remain viable. The fishing industry is already dealing with multiple closures mostly driven by management concerns. Yet, all these closures were scrutinized for cost/benefit consequences under our regulatory policy. The politics of offshore wind offer no such analysis.	The SEIS along with other impact producing factors, addresses the cumulative impacts of fishing regulation and offshore wind development. Any regulations on the fishing industry are subject to the Regulatory Flexibility Act. The proposed action does not include any proposed regulations on the commercial fishing industry.
13147-025	Wind energy is seen as an absolute imperative which can displace any competing use of space without consequence. One consequence not considered in all the debate is food security. The network of small fishing ports populated by often family-operated vessels is fraying. Our supply of seafood is becoming ever more dependent on long, complex and often, international supply chains. In mid- March we saw those supplies disrupted	The Secretary of the Interior will work with the Secretary of the Army, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Homeland Security, the Administrator of the Environmental Protection Agency, other appropriate Federal officials, and appropriate State officials to implement the Executive Order Promoting American Seafood Competitiveness and Economic Growth as described in the Order. FEIS

Index	Comment Text	Response
Number		
	by COVID-19. We quickly discovered that we no longer had the capacity to process and distribute enough seafood to replace them.	Table 3.10-11 shows a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. In addition Tables 3.10-3 and 3.10-7b allow for a comparison of the total volume of seafood landed at affected ports compared to seafood harvested just from the Vineyard Wind Development area.
13147-026	A proper analysis of the impact on fisheries cannot just look at the area covered by a single lease. The mandates for renewable energy adopted by the coastal states will have a profound effect on our ability to obtain renewable supplies of food from the sea. This reality must be factored into the overall discussion of pre-emption of our fishing grounds.	Section 3.11 of the SEIS discusses the potential cumulative impacts from all proposed future wind energy projects in New England and the Mid-Atlantic; therefore, no change to the FEIS is warranted.
13147-027	The entire WEA development has been driven by a process oriented approach. We need a results oriented approach.	Thank you for your comment.
13147-028	Fishermen's lives will be ruined, men will be out of work, environments will be altered forever, endangered right whales will be impacted and the oceans will be controlled by foreign interests.	Section 3.5 and 3.11 of the SEIS discusses impacts from offshore wind development on marine mammals and commercial and for-hire recreational fishing; therefore, no change to the FEIS is warranted.
13147-029	Concerned about the effects of the offshore wind farms on the inshore fisheries. Should not trade wind power at the expense of our fisheries.	Section 3.11 of the SEIS discusses impacts from offshore wind development on commercial and for-hire recreational fishing; therefore, no change to the FEIS is warranted.
13147-030	The wind farms will take away much needed fishing grounds, plus be a navigational hazard.	Section 3.11 and 3.13 of the SEIS discusses impacts from offshore wind development on commercial and for-hire recreational fishing and navigation; therefore, no change to the FEIS is warranted.
13147-031	My family has fished proposed area where windmill lease is proposed to go for 4 generations approaching 100 years. Location of windmills is the problem.	Section 3.11 and 3.13 of the SEIS discusses impacts from offshore wind development on commercial and for-hire recreational fishing and navigation; therefore, no change to the FEIS is warranted.
13147-032	I disagree with the building of the windmills, and the lack of openness and communication with the fishermen.	The NEPA process has allowed for comments of commercial fishermen including the inclusion of three alternatives requested by the fishing industry.
13147-033	I don't agree with the windmills because of its effects on my job and livelihood (scallop fisherman).	Section 3.11 of the SEIS discusses impacts from offshore wind development on commercial and for-hire recreational fishing, including the scallop fishery; therefore, no change to the FEIS is warranted.
13147-034	I am a commercial fisherman and the windmills affect my job (scallop fisherman) and the environment.	Section 3.11 of the SEIS discusses impacts from offshore wind development on commercial and for-hire recreational fishing, including the scallop fishery; therefore, no change to the FEIS is warranted.
13147-035	Wind farms will destroy my livelihood (bottom trawl fisherman).	Section 3.11 of the SEIS discusses impacts from offshore wind development on commercial and for-hire recreational fishing, including bottom trawl fisheries; therefore, no change to the FEIS is warranted.
13149-001	Alternative F creates a new "marine vessel" lane through the Project site. This would result in several turbines being moved from the northern edge of the Project site to the southern edge of the Project site. While this will reduce	Several sections of the SEIS addressed the potential impacts of additional cabling for Alternative F, including increased cabling and sea floor

Index	Comment Text	Response
Number		
	- but not completely avoid - visual impacts, it also will also result in more	disturbance. In particular, these topics were noted in Sections 3.3.4, 3.10.4,
	electrical cabling, and thus more ocean floor disturbances.	and 3.11.4 of the SEIS; therefore, no changes to the FEIS are warranted.
13149-002	BOEM has an obligation under the United Nations Declaration on the Rights	The United Nations Declaration on the Rights of Indigenous Peoples is not a
	of Indigenous Peoples (the "UN Declaration" or "Declaration") to protect the	part of the regulatory framework that federal agencies such as BOEM follow
	traditional cultural resources and cultural practices of the Tribe and to ensure	during the NEPA process. BOEM engages with the public and other National
	mitigation or compensation for losses of economic, cultural and natural	Historic Preservation Act Section 106 consulting parties throughout the
	resources.	NEPA process to assess impacts on the environment, natural and cultural
		resources, and environmental justice communities in order that the decision
		maker is fully informed. Through the NHPA Section 106 review process,
		BOEM additionally works to resolve adverse effects to National Register-
		eligible historic properties through avoidance, minimization, and mitigation.
		No regulatory obligation exists that requires a particular outcome, decision,
		or compensation.
13149-003	Consistent with the [UN] Declaration [on the Rights of Indigenous Peoples],	The United Nations Declaration on the Rights of Indigenous Peoples is not a
	BOEM must seek to protect the Tribe's cultural, natural and economic	part of the regulatory framework that federal agencies such as BOEM follow
	resources pursuant to the following Articles: [11, 25, 26, 29, 31, 32, 39, and	during the NEPA process. BOEM engages with the public and other National
	43].	Historic Preservation Act Section 106 consulting parties throughout the
		NEPA process to assess impacts on the environment, natural and cultural
		resources, and environmental justice communities in order that the decision
		maker is fully informed. Through the NHPA Section 106 review process,
		BOEM additionally works to resolve adverse effects to National Register-
		eligible historic properties through avoidance, minimization, and mitigation.
		No regulatory obligation exists that requires a particular outcome, decision,
		or compensation.
13149-004	As the acknowledged indigenous people of Chappaquiddick Island, the Tribe	The United Nations Declaration on the Rights of Indigenous Peoples is not a
	is entitled to consultation, impacts analysis, mitigation, and compensation	part of the regulatory framework that federal agencies such as BOEM follow
	that comply with, and live up to, the United States' commitment to the [UN]	during the NEPA process. BOEM engages with the public and other National
	Declaration [on the Rights of Indigenous Peoples]. The SEIS fails to analyze	Historic Preservation Act Section 106 consulting parties throughout the
	and define mitigation of the full impacts of the Project on the Tribe's rights as	NEPA process to assess impacts on the environment, natural and cultural
	the indigenous peoples of the Island and the Project area.	resources, and environmental justice communities in order that the decision
		maker is fully informed. Through the NHPA Section 106 review process,
		BOEM additionally works to resolve adverse effects to National Register-
		eligible historic properties through avoidance, minimization, and mitigation.
		No regulatory obligation exists that requires a particular outcome, decision,
		or compensation.
13149-005	The SEIS Environmental Justice (EJ) Impacts and Analysis is Insufficient as	Sections 3.7.1 and 3.7.2 of the FEIS have been updated to incorporate the
	it Does Not Explicitly Include the EJ Impacts on the Tribe.	following information with respect to environmental justice impacts on
		Native American tribes: a listing of the tribes consulted regarding the
		Proposed Action; identification of cultural resources affected by the Proposed

Index	Comment Text	Response
Number		
13149-006	The SEIS has slightly expanded the analysis of environmental justice impacts of the Project. This slight expansion is limited to additional analysis of impacts to the low-income and/or minority communities potentially affected by the proposed onshore infrastructure and potential port cities. Importantly, there is no analysis of the environmental justice issues associated with the impacts on the Tribe's cultural practices or subsistence rights (such as clam digging and fishing).	Action that hold significance to these tribes; identification of the IPFs that would affect these cultural resources; references to Section 3.8 which provides a detailed discussion of impacts on cultural resources; and impact levels for disproportionate adverse effects on Native American tribes. Section 3.8 concludes that the Proposed Action with mitigations would have potentially moderate impacts on the cultural resources identified as having significance for Native American tribes. Sections 3.7.1 and 3.7.2 of the FEIS have been updated to incorporate the following information with respect to environmental justice impacts on Native American tribes: a listing of the tribes consulted regarding the proposed action; identification of cultural resources affected by the Proposed Action that hold significance to these tribes; and identification of the IPFs that would affect these cultural resources. In addition, Sections 3.8.1 and 3.8.2 of the SEIS included impacts on environmental justice populations resulting from impacts on subsistence fishing. This has been updated in the same sections of the FEIS to also note that where IPFs would affect subsistence fishing, these factors would also affect cultural practices of
		Native American tribes related to finfish, shellfish, and marine mammals.
13149-007	While the Draft EIS (DEIS) and the SEIS rely on the state's definition of an "environmental justice community" they also reference the EPA's definition. The standard definition includes low-income (below the median household income) and minority (25-50% of residents are minority) populations, based on US census data. Because of the geographic nature of the definition of community, it is unclear whether the Tribe would be considered a separate minority or low-income community. Nonetheless, the BOEM should treat the Tribe as a separate minority community for purposes of EJ analysis.	Sections 3.7.1 and 3.7.2 of the FEIS have been updated to incorporate additional guidance from the EPA on environmental justice impacts with respect to Native American tribes; to provide a listing of the tribes consulted regarding the Proposed Action; and to identify environmental justice impacts specific to Native American tribes where applicable.
13149-008	In addition, the federal government's EJ strategies - and thus its EJ analysis - are supposed to focus on whether its actions will have "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The SEIS identifies the following for EJ impacts: air emissions, light, new cable placement/infrastructure, noise, port utilization, presences of structures, traffic vessels and land disturbances. But, the analysis generally focuses on the economic impacts of these aspects of the Project on non-tribal populations.	Section 3.7.1 of the FEIS has been revised to discuss the Project-related and cumulative health impacts of fossil fuel consumption and resulting degraded air quality on different racial and income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy. Sections 3.7.1 and 3.7.2 have also been updated to note the impacts on Native American tribes resulting from viewshed impacts, disturbance of submerged landscape features and cultural practices related to fish, shellfish, and marine mammals. The DEIS and SEIS in Section 3.8.1 and 3.8.2 identified environmental impacts on fish and invertebrates that could impact subsistence fishing. No other health or environmental impacts are identified that would disproportionately affect environmental justice populations.
13149-009	Council on Environmental Quality (CEQ) Guidance (CEQ Guidance) requires environmental impact statements to include a component on	Sections 3.7.1 and 3.7.2 of the FEIS have been updated to identify and explain effects of the Proposed Action that would disproportionately impact

Index	Comment Text	Response
Number		
	environmental justice. The CEQ Guidance also requires federal agencies to	certain Native American tribes due to impacts on resources or practices with
	evaluate any "interrelated cultural, social, occupational, historical, or	cultural significance.
	economic factors that may amplify the natural and physical environmental	
	effects of the proposed agency action." Pursuant to this CEQ Guidance,	
	BOEM should also "recognize that the impacts within indian tribes may	
	distinct cultural practices "CEO Cuidance: see Standing Pool Sioux Tribe	
	distinct cultural practices. CEQ Outdance, see, Standing Rock Stoux The	
	V. Affiny Corps of Engineers, $2017 \text{ w} \perp 257574 (D.D.C. 2017)$, see also, Allen v. Nat'l Institutes of Health 974 F. Sunn. 2d 18, 47 (D. Mass. 2013)	
13149-010	Contrary to the CEO Guidance, neither the DEIS nor the SEIS includes an EL	Sections 3.7.1 and 3.7.2 of the FEIS have been undated to incorporate the
13149-010	collulary to the CEQ Outdatice, ficturer the DETS not the SETS incrudes an Es	following information with respect to environmental justice impacts on
	health and environmental impacts on the Tribe and its tribal members'	Native American tribes: a listing of the tribes consulted in preparing the
	"distinct cultural practices" or subsistence practices, the FI analysis in the	FFIS: a description of the Channaquiddick TCP: a description of
	SFIS is insufficient BOEM must complete additional analysis to evaluate the	Channaquiddick Wamnanoag Tribe cultural practices related to the
	cultural social occupational and economic impacts of the Project on the	Chappaquiddick TCP: identification of impacts on the TCP resulting from the
	Chappaquiddick Island TCP (and thus the Tribe's) and effects on the natural	Proposed Action, based upon the detailed analysis in Section 3.8, Cultural
	and physical environment.	Resources. and additional information on IPFs related to fishing and
		shellfishing; and assessment of the impact on the Chappaquiddick
		Wampanoag Tribe resulting from these impacts.
13149-011	Analysis and Mitigation of the Tribe's Cultural Resource Impacts is	BOEM utilized all information provided in the course of the NEPA review
	Insufficient.	and National Historic Preservation Act Section 106 consultations to analyze
		the impacts on the environment, natural and cultural resources, and
		environmental justice communities in order that the decision maker is fully
		informed. The description of impacts is located in Sections 3.8.2-3.8.5, and
		when considered against the criteria determining the intensity of impacts (i.e.,
		whether they are minor, moderate, etc.), located in Section 3.8.6, the impacts
		are of a moderate nature.
13149-012	The SEIS now includes the Chappaquiddick TCP in the Project's impacts on	BOEM utilized all information provided in the course of the NEPA review
	cultural resources - but does not include specific analysis related to the	and National Historic Preservation Act Section 106 consultations to analyze
	impacts to the Tribe's cultural or natural resources on the TCP. For the	the impacts on the environment, natural and cultural resources, and
	Proposed Action and all alternatives (even the No Action Alternative),	environmental justice communities in order that the decision maker is fully
	BOEM still anticipates "moderate" impacts on the Chappaquiddick I CP and	informed. The description of impacts is located in Sections 3.8.2-3.8.3, and
	the underwater paleo landforms and marine cultural resources - in other	when considered against the criteria determining the intensity of impacts (i.e.,
	words, no change from the DEIS.	whether they are minor, moderate, etc.), located in Section 5.8.6, the impacts
12140 012	The SEIS new includes the Channequiddick TCD in the Project's impacts on	DOEM performed a good faith affort to identify historic properties within all
15149-015	cultural resources - but does not include specific analysis related to the	portions of the NHPA Section 106 review Area of Potential Effects or will be
	impacts to the Tribe's cultural or natural resources on the TCP. The SEIS	performing it as part of a phased identification of historic properties pursuant
	has determined that visual impacts [on cultural resources] will be minor for	to 36 CFR 800 4(b)(2) Moreover BOFM utilized all information provided in

Index	Comment Text	Response
	all alternatives, due to the change in the project design and other mitigation measures to be taken.	the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. Visual impacts are analyzed in Sections 3.9 of the FEIS; impacts to cultural resources are analyzed in Sections 3.8 of the FEIS.
13149-014	As a general matter, BOEM assumes that most aspects of the project will have an impact on archaeological resources, including the paleo landforms and marine cultural resources. It is unclear how BOEM assesses that the impacts on those resources will be "moderate" - as opposed to "major" - when BOEM anticipates the total destruction of at least 16 - 19 of 35 (more than 50%) paleo landforms sites that are located within the Project's construction and operation site (the WDA and OECC). As BOEM describes the direct, indirect and cumulative impacts for all the alternatives: "The damage or destruction of submerged archaeological sites or other underwater cultural resources from these activities would result in the permanent and irreversible loss of scientific or cultural value."	BOEM does not anticipate total destruction of any of the identified paleolandform features. A small area of the total area of 19 of the 31 identified paleolandform features would be impacted by construction; in other words, within these 19 features, only a small fraction of the overall volume of the features would be impacted. As discussed in Section 3.8.2 of the FEIS, this impact is irreversible, thus warranting the conclusion that the impact is "major." Vineyard Wind has committed to working with the consulting parties, Native American Tribes, BOEM, and the MHC to develop a specific treatment plan for mitigating impacts on unavoidable paleolandform features. Implementation of a treatment plan agreed to by all parties would likely reduce the magnitude of impacts on paleolandform features from major to result moderate impacts on paleolandform features. Finally, these features do not represent archaeological sites; no archaeological materials have been identified therein, despite a good faith effort to identify archaeological historic properties. Rather, these features represent a portion of a cultural landscape of importance to many Tribal communities.
13149-015	BOEM continues to defer to the Section 106 process for identifying mitigation measures to avoid or reduce harm to the TCP, paleo landforms, and other identified archaeological and cultural resources. The DEIS, in Appendix D, states that "any archaeological resources or TCPs determined eligible for listing on the National Register (i.e., historic properties) would be avoided or additional mitigations would be required for resolving adverse effects pursuant to 36 CFR § 800.6."	The NHPA Section 106 review process requires BOEM to consider means of avoiding, minimizing, and, where appropriate, mitigating adverse effects, in that order. The final mitigation plan and MOA to resolve adverse effects to historic properties will be finalized as part of the NHPA Section 106 process and will be completed before the Record of Decision is issued.
13149-016	There is almost no evaluation of direct, indirect or cumulative impacts on the TCP, other than visual impacts.	BOEM utilized all information provided in the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. Visual impacts are analyzed in Sections 3.9 of the FEIS; impacts to cultural resources are analyzed in Sections 3.8 of the FEIS.
13149-017	The Tribe has expressed concern that: Despite the change in project design, the visual impacts of this changes have not yet been fully analyzed with respect to the Tribe and the impact on the Chappaquiddick TCP: Without	BOEM performed a good faith effort to identify historic properties within all portions of the NHPA Section 106 review Area of Potential Effects or will be performing it as part of a phased identification of historic properties pursuant

Index	Comment Text	Response
Number	more detailed analysis of the paleo landforms, BOEM and the Project cannot know the full impacts on our ancestral lands, important archaeological sites, potential human remains and burial sites in the marine affected area; In both instances, this lack of in-depth analysis does not give the Tribe the information necessary to effectively participate in the development of mitigation measures that might avoid or minimize the known expected harm and destruction to the Chappaquiddick TCP and the marine archaeological resources.	to 36 CFR 800.4(b)(2). Moreover, BOEM utilized all information provided in the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. Visual impacts are analyzed in Sections 3.9 of the FEIS; impacts to cultural resources are analyzed in Sections 3.8 of the FEIS.
13149-018	Notwithstanding the Section 106 process, the SEIS approach to summarily conclude (and assume) that there will be mitigation measures that will avoid impacts - without stating what those measures are, or requiring those measures to be implemented as a condition of the Record of Decision - is deficient. BOEM must further develop impacts on the cultural resources on the Chappaquiddick TPC and its related and connected marine environment, consistent with the Advisory Council on Historic Preservation's 2016 White Paper on Cultural Landscapes [(Understanding and Interpreting Indigenous Places and Landscapes, Advisory Council on Historic Preservation (Oct. 11., 2016))].	BOEM utilized all information provided in the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. Moreover, BOEM performed a good faith effort to identify historic properties within all portions of the NHPA Section 106 review Area of Potential Effects or will be performing it as part of a phased identification of historic properties pursuant to 36 CFR 800.4(b)(2). The final mitigation plan and MOA to resolve adverse effects to historic properties will be finalized as part of the NHPA Section 106 process and will be completed before the Record of Decision is issued.
13149-019	BOEM has failed to analyze the Project's impacts on the natural resources potential erosion impacts to Chappaquiddick Island TCP - on which the Tribe and its members rely for cultural, social, subsistence and economic purposes.	BOEM has considered the potential for erosion of shorelines and has determined that there is no evidence that the proposed Project would have any influence on this issue. Appendix E of the FEIS has been updated to include additional information regarding the oceanographic environment, including the potential impacts to mean flows near offshore wind foundations. Information related to potential changes in mean flows provides implications for shoreline erosion. Section 3.3.2 of the FEIS explains that background hydrodynamic conditions would exist approximately 328 feet (100 meters) from each monopile foundation. Appendix E Section E.4.4 of the FEIS discusses cable installation and concludes that no increased potential for shoreline erosion is expected. Appendix E Section E.4.4 of the FEIS also discusses the potential for shoreline erosion from vessel wakes.
13149-020	There has been no detailed analysis or study of the impacts on the natural resources we have identified are important to the Tribe and the unique nature of the Chappaquiddick Island TCP and connected and related marine environment. BOEM should complete more in-depth studies of the impacts to the natural environment on the Chappaquiddick TCP, especially as those impacts have a direct effect on the Tribe and its members.	BOEM has considered the potential for erosion of shorelines and has determined that there is no evidence that the proposed Project would have any influence on this issue. Appendix E of the FEIS has been updated to include additional information regarding the oceanographic environment, including the potential impacts to mean flows near offshore wind foundations. Information related to potential changes in mean flows provides implications for shoreline erosion. Section 3.3.2 of the FEIS explains that background hydrodynamic conditions would exist approximately 328 feet (100 meters) from each monopile foundation. Appendix E Section E.4.4 of

Index	Comment Text	Response
Number		the FEIS discusses cable installation and concludes that no increased potential for shoreline erosion is expected. Appendix E Section E.4.4 of the FEIS also discusses the potential for shoreline erosion from vessel wakes.
13149-021	There has been ongoing erosion and shifting of the constantly changing canal between Nunnepog (Edgartown) and Chappaquiddick, with ebbing and flowing of pond inlets. This highlights the vulnerability of the Chappaquiddick Island to the natural forces of the Atlantic wind and water. Yet, despite our requests since April of last year, neither BOEM nor Vineyard Wind have conducted a geological review of the OECC near the Chappaquiddick TCP to determine what, if any, erosion risk may occur - direct, indirect, and cumulative - from the dredging, digging, and dumping activities for the construction of export cabling for the Project or future projects. Nor is there any analysis of how potential erosion will be mitigated.	BOEM has considered the potential for erosion of shorelines and has determined that there is no evidence that the proposed Project would have any influence on this issue. Appendix E of the FEIS has been updated to include additional information regarding the oceanographic environment, including the potential impacts to mean flows near offshore wind foundations. Information related to potential changes in mean flows provides implications for shoreline erosion. Section 3.3.2 of the FEIS explains that background hydrodynamic conditions would exist approximately 328 feet (100 meters) from each monopile foundation. Appendix E Section E.4.4 of the FEIS discusses cable installation and concludes that no increased potential for shoreline erosion is expected. Appendix E Section E.4.4 of the FEIS also discusses the potential for shoreline erosion from vessel wakes.
13149-022	Geological studies [should] be completed prior to finalizing the environmental impact statement with regard to the cable installation and operation to properly review and evaluate potential loss or damage to Chappaquiddick Island.	BOEM has considered the potential for erosion of shorelines and has determined that there is no evidence that the proposed Project would have any influence on this issue. Appendix E of the FEIS has been updated to include additional information regarding the oceanographic environment, including the potential impacts to mean flows near offshore wind foundations. Information related to potential changes in mean flows provides implications for shoreline erosion. Section 3.3.2 of the FEIS explains that background hydrodynamic conditions would exist approximately 328 feet (100 meters) from each monopile foundation. Appendix E Section E.4.4 of the FEIS discusses cable installation and concludes that no increased potential for shoreline erosion is expected. Appendix E Section E.4.4 of the FEIS also discusses the potential for shoreline erosion from vessel wakes.
13149-023	The SEIS does not analyze the potential environmental justice issues and impacts on the Tribe and its members. These issues and impacts are not just human health and environmental, but should also include cultural, economic and subsistence practices.	Sections 3.7.1 and 3.7.2 of the FEIS have been updated to incorporate the following with respect to Native American tribes: a listing of the tribes consulted in preparing the FEIS; description of cultural practices; identification of cultural resources affected by the Proposed Action that hold significance to these tribes; identification of the IPFs that would affect cultural resources and practices including fishing and shellfishing; references to Section 3.8 which provides a detailed discussion of impacts on cultural resources; and an assessment of environmental justice impacts on Native American tribes.
13149-024	The SEIS also does not fully describe mitigation measures for the expected destruction of archaeological and marine cultural resources; instead, it defers to the Section 106 process to resolve.	BOEM performed a good faith effort to identify historic properties within all portions of the NHPA Section 106 review Area of Potential Effects or will be performing it as part of a phased identification of historic properties pursuant

Index Number	Comment Text	Response
		to 36 CFR 800.4(b)(2). The final mitigation plan and MOA to resolve adverse effects to historic properties will be finalized as part of the NHPA Section 106 process and will be completed before the Record of Decision is issued.
13149-025	The SEIS does not expand and analyze the potential impacts to the TCP itself beyond the potential visual impacts.	BOEM utilized all information provided in the course of the NEPA review and National Historic Preservation Act Section 106 consultations to analyze the impacts on the environment, natural and cultural resources, and environmental justice communities in order that the decision maker is fully informed. Visual impacts are analyzed in Sections 3.9 of the FEIS; impacts to cultural resources are analyzed in Sections 3.8 of the FEIS.
13152-001	We also have concerns about the impacts to recreationally important fish species from offshore wind development, which include but are not limited to vibration and noise from piling driving, acoustic surveys, operation of turbines, impacts of cable installation and maintenance, sediment and scour impacts, and interference with larval transport. The continued development of offshore wind turbine must proceed with these concerns and the best available science in mindWe believe the project has largely been a success from the recreational fishing perspective because the developer, Deepwater Wind, (now owned by Ørsted): • Engaged fishing clubs, charter captains and other stakeholders regularly and listened to their input. • Provided financial resources to the charter fishing industry impacted by closures during the construction of the wind farm to assist in marketing. • Committed to and followed-through on fisheries monitoring before, during and after construction of the wind farm. • Generally followed the guidance established by the Rhode Island Ocean Special Area Management Plan produced by the state's Coastal Resources Management Council. These components can and should be replicated to the extent possible in other project developments moving forward. The Vineyard 1 and other projects propose to use monopiles as opposed to	Section 3.3.2 of the FEIS has been updated to consider higher hammer energies. Sections 3.3 and 3.4 of the SEIS discuss the effect of structure but do not put forth any expectation of the strength of this effect from the foundations versus the scour and cable protection. Therefore, no further revision to Sections 3.3 or 3.9 of the FEIS (i.e., to evaluate the impacts of this noise on recreational fishing) is warranted.
15152 002	the jacketed foundations of the BIWF. Monopiles are more of a concern because they require much greater energy during pile driving and provide much less structure to enhance fish habitat.	energies. Sections 3.3 and 3.4 of the SEIS discuss the effect of structure but do not put forth any expectation of the strength of this effect from the foundations versus the scour and cable protection. Therefore, no further revision to the FEIS is warranted.
13152-003	During construction of wind farms, the SEIS states that while mortality impacts from pile driving will be limited to only 250 feet from the activity.	Section 3.4.1 of the SEIS described the potential for spawning behavior disruption and for the same populations or individuals to be affected multiple

Index	Comment Text	Response
Number	behavioral impacts can extend up to 5.7 miles – quite a significant distance in	times in 1 year or in sequential years. Therefore, no change to the FEIS is
	a recreational fisheries context. This could include potentially impacting spawning activity in key habitats, such as Cox's Ledge off of Rhode Island	warranted.
	individual windfarm may have "temporary and localized impacts"	
	successive years of construction where critical habitats are in overlapping 5.7	
	mile radiuses around projects could result in multi-year disruption to spawning.	
13152-004	Operational noise and vibration impacts are likely minimal.	Sections 3.4, 3.5, and A.8.3 of the SEIS discussed the potential impacts of WTG operational noise. Therefore, no change to the FEIS is warranted.
13152-005	Similarly, geological and geophysical survey noise impacts are not likely to rise to fisheries-level impacts and are also temporary and highly local, even as they may harm individual species and localized populations.	Section 3.4 of the SEIS discussed the potential impacts of G&G survey noise on finfish, invertebrates, and EFH. Therefore, no change to the FEIS is warranted.
13152-006	Larval transport is more likely to be impacted by changes in water temperature and salinity than presence of structures.	The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments, including larval transport modelling at a regional scale (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). This is a Project-specific EIS, not a Programmatic EIS or assessment.
13152-007	The vast majority of wind turbines will be developed in areas where fishing for highly migratory species is present. The presence of turbine structures will likely attract pelagic species such as tuna, which could enhance fishing opportunities. On the other hand, tuna anglers could have existing fishing grounds covered in potential snags; some anglers are concerned about hook long and hard fighting fish like tuna within .5 miles of a turbine.	Section 3.10.1.1 and 3.10.2 of the FEIS were updated to state that HMS may be attracted to the turbine foundations. As stated in Section 3.11 of the SEIS and FEIS, impacts from the presence of structures on for-hire recreational fishing vessels maneuverability could occur while trolling for fish.
13152-008	The presence of turbine structures acting as artificial reefs will be reduced if monopiles are used and scour pads are basically solid rock structures.	Sections 3.3 and 3.4 of the SEIS discuss the effect of structure but do not put forth any expectation of the strength of this effect from the foundations versus the scour and cable protection. Therefore, no further revision to the FEIS is warranted.
13152-009	The population-level impacts of adding hundreds of artificial reefs over ten years, including shifts in species assemblages and abundance in specific wind farms is unknown, and must be continually monitored.	Section 3.4.1 of the SEIS considered the potential for the reef effect. This is a single-project EIS, not a Programmatic EIS, and complies with the requirements of NEPA. A benthic monitoring plan is included in COP Appendix III-D, and the COP also includes provisions for fisheries monitoring. Therefore, no change to the FEIS is warranted.
13152-010	Specific to the SEIS, we believe that recreational fishing impacts should be considered independently of commercial fishing impacts. Taken as a whole, the SEIS labels the impacts to for-hire recreational fishing and commercial fishing as major. There are certainly significant likely impacts to recreational	While the organization of these two topics is not altered in the FEIS, Section 3.9.2 of the FEIS has been updated to note the findings on for-hire recreational fishing in Section 3.10.2 and discuss the relationship between the impact findings of the two sections.

Index	Comment Text	Response
Number		
	fishing, but they are substantially different. In the current draft, the impacts	
	are conflated at times, especially in reference to gear entanglements. The loss	
	of a very expensive commercial trawl net is not comparable to a recreational	
	angler hanging up while fishing a turbine, yet the SEIS seems to treat them	
	similarly. Likewise, for-hire and personal vessels may have access restricted	
	during construction, but both navigation and fishing will be much easier for	
	these smaller vessels.	
13152-011	Finally, the SEIS possibly understates the impact of the reef effect on	Section 3.4 of the SEIS discussed the reef effect on finfish, and Sections 3.10
	recreational fishing as "minor". While there are not many vessels that can	and 3.11 discussed that recreational fishing may improve near structures
	fish these turbines due to their offshore distance, studies show the reef effect	offshore. The SEIS notes that as more offshore wind development is
	is significant and may attract many anglers. Without qualifying whether	established, recreational fishing practices may change to include a greater
	impact is positive or negative, we believe the reef effect of turbines may be a	volume of trips to wind development areas. Therefore, no change to the FEIS
	major impact.	is warranted.
13152-012	The study "Electromagnetic Field (EMF) Impacts on Elasmobranch (shark,	The data used are the best available and reflect the state of the science at the
	rays, and skates) and American Lobster Movement and Migration from	time of publication of the EIS. BOEM continues to fund studies to address
	Direct Current Cables" conducted by the University of Rhode Island and	concerns raised in public comments, including responses of additional
	referenced in the SEIS indicates more research is needed about the impacts of	species to EMF (https://www.boem.gov/environment/environmental-
	EMF to certain sensitive species. While the existing evidence and angler	studies/renewable-energy-research).
	experience with existing power cables across the Northeast both indicate	
	EMF is not likely to majorly affect fisheries, one of the study's authors	
	recommended more research to firmly conclude there is no impact, especially	
	as multiple power cables are likely to be concentrated in certain areas.	
13152-013	To assess cumulative impacts from wind farms, and to monitor changes in	The COP includes before-and-after monitoring plans for benthic resources
	species distribution and abundance at wind farm sites, monitoring of species	and fisheries. The data used are the best available and reflect the state of the
	and fishing activity before, during, and after construction is essential. While	science at the time of publication of the EIS. BOEM continues to fund studies
	we have seen limited studies such as a cod rod and reel survey of Cox's	to address concerns raised in public comments
	Ledge executed, and proposed studies for planned developments off the	(https://www.boem.gov/environment/environmental-studies/renewable-
	coasts of Massachusetts and Rhode Island, some anglers feel these studies are	energy-research).
	happening too late in the development process. A few are concerned that	
	acoustic seafloor surveys could already be having impacts to fisheries that	
	surveys beginning now could miss. Future developments must begin	
	monitoring as soon as is feasible to create a legitimate baseline before	
	construction. This is particularly important as the SEIS acknowledges the	
	intersection of proposed projects and highly migratory species, the presence	
	of which in any development area are dependent on forage fish species,	
	ocean currents, salinity and temperature that may be difficult to isolate from	
	development impacts.	
13152-014	Create a coordinating body to streamline conversations between the	It is beyond the scope of this FEIS for the Vineyard Wind 1 project to
	recreational fishing community, developers and agencies. There are state-	recommend the suggested coordinated, coastwide engagement between

Index Number	Comment Text	Response
	level advisory groups with at least some recreational presence, and developer fisheries liaisons are increasingly developing relationships with key stakeholders. Yet, there is no central body to coordinate coastwide engagement between charter businesses, fishing clubs, marina and tackle shop owners, private recreational anglers and developers. Unlike commercial fisheries, recreational anglers that are not for-hire charter operators see fishing as a pastime, and creating such an entity will require financial commitments from all interested developers.	charter businesses, fishing clubs, marina and tackle shop owners, private recreational anglers and developers.
13152-015	Compensate the recreational fishing sector for any impacts. We know that at the very least, fishing will be restricted during construction. Should impacts to any popular fishing locations be identified, those too should be mitigated by the creation of artificial reefs or other strategies such as further habitat enhancement of the scour pads to be built around each of the turbine bases. Compensation may also include funding a conservation effort through a non- profit entities in the angling community. It may be difficult to identify specific impacts to the recreational fishing industry because of limited trip data to areas of proposed wind farms, so comprehensive support to for-hire vessels including marketing efforts should be included.	While the SEIS found short-term moderate impacts on recreational fishing during construction of Vineyard Wind 1, long term impacts were found to be minor overall. Section 3.9.2 of the FEIS is updated to clarify that that certain impacts on for-hire fishing would be moderate, as stated in Section 3.10.2 of the FEIS, because these enterprises are more likely to be materially affected by displacement, competition for resources and longer transit times in a manner similar to commercial fishing businesses. Certain mitigations established in Appendix D would apply to the for-hire fishing businesses. Therefore, additional mitigation measures are not warranted.
13152-016	Prioritize the use of gravity foundations that minimize the need for pile driving, and consider enhancements that improve their ability to serve as artificial reefs.	Thank you for your comment.
13152-017	Eliminate or minimize successive year-to-year pile driving that overlaps identified critical habitats for recreational fish species, so as to avoid disrupting fisheries and spawning for multiple years.	Section 3.10.2 of the SEIS concluded that during construction of Vineyard Wind 1, recreational marine activities could be affected by only one other offshore wind project that may overlap with the Vineyard Wind 1 project in terms of pile driving, with only short-term, localized impacts. Therefore, no change to the FEIS is warranted.
13152-018	Wherever possible, developers should work with recreational anglers to help with monitoring studies. As an example, before its acquisition Deepwater Wind worked with Rhode Island anglers to participate in a cod rod and reel survey on Cox's Ledge. Recreational anglers have knowledge that could be valuable to any monitoring studies.	It is beyond the scope of this FEIS for the Vineyard Wind 1 project to recommend coordination between offshore wind developers and recreational mariners in surveys and monitoring.
13152-019	Last but not least, developers have reassured the recreational fishing community they have no plans on restricting fishing access to their projects. We have heard the same thing from the United States Coast Guard which would enforce any closures. However, we believe this should be a permit condition from BOEM, or otherwise somehow enshrined in writing to ensure guaranteed fishing access. None of the fishing benefits of the reef effect are worth noting in the SEIS if fishing access is restricted outside of construction.	Section 3.10.2 of the FEIS has been updated to state that while temporary restricted access areas (safety zones) may be set up around active construction areas where applicable, BOEM does not have the authority to restrict vessel access to the WDA during operations. In addition, the USCG has stated that they do not intend to restrict access to the WDA during operations. The USCG's authority to establish safety zones only extends to the boundary of the territorial waters of the United States, which is 12 nautical miles from shore and outside the WDA. BOEM's lack of authority to

Index	Comment Text	Response
Number		
		restrict vessel traffic would apply equally to commercial and recreational
12152 001	Desisions that will affect multiple sectors of American industry for a	Thenk you for your comment
15155-001	generation or more should be based on facts and experience, not conjecture	Thank you for your comment.
	and fear of the unknown. Our United States of America almost always is on	
	the leading edge of technology development. A consequence of being in that	
	anyighte position is that the United States is not adopt at hervesting lessons	
	learned by other countries that have more experience in an emerging sector of	
	industry. Vet if A marica wants to develop offshore wind power in a safe and	
	efficient manner, we must look to the examples and lessons learned from	
	other countries that have been leading wind development for decades. I	
	suggest we look to the United Kingdom	
13153 002	Obviously, it is not possible for all mariners and regulators to gain first hand	Thank you for your comment
13133-002	experience povide for a large wind form. However, there are currently	Thank you for your comment.
	wind farm models under development at two maritime pavigation simulators	
	training centers on the East Coast. It is anticipated that these models will	
	provide realistic experience to mariners and simulation data to evaluate wind	
	farm configurations turbing markings and lighting as well as provide	
	emergency scenarios for first responders to develop safe search and rescue	
	protocols. These models are scheduled to be available to maritime and	
	regulatory stakeholders late this summer	
13154-001	Renewable energy is the future for this country with good Union jobs	Thank you for your comment
1010.001	Renewable energy is the future for electricity.	
13156-001	The Nature Conservancy believes that the offshore wind industry will be	Thank you for your comment.
	critical for setting us on the path toward decarbonization AND that ensuring	
	proper monitoring, mitigation, and environmental protections are in place	
	will enable projects to be developed in a sustainable mannerOur staff has	
	supported state legislation to increase the amount of renewable energy for	
	generating electricity. For example, in many states we have supported	
	policies to foster long-term renewable energy contracts. These long-term	
	contracts help states reduce consumer costs, generate jobs, reduce fossil fuel	
	pollution and health impacts in environmental justice communities and help	
	meet clean energy and climate goals.	
13156-002	In addition, our staff serve on every state led offshore wind environmental	Thank you for your comment.
	working group along the Atlantic coast, including here in Massachusetts	
	where we have been engaged in the BOEM process since the RFI in 2010.	
	We have consistently called for a closer examination of cumulative impacts	
	of coastwide wind development, improvements to the public process and the	
	broad application of the mitigation hierarchy (avoid, minimize, mitigate) for	

Index	Comment Text	Response
Number	anvironmental importe We enpressiote POEM's investment in completing	
	this SEIS, which is a large step forward on most of those points	
13156-003	The SEIS has substantially improved the scope and assessment of cumulative	Thank you for your comment
15150 005	impacts of offshore wind, and these analyses will need undating in	Thank you for your comment.
	subsequent project EISs.	
13156-004	The public would better understand the Final EIS with an articulation of both	Section 2.5 of the FEIS has been added which includes the agency-preferred
	likely and preferred alternatives.	alternative.
13156-005	Aggressive monitoring and rapid reporting of construction mitigation	Resource sections of the FEIS include proposed mitigation, where applicable,
	efficacy, coupled with rapid agency evaluation, is needed to adaptively	and Appendix D of the FEIS, which is a summary of all proposed mitigation
	manage upcoming projects.	considered, has also been updated to include modifications and/or additional
		mitigation and monitoring measures. Additional mitigation and monitoring
		measures may arise from consultations and coordination with Federal and
		State resource agencies. These additional mitigation measures will be
		considered by decision makers and could be adopted in the Record of
		Decision and required as conditions of approval. Section 2.2.1 of the FEIS
12156.006		has been updated to reflect this information.
13156-006	Longer term project monitoring still needs detailed agency guidance for	Resource sections of the FEIS include proposed mitigation, where applicable,
	greatest utility.	and Appendix D of the FEIS, which is a summary of all proposed mitigation
		mitigation and monitoring measures. Additional mitigation and monitoring
		measures may arise from consultations and coordination with Federal and
		State resource agencies. These additional mitigation measures will be
		considered by decision makers and could be adopted in the Record of
		Decision and required as conditions of approval. Section 2.2.1 of the FEIS
		has been updated to reflect this information.
13156-007	When mitigating unavoidable impacts developers should aim for	Thank you for your comment.
	additionality where possible, not simply equivalency.	
13156-008	Agencies could better use regional Data Portals for informing the public, and	Thank you for your comment.
	the Nature Conservancy is developing a mapping tool to help with that.	
13156-009	We agree with BOEM in expanding the scope of 'reasonably foreseeable'	Each applicant is required to submit a COP with their proposed action for
	projects from 5.4 GW to 21.8 GW to match the planned state commitments,	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	at this time. The SEIS includes a good description of the uncertainties that	require an analysis of impacts and the selection of the preferred alternative.
	could both increase and decrease the potential build out, and we expect most	
	of those assumptions to evolve over time. We recommend that BOEM re-	
	evaluate the potential cumulative build-out scope in each subsequent project	
13156-010	Since the development of the Draft Environmental Impact Statement (DEIS)	Section 2.5 of the FEIS has been added which includes the agency preferred
15150-010	nublic statements have been made by the developer and other important	alternative. Although the developer may make public statements about their
	parties that appear to have publicly acknowledged the most likely	preference of alternatives or other agreements related to the project. ROEM is

Index Number	Comment Text	Response
Number	alternatives, yet those are sparsely indicated in the DEIS/SEIS, which may be a disservice to the reader.	tasked with identifying and assessing the potential effects of the proposed Project as defined in the COP as well as a reasonable range of alternatives. Where appropriate, these agreements and COP updates were considered under various alternatives. For example, the developers' 1 x 1 nautical mile layout is considered under Alternative D2.
13156-011	Vineyard Wind announced that turbine manufacturer MHI Vestas Offshore will supply 84 each V164-9.5 megawatt turbines (in Nov 2018) suggesting they are unlikely to select smaller nameplate turbines.	Chapter 2 of the SEIS and FEIS outlines Vineyard Wind's project design envelope. Appendix G provides a summary of the PDE components.
13156-012	Alternative B, the Covell beach landing was publicly agreed to by many parties in March 2019.	Vineyard Wind has updated their COP to remove the New Hampshire Avenue landfall location as they have secured all their necessary state and local permits for Covell's Beach landfall site. Therefore, that landfall location has been removed from the Proposed Action. The FEIS has been updated to reflect this change.
13156-013	Alternative D2, the East/West turbine alignment with 1nm spacing was publicly agreed to by all MA/RI WEA developers in Nov 20194 and was endorsed in the Final US Coast Guard Massachusetts and Rhode Island Port Access Route Study (MARIPARS) study in May 2020.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13156-014	We recognize that until permitted these could change, but most observers of this project would say these are the most likely alternatives at this time. In addition to the lack of description of likely alternatives, this SEIS would benefit from preferred alternatives being indicated by BOEM. Preferred alternatives help the public anticipate likely outcomes.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. While the preferred alternative may be identified in a DEIS, it is required as part of a FEIS, and public comments help to informed BOEM's identification of the preferred alternative.
13156-015	Combining the DEIS and SEIS into a Final EIS (FEIS) that is clear and understandable will be a difficult task, but is particularly important due to the precedent setting nature of this project. There are several areas about mitigation specifically where additional clarity would be useful in the FEIS	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-016	There are several areas about mitigation specifically where additional clarity would be useful in the FEIS, including: A description of agreed upon or required minimizing and mitigating measures should be discussed in each section, in addition to consolidated in an appendix. The impacts scoring of proposed activities are strongly influenced by these mitigation measures, so they should be described inline in the text for easier interpretation.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of

Index	Comment Text	Response
Number		Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-017	[There are several areas about mitigation specifically where additional clarity would be useful in the FEIS, including:] There is ambiguity in this document on which mitigation measures will be conditions of the final permit or Record of Decision. For example, the developer has voluntarily agreed to some whale mitigation measures, which have influenced the scoring of impacts. These should be the minimum required mitigation measures.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-018	[There are several areas about mitigation specifically where additional clarity would be useful in the FEIS, including:] The developer has submitted revisions and additions to the COP, including most recently on June 3rd. The FEIS should clearly cite specific COP revisions and be clear which version is being considered.	The SEIS included an analysis of the changes to the COP and identified whether or not this changed the maximum-case scenario analyzed. The FEIS has been updated to state that the specific COP versions and sections referenced throughout the document are available on BOEM's website.
13156-019	[There are several areas about mitigation specifically where additional clarity would be useful in the FEIS, including:] Appendix D (Mitigation and Monitoring) in the DEIS should be updated for the FEIS to include as much detail as possible about what measures will be used, the performance standards they should meet, and how the developer will be evaluated on meeting those standards.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-020	Since this project is the first utility scale offshore wind development in US waters, and the first project to be built in the RI/MA WEAs where many other projects are planned, it is critically important to closely monitor and rapidly report out on successes and challenges of construction and early operation.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-021	The SEIS alludes to this in a few sections with language like "Information gained via monitoring (impacts on marine mammals) could also be used to assist other future offshore wind projects in selecting the least impactful method(s)." We agree very strongly with this premise and urge BOEM to develop a proposed methodology and aggressive timeline for the public and	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and

Index	Comment Text	Response
	BOEM to review these data and analyses and utilize these findings to support an adaptive management approach.	State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-022	Based on the anticipated project construction schedule in Table A-6 there will be between 139 and 311 turbines installed in each year from 2022 through 2025 in the RI/MA WEAs alone. In order to meaningfully inform this rapid progression of projects the developers should be required to report on and analyze construction monitoring data every 6 months for the first three years of the project. This should be a permit condition with penalties assessed for failure to meet the deadlines. This rapid reporting will be a significant burden for the developer, and there should be a similar commitment of time and resource investment by the agencies. Once BOEM receives these monitoring reports, federal agencies would need to conduct a rapid evaluation to determine "If data collected are sufficiently robust, BOEM or other resource agencies could use the information obtained to support potential regulation changes, or new mitigation measures for future projects." We agree strongly with this statement as well and urge that a process is outlined for these evaluations to take place. New information should also inform regular revisions and updates to the now dated Best Management Practices, which are based on the 2007 BOEM Programmatic EIS.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-023	As indicated repeatedly in the DEIS and SEIS the ocean environment is also changing at a rapid and unprecedented pace due to climate change. This project represents a part of the solution to this crisis by building renewable energy generators, but even with a rapid decarbonization of the global economy there will be continued environmental change thru the life of this project.	Thank you for your comment.
13156-024	Some assumptions that are critical for reducing impacts will need to be frequently updated, particularly for future projects and critically endangered animals like the NARW (NARW). The phenology of seasonal migrations is used to establish pile driving restrictions for example, yet, "over the last several years, NARW distribution and patterns of habitat use have shifted, in some cases dramatically (Pettis et al. 2017)" and the same has been shown for other large whales.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Post-construction monitoring requirements are being developed with researchers, environmental NGOs, State, and Federal agencies. The results of monitoring could be applied to adaptive requirements if the results show certain actions may be warranted.

Index	Comment Text	Response
13156-025	Climate change is already causing major shifts in fish species distribution which are already impacting commercial and recreational fishermen and coastal communities. The Nature Conservancy is working with regional	Thank you for your comment.
	fisheries management councils across the country to help make fisheries management 'climate ready' but that is adapting to change, not slowing it.	
13156-026	While this project will set precedents for future projects in the region, BOEM will need to carefully evaluate the changing conditions for each location and project, in consultation with agency and independent researchers, to determine which monitoring and mitigation measures can be directly	This comment does not require edits to the FEIS but will be considered in future NEPA reviews.
13156-027	transferred and which ones require more evaluation. It is critical that throughout the next decade of rapid offshore wind buildout that we invest in the science needed to stay current, and keep adjusting the best practices and mitigation measures as the research indicates.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and
		State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-028	We appreciate the language in DEIS Appendix D compelling the developer to conduct ecological monitoring in their lease area, and to contribute funds to both regional fisheries research and long-term regional monitoring of protected species impacts. This scientific research and long-term monitoring to advance understanding of the effects of offshore wind development on marine and coastal resources and ocean uses is essential.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-029	Science should be conducted in a collaborative and transparent manner, utilizing recognized marine experts, engaging relevant stakeholders, and making results publicly available and shared, as appropriate, on the Northeast and Mid-Atlantic Ocean Data Portals and other public platforms.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.

Index	Comment Text	Response
Number		
13156-030	We recognize that evaluating cumulative impacts is a challenging and emerging science, but the large-scale likely development demands an aggressive approach to determining impacts.	Thank you for your comment.
13156-031	We point to a few relevant papers describing the challenges and possible approaches to offshore wind cumulative impact analysis, impacts on avian species specifically, and challenges assessing fisheries impacts.	The FEIS has been updated to include relevant citations from the list of publications provided by the commenter. Furthermore, BOEM's assessment of fisheries impacts was guided by coordinating with NMFS and methods from Kirkpatrick et al. 2017.
13156-032	Impacts for particularly vulnerable species, such as the critically endangered NARW should be prioritized and expedited thru aggressive funding. This species appears to already be in decline18 before being impacted by the additional stresses that may result from offshore energy development.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Post-construction monitoring requirements are being developed with researchers, environmental NGOs, State, and Federal agencies. The results of monitoring could be applied to adaptive requirements if the results show certain actions may be warranted.
13156-033	Conducting Ecological monitoring inside the project site is one important component, which is described in the DEIS as "Conduct long-term monitoring to document the changes to the ecological communities on, around, and between WTG foundations and other benthic areas disturbed by the proposed Project, including protected species movement and habitat use." We have heard anecdotally from many developers that they are willing to do whatever ecological monitoring is required, but someone needs to decide exactly what that is. BOEM needs to create a specific monitoring methodology that all developers can use to allow these data to be compared between projects.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-034	The National Marine Fisheries Service has proposed detailed recommendations on mapping fish habitat which are at the appropriate level of detail and should be developed for as many other ecosystem components as possible. A recent paper describes this approach to develop criteria for each lessee to collect standardized baseline data, and develop standardized monitoring protocols so that future effects and impacts can be measured in a statistically valid manner. Without coordinated monitoring methodologies across the existing lease areas it will be difficult or impossible to identify positive or negative impacts of offshore development. In addition to collecting data it is important for BOEM to set thresholds of impact early on,	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.

Index Number	Comment Text	Response
	and then articulate what specific actions would result from reaching or exceeding those thresholds.	
13156-035	Large-scale monitoring is essential to track both environmental and human features of the ecosystem that overlap multiple planning areas and leases. Developers are already coordinating with the entities that have been, or are being, developed to steer and fund regional research which will contribute to regional-scale analyses needed to address questions related to population- level change and cumulative impacts across the geographic range of the NARW and other affected species. The Nature Conservancy has been working closely with state and federal agencies, environmental organizations and offshore wind developers to establish the Regional Wildlife Science Entity (RWSE) to support research and monitoring on wildlife and offshore wind energy. Between the RWSE and the Responsible Offshore Science Alliance, focused on impacts to fisheries, the conversation around regional research has shifted away from BOEM but the agency still has important roles in setting standards, providing funding and ensuring there are no critical gaps to be filled in other ways.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-036	One principle that deserves calling out is that of additionality. Specifically, mitigation "actions that restore, enhance, manage, and/or protect values and functions should be a genuinely new contribution to conservation with a strong probability of success." In the ocean environment there are few examples of this, but there is new research being conducted looking at how to maximize ecological value of offshore wind scour protection in the North Sea. The focus is on species "that need hiding places, shelter, feeding area or use the area as a nursery area and species that will profit from creating additional smaller and larger crevices", such as Atlantic cod, loligo squid, crab, lobster, and Eastern oysters, all of which are of interest here in the Northeast. The general approach is to integrate objects like pipes, reef balls, cages and other space producing items into the standard scour protection to improve the beneficial impact that is described in the DEIS/SEIS for this structure.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13156-037	Another approach for enhancing ecological value of structures has been demonstrated by adjusting concrete mixes to increase species richness of encrusting organisms. We would be interested in working with BOEM and developers to experiment with this type of habitat additionality which would benefit certain species, ecological resources, and commercial and recreational fishermen by extension.	Section 3.2 and Appendix D of the FEIS have been updated to discuss the suggested mitigation in the form of nature inclusive designs.
13156-038	The Northeast region developed and had approved two Regional Ocean plans in 2016 which list actions that federal agencies, including BOEM, agreed to	Thank you for your comment.

Index Number	Comment Text	Response
	take, within the constraints of existing regulations. Many actions are related to the maintenance and use of spatial data housed by the Mid-Atlantic and	
	Northeast Ocean Data Portals, which collectively represent the best available science for regional scale projects, like the VW 1 project. Regulatory bodies	
	including the EPA and the NEFMC have successfully used the NE Ocean	
	Data Portal to help stakeholders analyze proposed actions. The NE Ocean Plan Action FI-4 links the Portal with environmental reviews specifically like	
	this SEIS, where agencies agreed to "Incorporate Plan maps and data into	
	environmental reviews associated with new offshore energy or submarine	
	cable proposals" and further mentions the use of the Portal specifically for	
	We encourage BOFM to better utilize the Portals in the VW FEIS and in	
	future EISs undertaken across the region to enable the public to do their own	
	interpretation of the data.	
13156-039	Recognizing the challenge of sifting through the nearly 10,000 data layers on	Thank you for your comment.
	developing a wind energy mapping tool to help interested parties query	
	visualize, synthesize and interpret these data in a simpler, but no less rigorous	
	way. To achieve this goal, we are reviewing, updating and modifying	
	available marine-life, habitat and oceanographic regional data layers;	
	determining the best metrics to characterize the ecosystem, especially given	
	its variability; and analyzing and interpreting data layers in the context of	
	wind-energy development. This tool, which will cover the waters from Maine	
	to North Carolina, is being developed with input from state, federal and	
	release.	
13158-001	We also have concerns about the impacts to recreationally important fish	Section 3.4 of the SEIS discussed the potential impacts of noise, new cable
	species from offshore wind development, which include but are not limited to	emplacement/maintenance, sedimentation, and alteration of local water
	vibration and noise from piling driving, acoustic surveys, operation of	movements. Therefore, no change to the FEIS is warranted.
	turbines, impacts of cable installation and maintenance, sediment and scour	
	impacts, and interference with larval transport. The continued development	
	of offshore wind turbine must proceed with these concerns and the best	
13158-002	The Block Island Wind Farm became operational in 2016 Since then the	Section 3.10.2 of the FEIS has been undated to include information about this
15150-002	results have largely been positive – with numerous species including black	comment from a survey conducted by the University of Rhode Island which
	sea bass, fluke, cod, scup and many others caught regularly in the wind farm	found that recreational fishing increased in the vicinity of the wind turbines.
	area from both individual and for-hire charter boats. The charter industry has	
	also seen a significant increase in bookings from tourists whom want to see	
	the turbines up close and personally.	

Index	Comment Text	Response
Number		
13158-003	We also have concerns about the impacts to recreationally important fish species from offshore wind development, which include but are not limited to vibration and noise from piling driving, acoustic surveys, operation of turbines, impacts of cable installation and maintenance, sediment and scour impacts, and interference with larval transport. The continued development of offshore wind turbine must proceed with these concerns and the best available science in mindWe believe the project has largely been a success from the recreational fishing perspective because the developer, Deepwater Wind, (now owned by Ørsted): • Engaged fishing clubs, charter captains and other stakeholders regularly and listened to their input. • Provided financial resources to the charter fishing industry impacted by closures during the construction of the wind farm to assist in marketing. • Committed to and followed-through on fisheries monitoring before, during and after construction of the wind farm. • Generally followed the guidance established by the Rhode Island Ocean Special Area Management Plan produced by the state's Coastal Resources Management Council. These components can and should be replicated to the extent possible in other project developments moving forward	Section 3.3.2 of the FEIS has been updated to consider higher hammer energies. Sections 3.3 and 3.4 of the SEIS discuss the effect of structure but do not put forth any expectation of the strength of this effect from the foundations versus the scour and cable protection. Therefore, no further revision to Sections 3.3 or 3.9 of the FEIS (i.e., to evaluate the impacts of this noise on recreational fishing) is warranted.
13158-004	The Vineyard 1 and other projects propose to use monopiles as opposed to the jacketed foundations of the BIWF. Monopiles are more of a concern because they require much greater energy during pile driving and provide much less structure to enhance fish habitat. During construction of wind farms, the SEIS states that while mortality impacts from pile driving will be limited to only 250 feet from the activity, behavioral impacts can extend up to 5.7 miles – quite a significant distance in a recreational fisheries context. This could include potentially impacting spawning activity in key habitats, such as Cox's Ledge off of Rhode Island	Section 3.3.2 of the FEIS has been updated to consider higher hammer energies. Sections 3.3 and 3.4 of the SEIS discuss the effect of structure but do not put forth any expectation of the strength of this effect from the foundations versus the scour and cable protection. Therefore, no further revision to the FEIS is warranted. Section 3.4.1 of the SEIS described the potential for spawning behavior disruption and for the same populations or individuals to be affected multiple times in 1 year or in sequential years. Therefore, no change to the FEIS is warranted.
13158-006	and Massachusetts where multiple windfarms are proposed. While an individual windfarm may have "temporary and localized impacts", successive years of construction where critical habitats are in overlapping 5.7 mile radiuses around projects could result in multi-year disruption to spawning. Operational noise and vibration impacts are likely minimal.	Sections 3.4, 3.5, and A.8.3 of the SEIS discussed the potential impacts of
1		WTG operational noise. Therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
13158-007	geological and geophysical survey noise impacts are not likely to rise to	Section 3.4 of the SEIS discussed the potential impacts of G&G survey noise
	fisheries-level impacts and are also temporary and highly local, even as they	on finfish, invertebrates, and EFH. Therefore, no change to the FEIS is
	may harm individual species and localized populations.	warranted.
13158-008	Larval transport is more likely to be impacted by changes in water	The data used are the best available and reflect the state of the science at the
	temperature and salinity than presence of structures.	time of publication of the EIS. Therefore, no change to the FEIS is warranted.
		BOEM continues to fund studies to address concerns raised in public
		comments, including larval transport modelling at a regional scale
		(https://www.boem.gov/environment/environmental-studies/renewable-
		energy-research). This is a Project-specific EIS, not a Programmatic EIS or
		assessment.
13158-009	The vast majority of wind turbines will be developed in areas where fishing	The revised Sections 3.9.1.1 and 3.9.2, as well as Sections 3.10.1.1 and
	for highly migratory species is present. The presence of turbine structures	3.10.2 of the FEIS, which already discussed this subject and did not require
	will likely attract pelagic species such as tuna, which could enhance fishing	further revisions on the matter, discuss fishing for highly migratory species
	opportunities. On the other hand, tuna anglers could have existing fishing	and how such fishing could be affected by offshore wind energy
	grounds covered in potential snags; some anglers are concerned about hook	development, with the presence of foundations potentially being
	long and hard fighting fish like tuna within .5 miles of a turbine.	incompatible with certain fishing methods, as well as increasing the risk of
10150.010		fishing gear loss.
13158-010	The presence of turbine structures acting as artificial reefs will be reduced if	Sections 3.3 and 3.4 of the SEIS discuss the effect of structure but do not put
	monopiles are used and scour pads are basically solid rock structures.	forth any expectation of the strength of this effect from the foundations
		versus the scour and cable protection. Therefore, no further revision to the
10150 011		FEIS is warranted.
13158-011	The population-level impacts of adding hundreds of artificial reefs over ten	Section 3.4.1 of the SEIS considered the potential for the reef effect. This is a
	years, including shifts in species assemblages and abundance in specific wind	single-project EIS, not a Programmatic EIS, and complies with the
	farms is unknown, and must be continually monitored.	requirements of NEPA. A benthic monitoring plan is included in COP
		Appendix III-D, and the COP also includes provisions for fisheries
12159 012		While the energiastics of these true tories is not altered in the EEIC Section.
13138-012	Specific to the SEIS, we believe that recreational fishing impacts should be	while the organization of these two topics is not altered in the FEIS, Section
	the SEIS labels the impacts to far him representional fishing and commercial	5.9.2 of the FEIS has been updated to note the findings of for-file
	fishing as major. There are certainly significant likely impacts to recreational	impact findings of the two. In Section 3.10.2 the EEIS has been undated to
	fishing as major. There are certainly significant fixery impacts to recreational	make several distinctions between for hire and commercial fishing when
	are conflated at times, especially in reference to gear entanglements. The loss	there are expected differences, such as maneuverability within the WDA or
	of a very expensive commercial trawl net is not comparable to a recreational	increased opportunities from a greater abundance of structure-oriented
	angler hanging up while fishing a turbine, yet the SEIS seems to treat them	species being present near the structures. Additionally some of the impact
	similarly Likewise for-hire and personal vessels may have access restricted	ratings for the IPFs and sub-IPFs differ between commercial fisheries and
	during construction, but both navigation and fishing will be much easier for	for-hire recreational fishing (e.g. space use conflicts) For-hire (charter)
	these smaller vessels.	fishing businesses share certain characteristics with commercial fishing (e.g.
		the impact on earnings resulting from factors such as increased trin length
		and disruption of access to certain locations).

Index	Comment Text	Response
Number		
13158-013	Finally, the SEIS possibly understates the impact of the reef effect on recreational fishing as "minor". While there are not many vessels that can fish these turbines due to their offshore distance, studies show the reef effect is significant and may attract many anglers. Without qualifying whether impact is positive or negative, we believe the reef effect of turbines may be a major impact.	Section 3.4 of the SEIS discussed the reef effect on finfish, and Sections 3.10 and 3.10 discussed that recreational fishing may improve near structures offshore. Therefore, no change to the FEIS is warranted. The SEIS notes that as more offshore wind development is established, recreational fishing practices may change to include a greater volume of trips to wind development areas. Therefore, no change to the FEIS is warranted.
13158-014	The study "Electromagnetic Field (EMF) Impacts on Elasmobranch (shark, rays, and skates) and American Lobster Movement and Migration from Direct Current Cables" conducted by the University of Rhode Island and referenced in the SEIS indicates more research is needed about the impacts of EMF to certain sensitive species. While the existing evidence and angler experience with existing power cables across the Northeast both indicate EMF is not likely to majorly affect fisheries, one of the study's authors recommended more research to firmly conclude there is no impact, especially as multiple power cables are likely to be concentrated in certain areas.	The data used are the best available and reflect the state of the science at the time of publication of the EIS. BOEM continues to fund studies to address concerns raised in public comments, including responses of additional species to EMF (https://www.boem.gov/environment/environmental-studies/renewable-energy-research).
13158-015	To assess cumulative impacts from wind farms, and to monitor changes in species distribution and abundance at wind farm sites, monitoring of species and fishing activity before, during, and after construction is essential. While we have seen limited studies such as a cod rod and reel survey of Cox's Ledge executed, and proposed studies for planned developments off the coasts of Massachusetts and Rhode Island, some anglers feel these studies are happening too late in the development process. A few are concerned that acoustic seafloor surveys could already be having impacts to fisheries that surveys beginning now could miss. Future developments must begin monitoring as soon as is feasible to create a legitimate baseline before construction. This is particularly important as the SEIS acknowledges the intersection of proposed projects and highly migratory species, the presence of which in any development area are dependent on forage fish species, ocean currents, salinity and temperature that may be difficult to isolate from development impacts.	The COP includes before-and-after monitoring plans for benthic resources and fisheries. The data used are the best available and reflect the state of the science at the time of publication of the EIS. BOEM continues to fund studies to address concerns raised in public comments (https://www.boem.gov/environment/environmental-studies/renewable- energy-research).
13158-016	Create a coordinating body to streamline conversations between the recreational fishing community, developers and agencies. There are state- level advisory groups with at least some recreational presence, and developer fisheries liaisons are increasingly developing relationships with key stakeholders. Yet, there is no central body to coordinate coastwide engagement between charter businesses, fishing clubs, marina and tackle shop owners, private recreational anglers and developers. Unlike commercial fisheries, recreational anglers that are not for-hire charter operators see fishing as a pastime, and creating such an entity will require financial commitments from all interested developers.	It is beyond the scope of this FEIS for the Vineyard Wind 1 project to recommend the suggested coordinated, coastwide engagement between charter businesses, fishing clubs, marina and tackle shop owners, private recreational anglers and developers

Index	Comment Text	Response
Number		
13158-017	Compensate the recreational fishing sector for any impacts. We know that at the very least, fishing will be restricted during construction. Should impacts to any popular fishing locations be identified, those too should be mitigated by the creation of artificial reefs or other strategies such as further habitat enhancement of the scour pads to be built around each of the turbine bases. Compensation may also include funding a conservation effort through a non- profit entities in the angling community. It may be difficult to identify specific impacts to the recreational fishing industry because of limited trip data to areas of proposed wind farms, so comprehensive support to for-hire vessels including marketing efforts should be included.	While the SEIS found short-term moderate impacts on recreational fishing during construction of Vineyard Wind 1, long term impacts were found to be minor overall. Section 3.9.2 of the FEIS is updated to clarify that that certain impacts on for-hire fishing would be moderate, as stated in Section 3.10.2, because these enterprises are more likely to be materially affected by displacement, competition for resources and longer transit times in a manner similar to commercial fishing businesses. Certain mitigations established in Appendix D would apply to the for-hire fishing businesses. Therefore, additional mitigation measures are not warranted.
13158-018	Prioritize the use of gravity foundations that minimize the need for pile driving, and consider enhancements that improve their ability to serve as artificial reefs.	Thank you for your comment.
13158-019	Eliminate or minimize successive year-to-year pile driving that overlaps identified critical habitats for recreational fish species, so as to avoid disrupting fisheries and spawning for multiple years.	Section 3.10.2 of the SEIS concluded that during construction of Vineyard Wind 1, recreational marine activities could be affected by only one other offshore wind project that may overlap with the Vineyard Wind 1 project in terms of pile driving, with only short-term, localized impacts. Therefore, no change to the FEIS is warranted.
13158-020	Wherever possible, developers should work with recreational anglers to help with monitoring studies. As an example, before its acquisition Deepwater Wind worked with Rhode Island anglers to participate in a cod rod and reel survey on Cox's Ledge. Recreational anglers have knowledge that could be valuable to any monitoring studies.	It is beyond the scope of this FEIS for the Vineyard Wind 1 project to recommend coordination between offshore wind developers and recreational mariners in surveys and monitoring.
13158-021	Last but not least, developers have reassured the recreational fishing community they have no plans on restricting fishing access to their projects. We have heard the same thing from the United States Coast Guard which would enforce any closures. However, we believe this should be a permit condition from BOEM, or otherwise somehow enshrined in writing to ensure guaranteed fishing access. None of the fishing benefits of the reef effect are worth noting in the SEIS if fishing access is restricted outside of construction.	Section 3.10.2 of the FEIS has been updated to state that while temporary restricted access areas (safety zones) may be set up around active construction areas where applicable, BOEM does not have the authority to restrict vessel access to the WDA during operations. In addition, the USCG has stated that they do not intend to restrict access to the WDA during operations. The USCG's authority to establish safety zones only extends to the boundary of the territorial waters of the United States, which is 12 nautical miles from shore and outside the WDA. BOEM's lack of authority to restrict vessel traffic would apply equally to commercial and recreational vessels.
13159-001	BOEM, Dept of Interior and the Trump Administration has a real opportunity to green light a clean home-grown industry. Please consider early approval (well before November 3rd) of the "Record of Decision" for the Vineyard Wind 1 project.	Thank you for your comment.
13159-002	1NM spacing instead of transit lanes is better. Commercial fishermen need to stay out of the BOEM lease blocks, as there is plenty of ocean elsewhere. in	Section 3.4 of the SEIS discusses the "reef effect" and the potential benefits to finfish and invertebrates. Section 3.10 and 3.11 discuss the potential for

Index Number	Comment Text	Response
Number	fact a LIK study showed that Off Shore Wind (OSW) creates mini artificial	increased recreational commercial and for-hire fishing opportunities:
	reefs at the base of each turbine foundation	therefore no change to the FFIS is warranted
13159-003	Approximately 4 years ago DOE stated that the east coast could support	Thank you for your comment
15159 005	86GW of offshore wind, and I agree with this. Currently we see about 27GW	Thank you for your comment.
	of planned build out in the northeast. We also see old inefficient coal, oil and	
	nuke power plants closing down and this offshore wind industry is the	
	smartest plan to replace this electricity production. Yes, we will still need the	
	natural gas co-gen plants, but these gas power plants are mostly new and	
	highly efficient and clean. OSW is a merchant funded clean power industry,	
	not requiring tax dollars but does require your support and approval.	
13161-001	Therefore, we are left with no options but to strongly demand that the	BOEM is evaluating Vineyard Wind's COP which is for the development of
	permitting process be stopped until either the developers layout the wind	an 800-MW offshore wind farm and the potential impacts associated with
	farms to allow large fishing and clam vessels to operate efficiently and safely	their action. Section 2.5 of the FEIS has been added which includes the
	with enough space between the turbines.	agency-preferred alternative.
13161-002	In addition, to provide adequate turbine spacing that allows the National	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Marine Fisheries Service's research vessels to conduct finfish, scallop, and	alternative.
	clam surveys within the leases areas. The clam survey had been ongoing	
	since mid-1960s and will not be possible if the current turbine spacing is the	
	final layout. If the developers will not make concessions then they need to	
	compensate these vessel and ITQ owners for the clams that they have	
	exclusive rights to harvest and that they will not be available for them to	
121(1.002	harvest.	
13161-003	The clam industry would like to point out the obvious, if Vineyard Wind is	I hank you for your comment.
	allowed to proceed with construction of their wind farm as currently	
	England and the Mid Atlantic. The lang term affect is going to have as	
	England and the Wild Atlantic. The long-term effect is going to have, as	
	bolin put it, a <u>MAJOR</u> negative impact on the U.S. Isling industry and is a violation of the idea that the U.S. needs food security.	
13161-004	With the proposed 1X Inputical mile separation of the turbines in both	Section 2.5 of the FFIS has been added which includes the agency preferred
13101-004	direction there will be no large fishing vessels operation within the lease	alternative
	areas. That is a violation of the entire Magnuson / Steven Fisheries	
	Conservation and Management Act. (MSFCMA) which provides the	
	authority over fishing and Essential Fish Habitat (EFH) within the EEZ to the	
	regional fishery management councils.	
13161-005	A complete disregard by the developers is managed under Individual	Section 3.10 and Appendix D of the FEIS discuss the details of the voluntary
	Transferable Quotas (ITQ). ITQs are a fishery management tool that gives	revenue compensation funds. Vineyard Wind has established voluntary gear
	the ITQ owners the exclusive rights to the clam biomass. However, if the	loss and revenue compensation funds for fishing interests based in Rhode
	clams are in an area that has become controlled by some other entity other	Island and Massachusetts, which includes owners and operators of vessels,
	than the regional councils then the clam fishery cannot fish there for non-	vessel crews, shoreside processors, vessel supplier and support services, and
Index Number	Comment Text	Response
-----------------	---	--
Tumber	fishery management reasons, the restricting party must be responsible for the harm that they causes. Clam ITQs are a valuable commodity.	other entities that can demonstrate losses directly related to the Vineyard Wind 1 Project.
13161-006	The surfclam and ocean quahog fishery represented by this office strongly demands that BOEM not issue any additional permits to any of the wind developers until a fair and reasonable set of rules are put together by all ocean users and BOEM incorporates them into the final COP for every ocean wind project in the north east Unites States.	Thank you for your comment.
13161-007	The developers say that one by one mile layout is safe to transit even when approaching another ship going in opposite direction or meeting in a crossing pattern. The fishing industry strongly disagrees. While some of the other fisheries wanted four NM transit lanes the clam industry suggested that the turbines be spaced in the same pattern but Two X Two NM apart. In that, way vessel can safely transit the area most of the time and fishing for clams and other fisheries may be possible for the smaller vessel under favorable conditions.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13161-008	But, the larger vessel's captains, even in good weather are going to be very reluctant to steam through the [proposed 1x1 NM] array and in bad weather, fog and dark, no skipper in their right mind would put their crew and vessel in such a dangerous situation. To make the situation worse the interference from the turbines on the ship's radar makes that tool almost useless when it is needed most. Therefore, all vessels that must steam many miles to navigate around this large wind array in time lost and extra fuel burned and under the worst circumstances. This is very harmful for fishing vessels that fish on days at sea regulations. Steaming many extra hours cost them time that is only an extra expense and reduced fishing time that equates in less income. So steaming around the wind farms is more expensive and cause lost income, which is a double loss.	Section 3.10 of the FEIS addresses impacts to commercial fisheries, including the potential impacts to vessel operators that chose to avoid the proposed Project area. Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13161-009	However, we know that if they are developed as design it will cause substantial damage to the fishing industry for loss of fishing ground especially for those that fish for shellfish that do not move. The need for better baselines science information of the lease area is necessary so that the changes that take place as the areas become more populated with turbines and cables can be monitored as changes take place.	Section 3.10.2 of the FEIS was updated to discuss the proposed Project's plan for biological fisheries monitoring, which could provide an understanding of the effects of offshore wind development, benefit future management of commercial and for-hire fisheries, and inform planning of other offshore developments. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07).
13161-010	There is no justification for significant changes of the ecosystem in the area for a group of wind farms that only provide electricity 35 percent of the time. In addition, they are the most effective in the winter when demand is low and	Thank you for your comment.

Index	Comment Text	Response
Number	produce very little electric power in the summer when electric demand is highest.	
13161-011	There are many sample stations within the lease area for fisheries and protected species but because of the turbine, spacing the NOAA research vessels will not be able to do their surveys in the areas leave big holes in the data that has been collected for years on most of the species that are found in the area. Because fisheries is managed under a precautionary approach, if data is not validated on a regular basis then it must be assumed the species is not there, which reduces the biomass estimate which then reduces in fin fish or shellfish quotas.	The SEIS discusses these issues throughout Section 3.14 (Other Uses, Scientific Research and Surveys), and Section 3.14.2.5 addresses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07). Existing voluntary compensation packages that Vineyard Wind proposes for the life of the project. Therefore, no change to the FEIS is warranted.
13161-012	The developers are conning the Governors and the state legislators with the idea that they are going to provide high paying jobs to their state and billions of dollars in income. That is not possible for the near future because the U.S. has neither the equipment nor the skilled workers to build the turbines or install them. While the U.S. could build and install them, it would require a design of all the components parts for the turbines, cables, at sea substations and construction ships. The supply chain here in the U.S. does not exist and there is a great risk in building the construction ship because the developers want to install the largest turbines possible but it is very expensive to build a ship that can construct a 12 MW turbine and then use it to build an 8 MW array.	Economics and employment effects are addressed in Section 3.6 of the FEIS. Additionally, Chapter 1 of the FEIS has been updated to acknowledge that approval of the proposed Project would encourage support and investment in other offshore wind projects and the creation of a domestic supply chain for the industry.
13161-013	The point is that most of the turbines that are going to be installed here will come from Europe for at least years while U.S. yards gear up to build the components.	Economics and employment effects are addressed in Section 3.6 of the FEIS. Additionally, Chapter 1 of the FEIS has been updated to acknowledge that approval of the proposed Project would encourage support and investment in other offshore wind projects and the creation of a domestic supply chain for the industry.
13161-014	There is a lot of hype about wind farms having a near zero carbon footprint. That is not the case; All of [the turbine] components require energy generated from mostly fossil fuels to make the steel and then installing the turbines, substations and cables. Decommissioning the wind farms requires removing the turbines, cables, and substations will require large amount of energy to transport then melting down the steel and finding a place to bury the cables that will last for a thousand years and the blades, which will also last for hundreds if not thousands of years. In the case of the blades, there is	Greenhouse gas emissions, climate change, and air quality were evaluated in Section A.8.1 of the SEIS and the FEIS has been updated to include additional information. In addition, Section 2.1.1.3 of the FEIS specifies that Vineyard Wind would reuse, recycle, or responsibly dispose of all materials removed during decommissioning. Vineyard Wind has submitted a conceptual decommissioning plan as part of the COP, and the final plan would outline Vineyard Wind's process for managing waste and recycling proposed Project components.

Index	Comment Text	Response
Number		
	no materials that can be recycled. The cables material separation will cost	
	more than they could sell the components. Therefore, they would put them in	
	a landfill of dump them in the deep ocean. Alternatively, leave them on the	
	bottom in the lease area. The developers intend to cut the tower off just	
	below the bottom. They may attempt to leave the tower foundation and the	
10161.015	cables where they are if they can get away with it.	
13161-015	The conventional power plants using natural gas, coal, or nuclear fuel to	Thank you for your comment.
	carry the load most of the time. Therefore, the questions is, if you build these	
	wind arrays, have you reduced the carbon footprint? The answer is there is a	
	very small amount of carbon reduction. Nuclear power plants are much	
	more reliable and cleaner with a low carbon overall footprint while	
	providing power to the customer 100 percent of the time.	
13161-016	If the turbines are spaced as currently designed at one X one NM apart, the	The potential impacts to NMFS survey efforts are addressed in 3.12 of the
	[NMFS biomass] survey vessel will not be able to sample the area. If survey	FEIS. Additionally, resource sections of the FEIS include proposed
	station cannot be sampled the [clam] population of the area is counted as	mitigation, where applicable, and Appendix D of the FEIS, which is a
	zero. Therefore, the population is lowered and then so is the quota. Is the	summary of all proposed mitigation considered, has also been updated to
	federal government going to allow the clam fishermen that invested millions	include modifications and/or additional mitigation and monitoring measures.
	to purchasing clam ITQs to have them taken away by European companies	Additional mitigation and monitoring measures may arise from consultations
	free? The developers have two options, install much larger turbines spread	and coordination with Federal and State resource agencies. These additional
	out to two X two NM or pay the ITQ holders for the loss of their valuable	mitigation measures will be considered by decision makers and could be
	assets.	adopted in the Record of Decision and required as conditions of approval.
		Section 2.2.1 of the FEIS has been updated to reflect this information.
13162-001	I am writing to express support for the proposed Vineyard Wind 1 project	Section 2.5 of the FEIS has been added which includes the agency-preferred
	and encourage BOEM to reject Alternative F, adopt Alternative D2 and	alternative.
	proceed along its published schedule to issue a final EIS in November and a	
	Record of Decision approving the project.	
13162-002	While not in our region, decisions made about the Vineyard Wind 1 project	Thank you for your comment.
	will have ripple effects that will influence wind projects off the shores of our	
	region now and into the future. RPA believes that the proliferation of	
	offshore wind is critical for our region's environmental and economic	
	success and for the health and well-being of our communities.	
13165-001	Specifically, the economic development and workforce opportunities of this	Thank you for your comment.
	industry are now more important than ever as many people have found	
	themselves unemployed. There is urgency for approval with greater	
	awareness of the need to retool and educate for the new opportunities	
	connected with this project and renewable energy.	
13165-002	In addition, having followed the Trump Administration's "Pledge to	Thank you for your comment.
	America's Workers," we encourage consideration of the turbine layout to	
	minimize the need for additional transit lanes within the lease area. We	

Index	Comment Text	Response
Number		
	recognize that increasing the transit lanes increases the distance of undersea	
	cabling between fewer turbines, generating less clean energy, and ultimately	
	creating fewer jobs for our communities.	
13166-001	The development of offshore wind facilities is a significant opportunity for	Thank you for your comment.
	the U.S. government to address climate change, meet society's needs for	
	reliable and affordable energy, and most importantly to provide another tool	
	to boost the economy.	
13166-002	The VW 1 Project Draft SEIS Should Inform and Provide Greater Certainty	Thank you for your comment.
	Regarding Future Offshore Wind Permitting DecisionsShell	
	acknowledges that the intent of E.O. 13807 was satisfied in regard to the	
	draft SEIS processThe draft SEIS's detailed analysis demonstrates that	
	BOEM has taken a "hard look" at the pertinent issues, including the potential	
	cumulative impacts of reasonably foreseeable future projects.	
13166-003	It is critical that BOEM proceeds in an objective and balanced manner and	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect BOEM's
	finalizes the SEIS process in a manner consistent with its statutory	anticipated date for a decision on the COP.
	obligations.	
13166-004	Initial [offshore wind] projects [such as VW] will likely select export cable	Each applicant is required to submit a COP with their proposed action for
	routes and shore landings that may limit future projects' route selections,	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	culminating in a potentially higher cumulative resource impact. Ensuring the	require an analysis of impacts and the selection of the preferred alternative.
	cumulative scenario framework also accounts for co-existence between	
	foreseeable projects, BOEM can initiate project collaboration as a potential	
	opportunity to reduce cumulative impacts during development.	
13166-005	BOEM has to consider how a preferred alternative for the VW 1 Project may	Each applicant is required to submit a COP with their proposed action for
	impact the cumulative scenario framework, specifically the consequences of	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	proposed alternatives on future projectsShell recommends the agency	require an analysis of impacts and the selection of the preferred alternative.
	consider the time for building out the full 21.8 GW offshore wind capacity is	Section 2.5 of the FEIS has been added which includes the agency-preferred
	far from certain and that BOEM, or the Department of Interior, should not	alternative.
	make a preferred alternative decision that impacts the viability of the current	
12166.006	proposed project and tuture projects.	
13166-006	Shell encourages BOEM to rely on the reasonable opinions and	BOEM's experienced subject matter experts oversee the NEPA review
	interpretations of qualified experts, including those within the Office of	process.
	Renewable Energy Programs and across the agency, to make informed	
	DOEM's relevant all and are available science, including data generated from	
	BOEM's fobust oil and gas program, environmental analyses of past and	
	current offshore wind activities in the U.S. and overseas, and from globally-	
	applied monitoring and research activities specific to the offshore wind	
12166 007	The designations of notantial impact levels did not adoquately account for	As noted in the SEIS, the summary of the Drenesed Action and the
13100-007	The designations of potential impact levels did not adequately account for	As noted in the SEIS, the summary of the Proposed Action and the
	reasonably foreseeable mugation that could be applied at a project level of at	anemative analyses in this SEIS did not assume that the proposed mitigation

Index	Comment Text	Response
Number		
	a regional levelWhile Shell generally agrees with some impact ratings in the draft SEIS, other resource areas were rated higher than is appropriate and did not account for the best available science and the evolving types of mitigation measures.	measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13166-008	We encourage BOEM to recognize, in the final EIS, these early efforts in research, monitoring, and data collection, the adoption of best management practices for data sharing and public-private collaborations and the value that such efforts generate. These are important tools and should guide BOEM, the consulting agencies, offshore wind industry, and other stakeholders as they consider the steps that may be taken to mitigate any adverse environmental impacts.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13166-009	BOEM's analysis of the No Action Alternative states that "the proposed Project would not be built and hence would have no impact on commercial fisheries and for-hire recreational fishing" (pp. 3-94). This statement disregards other BOEM analyses in the document that recognize states' positions concerning the positive benefits or ancillary positive benefits that could result from offshore wind development, role of Fisheries Representatives and other opportunities for fishermen to collaborate with the D10 offshore wind industry, including partnering on cooperative science and monitoring that provides increased data and knowledge of fisheries and their habitats in and around the lease areas. In this sense, the no action alternative results in negative outcomes for the fisheries community and this should be acknowledged.	Section 3.10.2 of the FEIS discusses the proposed Project's plan for biological fisheries monitoring, which could provide an understanding of the effects of offshore wind development, benefit future management of commercial and for-hire fisheries, and inform planning of other offshore developments. However, the FEIS states that other ongoing and future surveys could still provide similar data to support similar goals. Therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number 13166-010	Shell recommends that BOEM clearly identify where data and literature	The FEIS includes a discussion of impacts as well as the use of the impact
	supports a direct or indirect finding of impact and clearly identify where	levels applied to the adverse and beneficial impacts. The resource specific
	BOEM's direct and indirect impact analyses are predictive, speculative,	sections include information related to the magnitude, duration, geographic
	qualitative, and/or subjective. BOEM should also require the same rigor from	extent, and/or frequency of potential impacts, as appropriate, to support
	the data, information and assessments provided by consulting agencies.	impact determinations.
	BOEM is also responsible for balancing consulting agency feedback with its	
10166.011	own assessment of the strength of information to a 'best science' principle.	
13166-011	For analyses that are predictive or speculative, the agency should reference	Each applicant is required to submit a COP with their proposed action for
	actions and/or activities by the agency and consulting agencies, the industry,	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	and the specific project under review that will help adapt and refine the	require an analysis of impacts and the selection of the preferred alternative.
	cumulative scenario framework over time, as individual projects are built and	
12166 012	monitored and more information can be provided to inform decision making.	Each and is a submit a contract of a contract of the firm of the f
13100-012	In the cumulative impacts scenario assessment, BOEM considers maximum-	Each applicant is required to submit a COP with their proposed action for DOEM's review at which time, triggers a NEDA EIS review. Each EIS will
	resource impacts BOEM also conflates impacts where all projects in the	boEW s review at which time, unggets a NEFA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative
	reasonably foreseeable future, are considered equal, when mitigation actions	The impact analysis of impacts and the proposed Project implemented a
	(e.g. impacts to fisheries resources) and consultations (e.g. Department of	maximum-case scenario for all resources so that BOFM's decision makers
	Defense) will be variable across the projects and specific to the individual	understand the most impactful scenario
	PDE choices of those projects. This establishes a precedent that does not	
	create fair and equitable development for lease areas under OCSLA, that	
	projects may be able to adequately mitigate the impacts in their lease areas or	
	with their PDEs, and that potential advances in technologies (e.g. navigation	
	safety, turbines, foundations, cables, mitigation monitoring) may serve to	
	reduce potential impacts.	
13166-013	BOEM should adopt a consistent approach in analyzing how impact	Each applicant is required to submit a COP with their proposed action for
	scenarios, and the assumptions informing the analysis will likely change over	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	the timeframe proposed with reasonably foreseeable projects that complies	require an analysis of impacts and the selection of the preferred alternative.
	with the agency's statutory responsibilities under OCSLA. Resources and the	The expanded planned action scenario utilized for the proposed Project will
	impacts to those resources – adverse and positive – should be equally	be a model future reviews and the scenario will be updated as necessary or as
	weighed to bring necessary balance to the analysis and BOEM's statutory	new information becomes available.
10166.011	responsibilities.	
13166-014	BOEM should clearly delineate and define where and how project-specific	As noted in the SEIS, the summary of the Proposed Action and the
	actions can mitigate risks and identify where the combination of project-	alternative analyses in this SEIS did not assume that the proposed mitigation
	specific and fit-for-purpose mitigation strategies across foreseeable future	measures discussed in the DEIS would be included to avoid or reduce
	scenarios may conectively reduce cumulative impacts.	Vineyand Wind as part of the Drangeed Action. The SELS are large survey
		v ineyaru wind as part of the proposed Action. The SEIS analysis was
		along with their voluntarily measures and was not a programmatic EIS. Table
		A-5 in Appendix A of the SEIS included best management practices for

Index	Comment Text	Response
Number		
13166-015	BOEM's draft SEIS concludes that future offshore wind development will only result in minor economic benefits to the region. This is counter to the draft SEIS's recognition of significant new investments in workforce development, job creation, infrastructure development (ports and harbors), and the supporting manufacturing and supply chain. Further, BOEM's 'No Action' alternative does not consider benefits lost if the project is not built.	future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS. The No Action Alternative analysis for the SEIS and the FEIS assume that if the Proposed Action is not built, development of other east coast offshore wind projects would nevertheless continue; therefore, loss of the Proposed Action would delay but not prevent the beneficial economic outcomes of the No Action Alternative. In addition, Section 3.6.2 of the FEIS has been updated to acknowledge industry
		continued investment in offshore wind.
13166-016	The final EIS should include a more accurate and robust analysis of investments for projects with executed PPAs, white papers, peer-review literature and projections by economists and the U.S. Energy Information Administration that clearly document provide data points that indicate the trajectory for the rise and growth of the U.S. supply chain and ocean industries that will support offshore wind and recognize that the positive economic impacts are greater than originally presented in the draft SEISBOEM should clearly articulate the justification and process for translating clearly quantitative-derived value to impact determinations, as it	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS. Additional specific data and analysis is not

Index	Comment Text	Response
Number		
13166-01/	BOEM's draft SEIS (Section 3:13, pp. 110 – 114) describes impacts to	Even with mitigation, overall, the impacts of Alternative A alone on
	navigation to be 'major', but the analysis discounts the effectiveness of	Alternative A's structures and levent (i.e., leaking 1 y 1 neutrical mile specing
	navigational ands to mitigate the risks of anisions and comstons.	Anternative A's structures and layout (i.e., lacking 1 x 1 natureal mile spacing
		could make it more difficult for SAR aircraft to perform operations in the
		lease area leading to less effective search patterns or earlier abandonment of
		searches. This could lead to increased possibility for loss of life due to
		maritime incidents, which would produce significant local and possibly
		regional disruptions for ocean users in the RI and MA Lease Areas.
13166-018	Transit lanes and spacing between wind turbines should be assessed at a	Thank you for your comment.
	project-level and, i.e. for adjoining lease areas, and should not be prematurely	
	based on one project's NEPA analysis for a different and distant geographic	
	location.	
13166-019	The agency process in determining how best to address spacing and the need	Section 2.5 of the FEIS has been added which includes the agency-preferred
	for transit lanes should be a transparent and interactive process between the	alternative.
	respective project proponent and the impacted stakeholders. BOEM should	
	take care to avoid overstepping its authority and should coordinate closely	
	with other federal agencies to ascertain who has the requisite authority to	
	address spacing and transit lanes and defer to that agency's recommendations	
12166.020	and decisions for navigation safety.	
13166-020	Shell agrees with the draft SEIS conclusion, as it applies to the Massachusetts	I hank you for your comment.
	- Knode Island wind Energy Area (MA-KI WEA), that broad transit lanes	
	outweigh any minimal positive benefits from their implementation	
13166-021	For Massachusetts _ Rhode Island Wind Energy Area Alternative D2 is	Section 2.5 of the FFIS has been added which includes the agency preferred
15100-021	Preferred	alternative
13166-022	Alternative D2 does account for navigational safety for all types of mariners	Section 2.5 of the FEIS has been added which includes the agency-preferred
	in the buildout of the MA-RI WEA and this has been confirmed by the U.S.	alternative.
	Coast Guard's recently released final report, The Areas Offshore of	
	Massachusetts and Rhode Island Port Access Route Study (MARIPARS),	
	advising BOEM that larger transit lanes are not necessary for safe navigation	
	and, in fact, explaining that they could lead to increased navigational	
	impacts.	
13166-023	With how the cumulative scenarios are designated in the draft SEIS, BOEM	Each applicant is required to submit a COP with their proposed action for
	must consider how the VW 1 Project ROD will impact reasonably	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	foreseeable projects. BOEM's analysis in the draft SEIS, supplemented with	require an analysis of impacts and the selection of the preferred alternative.
	the U.S. Coast Guard MARIPARS findings, satisfies the "hard look"	Section 2.1.3 and Section 3.11 of the FEIS incorporate, where appropriate,
	requirement of NEPA. Shell supports Mayflower Wind Energy LLC's	the Final MARIPARS. Section 2.5 of the FEIS has been added which
1	comments regarding project-level impacts of the transit lane alternative	includes the agency-preferred alternative.

Index Number	Comment Text	Response
	(Alternative F) in the draft SEIS and AWEA's comments and analysis of Alternatives D2 and F.	
13166-024	Shell recommends the following two actions by BOEM: 1. BOEM incorporate the final Final MARIPARS when finalizing the SEIS, and 2. BOEM reject Alternative F, and select Alternative D2 as the preferred alternative, in the final SEIS based on the findings of the U.S. Coast Guard MARIPARS findings and that the technical, operational and economic challenges outweigh the benefits provided by transit lanes.	Findings and recommendations of the Final MARIPARS study report are included in Section 3.11 of the FEIS. Section 3.11.5 of the FEIS includes a discussion of potential effects of Alternative F. The Preferred Alternative in discussed in Section 3.11.6 of the FEIS.
13166-025	For other Atlantic Wind Energy Areas, the final SEIS should not assume uniform spacing, layout, and inclusion of transit lanes outside of the Massachusetts – Rhode Island WEA. These areas have specific, and often individual, requirements, geography, stakeholders, and conditions uniquely representative of the areas, in which the MA-RI WEA proposed layout is not designed to address. BOEM should rely on the U.S. Coast Guard process and statutory authority to determine what is appropriate for those lease areas specific to spacing between wind turbines and for the inclusion of transit lanes.	As noted in Appendix A of the SEIS, BOEM assumed that all offshore wind developments offshore Massachusetts and Rhode Island would have 1 x 1 nautical mile spacing. This assumption was made based on the developers' agreement made among the developers and does not preclude the selection of another alternative by the decision maker. BOEM further assumed that wind development offshore other states, with the exception Virginia, is assumed to occur at the same density as 1 x 1 nautical mile spacing, but no particular layout orientation or foundation spacing is assumed as ocean users offshore different states may have different patterns of movement or considerations than projects in leases offshore Massachusetts and Rhode Island. Therefore, no changes to the FEIS are warranted. Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
13166-026	Shell supports AWEA's further explanation of impact designations relative to the processes and statutes that direct this existing cooperation between [Department of the Interior, Department of Defense and the offshore energy industry] and recommends that BOEM re-evaluate [the current process used by these agencies to assess any potential conflicts between military activities and energy operations, evaluate potential ways to minimize conflicts, and establish effective mitigation measures to alleviate any concerns] in the cumulative scenario impacts on military and national security issues for reasonably foreseeable projects.	As noted in the SEIS, the summary of the Proposed Action and the alternative analyses in this SEIS did not assume that the proposed mitigation measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional

Index	Comment Text	Response
		mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information. Impacts on military and national security are addressed in the FEIS in Section 3.12
13166-027	Shell suggests that the fisheries impact assessments of the draft SEIS may be oversimplified. We concur with published studies that multi-disciplinary research and monitoring of holistic development impacts are needed in order to better understand development impacts and their relationship with impacts from changing natural conditions and human behaviors and have been on forefront to establish structure (e.g. ROSA) to conduct the needed research and monitoring.	Section 3.10.2 of the FEIS has been updated to discuss the proposed Project's plan for biological fisheries monitoring, which could provide an understanding of the effects of offshore wind development, benefit future management of commercial and for-hire fisheries, and inform planning of other offshore developments. Although regional research and monitoring is something that BOEM fully supports, there are many challenges to requiring financial support to a regional research and monitoring program that may not be tied to specific project impacts. As a result, BOEM's preference remains voluntary, self-identified monitoring strategies that can be approved and enforced through Construction and Operation Plan approval. It should further be noted that, along with other offshore wind developers, Vineyard Wind is an active participant in both the Responsible Offshore Development Alliance and the Regional Wildlife Science Entity, which will likely be the vehicles to achieve the regional studies for many of the marine resources of concern. BOEM looks forward to continued participation with these groups as well.
13166-028	Shell recommends that BOEM rely on the rich literature on the ecological and fisheries impacts of oil and gas infrastructure to guide predictions of the impacts from wind infrastructure. BOEM should carefully consider parallel data points that indicate fisheries – demersal, benthic and migratory - can benefit from structures in the shallow Gulf of Mexico and California, in combination with the data on fishing activity at Block Island and consider the potential impacts to the commercial and recreational (for-hire and private angler) community, in conjunction with studies from other areas of the world.	Sections 3.2, 3.3, and 3.10 of the FEIS have been updated to consider a new reference describing the impacts of structures on marine communities in the Gulf of Mexico.
13166-029	Alternatives D1 and D2, combined with the artificial reef effects of the structures could alleviate short term impacts to the commercial industry. Evidence from Europe and in the Gulf of Mexico and California indicate that BOEM may be prematurely underestimating the positive impacts anticipated. Shell recommends that BOEM's analysis in the draft SEIS not aggregate all types of fishing activity and species together, but rather parse out impacts and benefits for individual species or fisheries complexes.	Sections 3.2 and 3.3 of the FEIS have been updated to consider a new reference describing the impacts of structures on marine communities in the Gulf of Mexico. Sections 3.2 and 3.3 of the FEIS discuss potential positive and negative impacts to various species, but a stock-specific assessment is beyond the scope of this EIS. Sections 3.9 and 3.10 of the FEIS discuss how impacts may differ across recreational fishing, for-hire fishing, and commercial fishing groups.
13166-030	Shell requests that BOEM move expeditiously to finalize the VW 1 Project NEPA process and to select Alternative D2 as the preferred alternative. BOEM should recognize that under the proposed cumulative scenario framework, the selection of D2 should only apply to adjoining leases inside	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Spacing and orientation layouts and transit lanes for other regions will be determined through future analysis and coordination with USCG. USCG's Final MARIPARS report evaluated vessel traffic through the lease

Index	Comment Text	Response
Number		
	the MA-RI WEA and should not set a precedent for any other wind development projects in the Atlantic seaboard.	areas and recommended all surface structures be aligned in a 1 x 1 nautical mile grid, such that vessels anywhere in the RI and MA Lease Areas would have approximately 1 nautical mile wide lanes available when traveling north-south or east-west, and 0.6 to 0.8 nautical mile wide lanes when traveling northwest-southeast or northeast-southwest.
13166-031	Shell recommends that BOEM also amend the cumulative scenario analysis to address the overall balance between the potential negative effects with the realized potential positive environmental and economic benefits that a fully scaled offshore wind industry can provide.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13166-032	Shell further requests that BOEM remove alternatives from the final SEIS that are determined to be infeasible, not consistent with the agency's purpose and need, not incrementally beneficial, as a standalone alternative, or in combination with other alternatives, as indicated by BOEM (e.g. Alterative F, pp. 3 -103).	BOEM assessed alternatives in the DEIS, the SEIS, and the FEIS based on their ability to meet the purpose and need as well as the screening criteria outlined in Section C.5 in Appendix C of the FEIS including: consistency with law and regulations; operational, technical, and economic feasibility; environmental impact; and geographical considerations. While Alternative F has technical and practical challenges as noted in Section 2.1.5, it was determined to be feasible, therefore, carried forward to the FEIS.
13167-001	First, we appreciate the Administration's decision to postpone approval of the Vineyard Wind COP pending further analysis and publication of the SEIS. There is no question that construction of wind development areas ("WDA") like Vineyard Wind will have significant and irreversible impacts on FSF's fishing interests and navigational safety.	Potential impacts to fishing interests and navigational safety are addressed in Chapter 3 of the FEIS.
13167-002	While we remain adamant that each WDA should be analyzed and developed on an individual basis, with close consideration of the unique nature and circumstances of each area, it is likely that the initial construction of a WDA will have bearing on future developments. Moreover, the development of a WDA cannot be considered in a vacuum. As we have stated in the past, and as described in greater detail below, any environmental review of a WDA must assess the cumulative effects of developing these wind lease areas. Therefore, it is paramount that the Vineyard Wind COP receive significant attention and consideration, and should only progress on an appropriate timeline that ensures impacts to all interests are fully mitigated.	Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
13167-003	That said, the SEIS makes several determinations that are likely in violation of the Administrative Procedure Act ("APA"). The APA allows the courts to invalidate any agency action that is "arbitrary, capricious, an abuse of	BOEM is aware of its obligations under the APA and continuously strives to conduct its NEPA process in compliance with that and all other applicable

Index	Comment Text	Response
Number		
	discretion, or otherwise not in accordance with law." Agency actions will be	statues. Lacking specific details, this comment does not require edits to the
	considered "arbitrary and capricious if the agency has relied on factors which	FEIS.
	Congress has not intended it to consider, entirely failed to consider an	
	important aspect of the problem, offered an explanation for its decision that	
	runs counter to the evidence before the agency, or is so implausible that it	
	evpertise "	
13167 004	We continue to hold several concerns with the construction of Vineword	The FEIS addresses novigational safety in Sections 2.10.1 and 2.11.2
13107-004	Wind that arise from a number of assumptions and unverified predictions	imposts to fishing grounds in Sections 2.10.1 and 2.10.2 and effects on local
	POEM makes recording future activities in this WDA all of which appear to	inipacts to fishing grounds in Sections 5.10.1 and 5.10.2, and effects of local
	BOEW makes regarding future activities in this w DA, an of which appear to	ecosystems in Sections 5.2 and 5.5.
	imports of wind turbing development on fishing vessels. Specifically, there	
	are unanswered questions that remain recording neurisational sofety, imports	
	to fishing grounds, and effects on local ecosystems	
13167-005	We are also concerned with the lack of stakeholder involvement throughout	Please refer to Chapter 1 and Appendix C of the FEIS for a discussion on
13107-005	the development process, especially regarding analysis of the economic and	stakeholder involvement
	environmental impacts on commercial fishing interests	
13167-006	Until such time that these concerns can be addressed in full FSF requests	Table 1.3-1 in Appendix B of the FEIS has been undated to reflect BOEM's
15107 000	that BOEM ont to postpone issuance of the Vinevard Wind COP Each of	anticipated date for a decision on the COP
	these concerns detailed below carry potential devastating consequences for	
	ESE and similar commercial fishing interests that cannot be mitigated away	
	once construction of the WDA begins.	
13167-007	One of the most fundamental aspects of developing any offshore wind site is	The FEIS addresses this comment in Section 3.10.1.1 and 3.11.2. The Final
	the protection of safe and navigable transit lanes through the turbine array.	MARIPARS study report (USCG 2020) states that vessel transit lanes that
	FSF members (and scallop vessels generally) transit on geographic diagonals	are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to
	to and from our fishing grounds. FSF supports the development of a series of	maneuver in accordance with the [International Regulations for Preventing
	transit lanes through the Vineyard WDA that run on geographic diagonals.	Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI
	However, we remain concerned with both the proposed width of the transit	WEA. Additional rationale is provided in the Final MARIPARS study report
	lanes as well as the methodology used to develop them. For instance, the	(USCG 2020). The data relied upon for the FEIS is adequate to support
	SEIS refers to the Coast Guard's Massachusetts/Rhode Island Port Access	analyses and conclusions.
	Route Study ("MARIPARS") several times in discussing the appropriate	
	width of transit lanes. However, the MARIPARS draft report proposes	
	reduced transit lane widths despite acknowledgement that the lack of	
	additional spacing poses a safety risk to vessels by reducing the setbacks	
	from turbines, limiting the space for unplanned and emergency anchoring,	
	and removing the additional buffering from turbines in inclement weather.	
13167-008	It is unfortunate and worrisome that the Coast Guard would move forward	The FEIS addresses this comment in Section 3.10 and 3.11 of the FEIS. The
	with the proposed reduced transit lane width of 0.6 to 0.8 nautical miles	Final MARIPARS (USCG 2020) states that vessel transit lanes that are 0.6 to
1	("NM") while simultaneously acknowledging that their absence equates to a	0.8 nautical mile wide lanes are wide enough to allow vessels the ability to

Index	Comment Text	Response
Number	reduction in safety for vessels operating in these lanes. That said, it is up to BOEM to ultimately determine the appropriate transit lane spacing. FSF would therefore request that BOEM disregard the Coast Guard recommendation of 0.6 to 0.8 NM transit lane spacing (as it likely violates the APA arbitrary and capricious standards) and instead adopt the proposal made by the Responsible Offshore Development Alliance ("RODA") for 4 NM spacings to allow for safe passage of vessels.	maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the RI and MA Lease Areas. Additionally, the Final MARIPARS (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the RI and MA Lease Areas. Additional rationale is provided in the Final MARIPARS (USCG 2020). The USCG is a cooperating agency to the EIS who is the leading agency on navigational matters; and, therefore, BOEM relies on - and does not question - the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13167-009	Further, FSF members do not support the proposal for 1 NM spacing between turbines. We conduct fishing operations on contours based on depth of the water column. Our vessels are approximately 80 to 100 feet in length and operate with gear that extends several times the depth of the ocean at a given location, with length extending relatively longer as the water column deepens. It is therefore not foreseeable that a spacing of 1 NM between turbines will allow scallop vessels to operate and conduct safe fishing activities in these areas.	Section 3.10 of the FEIS addresses scallop vessel operations. Figures are included that show sea scallop fishing vessel densities within the WDA and OECC as well as their trends for transiting.
13167-010	Despite recommending smaller spatial requirements for fishing vessels to operate their gear, the MARIPARS performed no technical analysis to posit such a recommendation, and therefore provides no foundation for BOEM to rely upon in rendering a final decision on spacing. Categorization of these reduced spacings as anything other than "major" downplays the importance of navigational safety in these WDAs. It also infringes on commercial fisheries' federally mandated responsibility to achieve optimum yield of the resource and provide highly valuable domestic nutrition to the country.	The FEIS addresses this comment in Section 3.10.1.1 and 3.11.2. The Final MARIPARS study report (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study report (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study report (USCG 2020). The USCG is a cooperating agency to the EIS, and is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13167-011	We are also concerned with the inadequacy of review related to wind turbine interactions with marine radar systems, as one of the most vital protections fishermen have at-sea is the ability to identify oncoming vessels and obstacles such as wind turbines, especially in dark or foggy conditions, by relying on their radar. Indeed, members of FSF recently traveled to England to meet with local fishermen regarding their experiences with the proliferation of offshore wind turbines. We were alarmed to discover that these turbines could prevent a vessel radar system (similar to those used by FSF participants) from detecting a freighter transiting on the far side of the wind farm due to the radar scatter the turbines created.	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of marine radar. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains). As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain

Index	Comment Text	Response
Number		-
13167-012	Implementing larger spacings between turbines, as well as in transit lanes, would better mitigate this potential marine radar interference. Although the impacts of turbines on marine radar are still being researched, the current lack of knowledge on how these turbine arrays will interfere with marine radar should dictate erring on the side of caution. Notably, the SEIS	constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. Further, the concerns conveyed are in connection to another project(s) in Europe and fails to explain why the impacts will be similar for the proposed project. Sections 3.11.1 and 3.11.2 of the FEIS include discussions of marine radar. The discussion of potential impacts to marine radar has been expanded in Section 3.11.1. Offshore wind projects would increase navigational complexity and ocean space use conflicts, including potential interfere with marine radars (although other navigation tools are available to ship captains).
	acknowledges that the proposed action "would interfere with marine radars." Therefore, any methodology utilized to determine spacing within the Vineyard WDA should account for the inability of vessels to detect oncoming traffic and create additional buffer zones to accommodate these increased navigational risks.	As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13167-013	As BOEM has acknowledged, offshore wind development activities in the Atlantic will have negative impacts on the region's fisheries, especially benthic species that are less mobile. Yet BOEM's categorization of these impacts as "minor" is simply inaccurate.	The SEIS found that the impacts on benthic resources (Section 3.3), finfish, invertebrates, and EFH (Section 3.4), and commercial fisheries (Section 3.11) of Alternatives A, C, D, E, or F alone would be moderate and in context of reasonably foreseeable factors would also be moderate.
13167-014	Adult scallops are sessile, attaching to the seabed and filtering plankton from water as it moves past. As such, they can only survive in areas with firm sand, gravel, or cobble substrate and low levels of inorganic suspended particulates. Scallops will therefore disappear from areas in which the substrate is replaced with concrete and rock mattresses to bury export cables to the sea floor. Construction activities will also modify the water column itself, creating excessive sedimentation clouds in these areas for extensive durations. Moreover, any foreign object at or near the seafloor will create turbulence and eddies, which influence scallop spat settlement and the viability of scallop beds as a whole.	Section 3.4 of the SEIS discussed the potential impacts to sessile species, including sedimentation; therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number 13167-015	Scallop larvae are planktonic, and thus are suspended in the water column during the early stage of their lives. Although planktonic scallops travel with currents, these larvae generally settle in similar places from year to year, as they mature into spat. Spatfall (the settling of larval scallops to the bottom), and the period immediately following, is thought to be particularly important in the formation of scallop beds and in determining year class size. There is no evidence of mass migrations by scallops after spatfall. The movements of	Section 3.4 of the SEIS discussed the potential impacts on planktonic larvae, scallops, and currents, and Section 3.3 of the SEIS discussed the potential impacts on benthic resources; therefore, no change to the FEIS is warranted.
	sea scallops are usually localized, and random or current-assisted. Once aggregations of adults are formed, they remain essentially stationary. Changes to an existing scallop bed's benthic environment and the currents that larval scallops rely on to be transported to that bed, therefore, pose significant risks to future scallop generations and the scallop resource as a whole.	
13167-016	Beyond the impacts to existing scallop habitat, the effects of WDA construction will have significant impacts on scallop growth and maturity. Recent studies demonstrate that scallop larvae exposed to excessive anthropogenic noise, such as seismic pulses and pile driving, show significant development delays and abnormalities. It is therefore imperative that BOEM reclassify and reconsider these risks to resource recruitment in making its final assessment of the Vineyard Wind COP, as construction of these facilities could cripple the most profitable fishery in the Eastern United States.	Section 3.3 of the FEIS has been updated to consider the effect of noise on scallops, as well as benthic disturbances.
13167-017	It is well documented that manmade noises in the marine environment, such as pile driving, can have detrimental impacts on whales and other cetaceans. Wind farm construction, on both a site-specific and cumulative basis, will result in significant ongoing marine noise. Yet the SEIS disregards many of the associated activities involved in construction of these facilities, and even goes so far as to suggest that the Vineyard Wind COP may actually result in "moderate beneficial" impacts for marine mammals by creating new structures in the water column for foraging. Such findings are wholly in opposition with known effects.	Section 3.5 of the SEIS provides a discussion of acoustic impacts to marine mammal species. Further details regarding acoustic effects to these species is provided in Appendix F of the FEIS and in the BA submitted to NOAA which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13167-018	The proposed siting for Vineyard Wind and several other WDAs are directly in known feeding grounds of critically endangered right whale pods that inhabit these areas year-round. Indeed, several offshore wind developers have	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. This

Index	Comment Text	Response
Number	recently hired acoustic researchers to examine these effects, as well as those associated with long-term operations, such as vibrations produced by turbines. Therefore, we would request that BOEM withhold determinations on the potential impacts to marine mammals until such studies are completed and peer-reviewed.	includes the Reasonable and Prudent Measures required in the September 11, 2020 Biological Opinion issued by NMFS that concluded that the Project may adversely affect but is not likely to jeopardize the continued existence of listed species. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. Additionally, as required in the September 11, 2020 Biological Opinion and included in Appendix D, enhanced detection and mitigation measures are required throughout the month of May and when a right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31. With all the mitigations proposed and required by the Biological Opinion, NMFS has concluded that the proposed Vineyard Wind 1 Project may adversely affect but is not likely to jeopardize the continued existence of NARWs.
13167-019	We are also concerned with how potential takings by offshore wind developers will be accounted for. Fisheries are subject to strict regulations under the Endangered Species Act ("ESA") and Marine Mammal Protection Act ("MMPA"). Wind farm development should not treated be differently. Yet there is no current ESA-mandated Biological Opinion ("BiOp"), nor is there an approved incidental take statement under the MMPA, for offshore wind developers to account for windfarm development and operation's potential impacts to endangered species and marine mammals. Consequently, it is unclear how any potential takings will be categorized, much less how past activities, such as G&G surveys and project-specific fisheries monitoring efforts, have already been accounted for. For instance, if a developer performs a gillnet research study in the WDA and entangles a right whale, because the developers are not subject to a BiOp or incidental take statement, it is possible that the taking would be required to count towards the gillnet fishery. The potential for such results are both alarming and absurd. As such, further research and analysis regarding offshore wind development's potential impacts on right whale populations is needed before any COP is approved. BOEM should also postpone approval of the COP until such time that offshore wind developers are subject to a BiOp and incidental take statement as required by the ESA and MMPA, respectively.	Consultation with NMFS under the ESA and MMPA for Vineyard Wind has been completed. The NMFS Biological Opinion and Incidental Take Statement (including all Terms and Conditions and Reasonable and Prudent Measures are discussed Section 3.4.2 and Appendix D of the FEIS. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss comprehensive mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS.
13167-020	Finally, we urge BOEM to reconsider several aspects of the SEIS assessment for the Vineyard Wind COP, as well as improve stakeholder consultation in all WDA developments in the future. We continue to have concerns with the nature in which fisheries experts are consulted in the wind leasing process. For instance, BOEM indicates that "VTR information was merged with data collected by at-sea fisheries observers" to determine the expected revenue	The FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Sections 3.10.1 and 3.10.2 of the FEIS utilize VMS information among other sources. BOEM is working closely with NMFS on this analysis and others, and looks forward to continued engagement with NMFS and with the fishing industry.

Index	Comment Text	Response
Number		
	impacts to commercial fisheries from offshore wind energy development.	
	However, VIR and at-sea observations are not the best available information	
	for making such assessments, and more involvement from fisheries	
	stakeholders would reveal that these estimates are inaccurate. VMS	
	information is a more data-rich source for demonstrating where fishing	
	operations take place, and NMFS has made VMS information available to	
	BOEM we believe that, as users of the resource, fishermen should be more	
	involved in the data collection phase to ensure that BOEM is utilizing the	
121(7.021	More server, there are serverable information in its decision-making process.	Continue 2 2 7 2 in the DEIC and Continue 2 5 1 of the CEIC will down an
13107-021	inforeover, there appear to be several instances in the SEIS where BOEM	Section 5.5.7.5 in the DEIS and Section 5.5.1 of the SEIS relied upon
	findings on moring momental immediate domits guerrations, such as the	Existing data on impacts to marine manimus at operating wind facilities in
	findings on marine manimal impacts, despite numerous quantitative research	Europe. As described in these sections, the available information on impacts
	indings from the European Onion on effects of windfarms on cetaceans.	on marine mammals from pile driving associated with offshore wind is
		primarily infined to information on harbor porpoises and sears, as the vast
		where large wholes are uncommon. Additional discussion of the uncertainty
		around marine mammal response to WTG structures was provided in
		Appendix H of the SEIS. Therefore, no change to the EEIS is warranted
13167-022	We would also reemphasize that any determinations made in the Vineward	The development of the DEIS SEIS and EEIS has been based on Vineyard
13107-022	Wind COP decision apply solely to that WDA As previously stated the	Wind's utilization of the DDE Each Applicant for a lease area is required to
	construction of these facilities carry unique properties from site-to-site and	submit their own COP which triggers an NEPA analysis BOFM believes that
	analysis of vital aspects such as proposed turbine spacings, navigational	the information provided by Vinevard Wind in their COP is accurate
	transit route sizes and quantities, and other relevant environmental and	
	economic considerations for any one WDA should not constitute any form of	
	precedent for other WDAs. Each lease site will carry its own site-specific	
	activities, oceanic and current conditions, traffic patterns, adjacent ports,	
	benthic topography, fishery abundances, and other relevant factors that must	
	receive individualized attention. As well, each project will contribute in its	
	own unique way to the cumulative effects from development of the offshore	
	wind resource in the New England and Mid-Atlantic areas.	
13168-001	Vineyard Wind 1 would also help the region reach its ambitious greenhouse	Thank you for your comment.
	gas emissions targets. Vineyard Wind estimates that the annual avoided CO2	
	emissions will be roughly equivalent to having 325,000 fewer cars on the	
	road. In addition, the loss of nuclear plants in the region means that	
	Connecticut will be losing significant zero-carbon electricity generation,	
	highlighting the need for projects like Park City Wind to provide carbon-free	
10160.005	electricity to the grid while providing savings for ratepayers.	
13169-001	Key Issue 1: Evaluation of the Totality of impact across the Mid-Atlantic	Each applicant is required to submit a COP with their proposed action for
1	region The SEIS briefly describes the overall plan, but then most of the	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will

Index	Comment Text	Response
Number		
	details, those that exist, do not appear to be comprehensive. Powell et al. (2003) provide a good example of mission creep in evaluating the influence of the Texas Water Plan in its entirety on the health of Galveston Bay In the case of the present SEIS, one cannot evaluate the total impact of the proposed development of the Mid- Atlantic Bight as insufficient attention is paid to the impact beyond the Vineyard Wind project, whereas the cumulative impact is the issue of greatest concern. This issue is exemplified by the absence at the Mid-Atlantic scale of an evaluation of the basic siting plan for wind turbine field development. One does not know if the present profile is optimal in the sense of minimizing ecological and economic damage relative to cost and energy production potential. As a consequence, evaluation of the present plan must be conducted in a vacuum, when alternatives would provide important comparability.	Please note that the NEPA process for the proposed Project is not intended to be a programmatic EIS evaluation. Instead, the impact analysis focused on Vineyard Wind's potential contribution to impacts on the various resources assessed.
13169-002	In general, the additional content in this SEIS now includes considerations of impacts to the cold poolGiven this focus on the impacts during peak stratification in the summer, the SEIS gives less attention to the seasonality of the cold pool beyond a statement that broadly summarizes its formation in spring and ultimate breakdown each fall. During the spring when the cold pool forms and again in the fall when it breaks down, the stratification is reduced (Bigelow 1933; Houghton et al. 1982; Castelao et al. 2010) and perhaps more susceptible to changes in hydrodynamics due to the presence of structures. Of particular sensitivity is the timing and rate of breakdown of the cold pool in the fall. The length of time that bottom water temperature remains high before the winter cooling sets in directly controls the inshore boundary of the boreal community.	Section 3.4 of the SEIS discussed the cold pool and potential effects of offshore wind development. Therefore, no change to the FEIS is warranted. How the rate of cold pool breakdown is influenced by external factors such as weather and future offshore wind facilities is not well known.
13169-003	The SEIS references studies of hydrodynamic effects of offshore wind turbines on seasonal stratification in the German Bight (Carpenter et al. 2016; Schultze et al. 2020). It should be noted that the seasonal stratification over the summer considered in these German Bight studies is much less than the peak stratification seen in the summer over the Mid-Atlantic Bight. It is much more representative of relatively weaker stratification seen during the formation and breakdown of the cold pool in the spring and fall. Therefore, the results characterizing potential impacts of offshore wind facilities in the German Bight are likely more representative of impacts we might expect from offshore wind facilities during the relatively weaker stratified time periods during the spring and fall rather than the highly-stratified summer months Carpenter et al. (2016) conducted an analysis of the impact of increased mixing in the water column due to the presence of offshore structures on the seasonal stratification of the German Bight. They offer a conclusion that the current build out of offshore facilities planned in the	Section 3.4 of the SEIS discussed the cold pool and potential effects of offshore wind development. Therefore, no change to the FEIS is warranted. Potential impacts on the cold pool are dominated by factors other than the Proposed Action; nevertheless, the FEIS considers impacts of reasonably foreseeable environmental trends and planned actions, including the Proposed Action.

Index	Comment Text	Response
Number	German Bight is unlikely to alter seasonal stratification dynamics in the region, but could impact the seasonal stratification if the area is developed to a point that it significantly covers the stratified shelf. The amount of overlap to reach this threshold was not defined. A critical need exists to understand the influence of large offshore turbines 10s of meters above the sea surface	
13169-004	The cross-shelf temperature gradient, exemplified by the cold pool, is important to many species in the region (Munroe et al. 2013, 2016; Narváez et al. 2015; Sullivan et al. 2000, 2003, 2005, 2006) The weakening of the cold pool supports the potential of generating the most catastrophic ecological event on the continental shelf the world has ever seen. Given the gravity of a catastrophic shift in cold pool dynamics, great care should be taken to show at high probability that the chance of an impact is vanishingly small. Adequate science leading to that evaluation is not presented in the SEIS and is probably not yet available. This science need is critical.	Section 3.4 of the SEIS discussed the cold pool and potential effects of offshore wind development. Therefore, no change to the FEIS is warranted. Potential impacts on the cold pool are dominated by factors other than the Proposed Action; nevertheless, the FEIS considers impacts of reasonably foreseeable environmental trends and planned actions, including the Proposed Action.
13169-005	The SEIS future impacts of climate change and the earlier statement that "The current state of terrestrial and coastal fauna resources is generally stable" reflects an inadequate integration of the present state of community reorganization going on within the Mid-Atlantic and northeastern U.S. continental shelves. Evaluation of ecological and economic impacts and impacts on threatened and endangered species based on the assumption that present-day species distribution patterns and the distribution of fishing fleets responding thereto are permanent fixtures is unlikely to be sufficient. Evaluation of impact should consider the 25-year lifetime of wind turbines and the likely dimensions of climate change over that time frame. Projections of the effects of climate change on species distribution and models to evaluate range and distribution shifts of living marine resources in the context of these do exist but do not often consider changes in population dynamics over the lifetime of climate projections in addition to possible species distribution. What can be stated with high probability is that the possibility that a benthic habitat map of today will be valid in ten years is vanishingly small.	Section 3.4.1 of the SEIS discussed distribution shifts as a result of climate change. Species-specific assessments are beyond the scope of this EIS. Such analyses are not essential to a reasoned choice among alternatives. Therefore, no change to the FEIS is warranted.
13169-006	The report suggests that mussel abundance will be high and cites two sources to support increases in mussel presence. One is a social science paper (ten Brink & Dalton 2018) that surveyed fishers about their impressions of the Block Island wind farm. ten Brink & Dalton (2018) report that 9 survey responses noted mussels on the piles, and one spearfisher noted 'lots' of mussels. The second source is a report (HDR 2019) that again simply notes an increase in mussel presence (not abundance estimates) on turbines relative to controls. Neither of these sources provide numerical estimates of	Section 3.4 of the SEIS discussed the possibility of mussels colonizing locations where mussels are currently not prominent. Analyses of abundance, biomass, or filtration capacity are not essential to a reasoned choice among alternatives. Therefore, no change to the FEIS is warranted.

Index Number	Comment Text	Response
	abundance or biomass of mussels, values that are necessary to estimate filtration capacity of a population of filter feeding mussels (Riisgård 2001; Riisgård et al. 2014) in an array of wind turbines.	
13169-007	The SEIS further cites Slavik et al. (2019) to support the claim that mussels on pilings would have a filtration capacity sufficient to eliminate any possible increases in primary productivity that resulted from enhanced mixing due to pilings. Slavik et al. (2019) used coupled modeling to evaluate impacts of wind farms on primary productivity. They estimated that wind farms add 45% to the regional mussel biomass, and those mussels only marginally impact phytoplankton. Net annual primary production was reduced in their study by only ~8%. Certainly, mussels will filter plankton and other particles from the water, but environmental conditions (temperature, salinity, dissolved oxygen, seston quality and quantity) are known to alter filtration rates (Riisgård et al. 2001; Li et al. 2012). Likewise, refiltration whereby mussels in high density populations filter the same water repeatedly (Yu & Culver 1999; Jones et al. 2011) leads to overestimates of filtration capacity of highly dense populations. Finally, it is common to see local reduction in phytoplankton at a mussel bed, with increases in primary productivity downstream of the mussel population (Norén et al. 1999; Schröder et al. 2014), a process that could be enhanced by turbulence in the wake of a monopile. All of these conditions make it very complicated to estimate the true filtration impacts of a population of bivalves in a natural system (Cranford et al. 2011).	Section 3.4 of the SEIS discussed the possibility of mussels capturing possible increases in primary productivity near structures; it is not conclusive. Analyses of filtration capacity are not essential to a reasoned choice among alternatives. Therefore, no change to the FEIS is warranted.
13169-008	The SEIS is silent on the likelihood that mussels will still be present in the Mid-Atlantic in 25 years, but Powell et al. (2019) suggest that continued northward movement will limit distribution south of Cape Cod.	Section 3.4.1 of the SEIS discussed range shifts as a result of climate change but did not assess particular species. Powell et al. (2019) speculate on future range shifts for mussels, but do not provide strong evidence. Species-specific analyses are beyond the scope of this EIS. Therefore, no change to the FEIS is warranted.
13169-009	In particular, the SEIS states "Most exposures are expected to last for minutes, not hours, and the affected area would represent only a tiny portion of the available habitat for most migratory species, many of which travel several miles in a day (CSA Ocean Sciences, Inc. and Exponent 2019)." EMF effects on fish behavior is considered on an area basis, not a blocking basis as in a hurdle to cross during migration. Supporting data are not yet available.	Section 3.3.1 of the FEIS has been updated to state that EMF does not appear to constitute a barrier to migration.
13169-010	Effects of scale on fish ecology with respect to the density/spacing of turbines is an issue. Turbine pylons and their rock scour revetments will create reefs on what is predominantly a soft-bottom benthic ecosystem. To some fishers, this will be a welcome extension of ongoing efforts to increase production and/or concentration of reef-oriented species such as black sea	Section 3.4.1 of the SEIS assessed potential impacts of habitat conversion by the presence of structures. It describes black sea bass as structure-oriented and preferring hard-bottom habitat, but does not in any way conflict with this comment. Therefore, no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
	bass and tautog, and seasonally structure-attracted midwater species such as	
	jacks. A cautionary consideration is that some 'structure oriented' fish may	
	not be as reliant on these structures as sometimes thought, and thus positive	
	effects of increases in reef habitat may be uncertain. For example, Fabrizio et	
	al (2013, 2014) found that black sea bass have large home ranges for a "reef"	
	species, and may spend substantial time away from structure, with some	
	exhibiting home ranges up to 4.8 square km. Nieland and Shepherd (2011)	
	found that catches of black sea bass in the NEFSC inshore trawl survey were	
	greater over open bottom than around structure.	
13169-011	So, at what point do individual small pylon footprints move from a fractured	Section 3.4.1 of the SEIS considered the potential for fish aggregation and
	landscape of scattered reefs to a reef complex with interaction effects? This	the reef effect, and reflected reports of the reef effect extending usually 30 to
	question is important but little considered in the plans for spacing in the	60 meters, but possibly up to 600 meters (0.32 nautical miles) from a
	original and alternative models of the SEIS, which appear to be constrained	structure. Please note that the studies cited in the comment focused on
	by navigation and efficiency (cable length and routing, wind extraction	structures spaced 0.4 nautical miles apart, as opposed to the minimum of 0.75
	efficiency). The fact that it matters has been shown in an existing (Alpha	nautical miles in the COP of the 1 nautical mile in the offshore wind
	Ventus) wind turbine farm in Sheringham Shoal, UK, by telemetry of	developers' agreement. This is a single-project EIS, not a Programmatic EIS.
	foraging seals that created a grid-like pattern of direct movement from	Therefore, no change to the FEIS is warranted.
	turbine to turbine as a foraging strategy (Russell et al. 2014). A high density	
	of Fish-Aggregating Devices (FADs), simple floating buoys and lines used to	
	concentrate pelagic thermophilic fishes for easier harvest, has also been	
	demonstrated to substantially change the distribution and abundance of jacks	
	in the Mediterranean	
	Sea (Sinpoli et al. 2019). Monopile reef density effects should at least be	
	modeled based on parameters of fish and mammal movements extracted from	
	a synthesis of telemetry data.	
13169-012	The SEIS discusses impacts to the benthos from wind energy installations. In	Section 3.2 of the FEIS has been undated to include the sources of Lefaible et
10109 012	their evaluation of what the changes and impacts to the benthic community	al. 2019 and Hemery 2020, to discuss potential impacts of the presence of
	might be from wind farms, the SEIS references only 2 studies that focus on	structures on sediment near foundations, and to distinguish epifauna from
	the epibenthic community, not true benthic fauna, or are from ecosystems	infauna. The current benthic monitoring plan (COP Volume III. Appendix D:
	very different than the U.S. continental shelf Kerckhof et al. (2019) focuses	Epsilon 2020c) is posted on BOEM's website.
	on epibenthic (fouling) communities, and does not consider the benthic	- <u>r</u>
	community, despite reference to it in the SEIS to support no change in	
	benthic community in soft sediments over 5 years since turbine foundations	
	are put in A preceding chapter in that peer-reviewed report (Lefaible et al.	
	2019) did address changes in the benthic community due to the presence of	
	wind turbines. Lefaible et al. (2019), and references therein, indicate changes	
	in the sedimentary habitat (fining of sediments) and an overall shift in the	
	benthic community towards a lower energy community from what was	
	previously a well-flushed higher energy community. Likewise, the Lefaible	
	et al (2019) report notes changes in the benthos due to increased	

Index	Comment Text	Response
Number		
	biodeposition from the increased fouling community (including mussels) on	
	the turbine foundations, a finding also noted in a number of other studies	
	(Miller et al. 2013; Causon & Gill 2018; Dannheim et al. 2020; Lu et al.	
	2020). These studies collectively also note that the benthos is a highly	
	understudied ecosystem component and impacts from wind energy	
	installations are therefore highly uncertain, and recommends increased effort	
	to study benthic impacts.	
13169-013	The section references the work of Guida et al. (2017) and Green et al.	These data are the best available sources for assessing impacts. Section 3.2 of
	(2010). These are wholly inadequate to describe the biota of the region for	the FEIS also was updated to discuss the large mollusks that are not
	the following reasons. 1) The datasets are out of date as substantive changes	represented well in grab samples. Sections 3.3 and 3.10 of the FEIS were
	in faunal distributions have happened since the first half of the 2010 decade.	updated to discuss additional information and analysis of commercially
	This is discussed in more detail in the previous section on climate change. 2)	important species, including scallop, ocean quahog, and surfclam, using
	Unfortunately, studies of the benthos in high energy continental shelf habitats	additional data sources, including fishing effort.
	in general have tended to use grab samples to attempt to assess the biological	
	community in the bottom (for example, Lefaible et al. 2019 used a van Veen	
	grab). Neither Guida et al. (2017) nor Green et al. (2010) used gear that	
	adequately sampled the biomass dominants of the continental shelf. Most	
	samples came from grabs. Relatively small grab samplers or even boxcores	
	are insufficient for sampling the majority of large macrobenthic species,	
	particularly those of known commercial importance along the U.S. Atlantic	
	continental shelf (namely surfclams and ocean quahogs). Powell and Mann	
	(2016) and Powell et al. (2017) provide details.	
13169-014	In the case of surfclams and ocean quahogs, which are very large-bodied	These data are the best available sources for assessing impacts. Section 3.2 of
	clams and make up the majority of the benthic biomass on the shelf (despite	the FEIS also was updated to discuss the large mollusks that are not
	the fact that there may be numerically more worms or other small	represented well in grab samples. Sections 3.3 and 3.10 of the FEIS were
	macrobenthos present), the tools typically used to evaluate the benthic	updated to discuss additional information and analysis of commercially
	community simply do not adequately account for these species. It has been	important species, including scallop, ocean quahog, and surfclam, using
	demonstrated that even a boxcore, which samples to 20 inches depth, is	additional data sources, including fishing effort.
	insufficient to assess the clam (both surfclam and ocean quahog) abundance	
	and biomass along the Mid-Atlantic shelf As an example, Powell and Mann	
	(2016) evaluated the efficacy of a boxcore for sampling the large infaunal	
	clams on the shelf, relative to more appropriate methods like dredge	
	sampling and found that boxcores vastly underestimate the abundance of	
	large-bodied and patchy clams. In the case of surfclams, one of the important	
	commercial species, the chance of a grab sample-based survey, at normal	
	sampling densities, encountering even a single clam is vanishingly small,	
	even though present in commercial quantities The lack of studies directly	
	addressing impacts of wind farms on benthos, particularly the biomass	
	dominants, combined with the trend towards underestimation of the large-	
	bodied and commercially important macrobenthos because of inadequate	

Index	Comment Text	Response
Number		
	sampling methods, means that little information is available with which to	
	evaluate the baseline and potential impacts of wind energy on benthic	
121(0.015		
13169-015	the SEIS contains no anchorage plan for supporting vessels. The impact of the biota is in part determined by the number and distributions of supporting vessels and their anchorages, as is the possible deployment of fishing gear	Section 3.2 of the FEIS was updated to discuss the potential impacts associated with anchoring from the proposed Project. BOEM has included a measure in Appendix D of the FEIS that was require Vineyard Wind to develop and implement an anchoring plan to make sure impacts to sensitive habitats are avoided during construction to the maximum extent practicable. Appendix D of the FEIS is a summary of all proposed mitigation considered and has been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval.
13169-016	The SEIS discusses the potential impact of wind energy areas on larval dispersal only briefly, despite the great importance of this process in structuring and maintaining marine biological communities. In terms of anticipated impacts of wind energy installations on larval dispersal, the SEIS cites Chen et al. (2016) noting the report's findings relative to impacts of wind energy areas on scallop larvae dispersal (SEIS 3rd paragraph page 3-23; SEIS page B-22). The SEIS characterizes the impacts of wind farms in southern New England on scallop larval dispersal as increasing the dispersion of the larval field, but that the wind farms "never… trap or block larvae from settling in habitat previously occupied" and generally are not expected to alter larval dispersal. Unfortunately, the simulations described in the Chen et al. (2016) report are insufficient to evaluate the potential impacts of wind farms on scallop larval dispersal. Rather the particle tracking simulations should be considered a representation of bulk flow and not larval dispersal.	The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments, including larval transport modelling at a regional scale (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). This is a Project-specific EIS, not a Programmatic EIS or assessment.
13169-017	Given that the SEIS bases its conclusions about potential impacts of wind energy installations on larval dispersal on one single report from a study that was not designed to evaluate larval dispersal impacts (Chen et al. 2016), the conclusions reached in the SEIS in this respect must be tentative at best. Future research should focus on commercially important species that extends beyond just scallops, such as other shellfish stocks and fish species that may demonstrate even more complex larval behavior. To this point, wind turbine fields, like oil platforms and forests, redirect flow. Scales vary from large (e.g., Gardiner et al. 2019) to small (e.g., Jumars & Nowell 1984), but the principal of bottom boundary layer effects and primary flow routes within and around structures are comparable. The issue is the degree of influence of	The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments, including larval transport modelling at a regional scale (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). This is a Project-specific EIS, not a Programmatic EIS or assessment.

Index	Comment Text	Response
Number		
	these structures and flows on larval transport and setting potential, which	
	would ultimately result in a proportional increase or decrease of community	
	component species, leading to unknown consequences beyond the turbine	
	arrays. Some may overcome Allee effects and produce spawn to influence	
	community structure far downstream (e.g., Hart et al. 2020). Some may be	
	unable to recruit at all due to increased bypassing flow. An expanded	
	evaluation of the impact of wind turbine development on the benthos is	
	clearly warranted.	
13169-018	The SEIS does not consider the recovery time of the long-lived biomass	Section 3.2 of the FEIS now states that full recovery of the benthos may
	dominantsThe SEIS provides little evaluation concerning the potential	require years and that large mollusks are present and it considers the effects
	permanence, in normal human life span scales of time, of the impact of wind	or Gulf of Mexico platforms. The FEIS also states that decommissioning
	energy development. Centuries long impacts may be anticipated in some	would remove the structures.
	regions. Long-lived sedentary or sessile biota are not biomass dominants	
	everywhere and a thorough review of benthic habitats in the Mid-Atlantic	
	would be illuminating. Given these permanent impacts, every effort should	
	be made to develop areas that do not now and are not expected in the future	
	to support biomass dominants with vicennial or greater life spans. Such siting	
	evaluations are not available. The SEIS considers that decommissioning and	
	removal at the end of the project life span will occur. Such has not always	
	been the case as exemplified for example, by Gulf of Mexico oil platforms.	
	These case studies should be reviewed and if applicable, the SEIS should	
	evaluate the influence of wind energy development if decommissioning and	
	removal does not occur.	
13169-019	The SEIS describes transit lane plans for today's vessel use but does not	The inter-array cables would be configured consistent with the PDE
	contemplate the potential that future transit operations may require	presented in Vineyard Wind's COP. The referenced Figure ES-1 in the DEIS
	directionality incompatible with the present-day scenario (see earlier	includes a note at the bottom of that page that the inter-array cable layout
	discussion of climate change). The underwater turbine linkage maps show a	shown is an example. The final cable layout and location would be within the
	poorly constructed plan if facilitation of fishing vessel operations is desired.	PDE. BOEM did not consider alternatives for the inter-array cable
	Figure ES-1 (DEIS) is an example. Alternative cable distributions, if feasible,	configurations.
	do not seem to have been considered.	
13169-020	The most important indirect impact on the economics of fishing is the	Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed
	possible feedback from impacts on marine	Project on marine mammals and developed under consultations under the
	mammals. Direct effects of increased entanglements of MMs in commercial	Endangered Species Act and the Marine Mammal Protection Act. A detailed
	fisheries including loss of fishing time and additional costs associated with	analysis of impacts to ESA listed species is provided in the revised BA that
	handling/reporting requirements, as well as gear repairs or replacement.	was submitted to NOAA, which can be found at the following link:
	Increased mortality/serious injury (MSI) in commercial fisheries which may	https://www.boem.gov/Vineyard-Wind-Consultation-Documents/.
	elevate fisheries' classification	Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated
	to categories (I and II) that trigger deployment of observers and potentially, if	mitigation and monitoring measures that would be implemented to avoid,
	MSI>PBR, trigger establishment of Take Reduction Teams and development	minimize, and mitigate adverse impacts to marine mammals. These measures
	of Take Reduction Plans. These monitoring and mitigation measures imposed	include, but are not limited to, avoidance of peak NARW presence, use of

Index	Comment Text	Response
Number	by the MMPA represent additional costs for NMFS and commercial fishing operators. Delay in the recovery of stocks, in particular of Right Whales, caused by the combined IPFs impacts, translates into costs to maintain or expand measures to reduce bycatch, which would be sustained by NMFS and the commercial fisheries operators. Declines in stocks to levels that warrant changes in stock status (depleted under MMPA or threatened, endangered under the ESA) could also lead to additional costs associated with new bycatch reduction measures if warranted.	sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Section 3.11 of the SEIS included a discussion of the effects of the Proposed Action on commercial and for-hire recreational fisheries. Any future regulatory action that is necessary to protect marine mammals or endangered species would occur through a separate public process that would consider impacts to commercial fisheries.
13169-021	The SEIS notes that surveys within the turbine field are unlikely and that this will increase uncertainty in assessments, but without any estimates of effect. For some species, the actual impact would begin with a contraction of the total stock. Simply put, the only recourse in the assessment would be to assume that no stock exists in unsurveyed areas. The example of the region east of Nantucket and the clam survey is a good example. Here, the fishery has caught clams for many years, yet the region is not surveyed and those clams are not, therefore, included in the stock estimate.	Section 3.14 of the SEIS addressed potential project-related and cumulative impacts to scientific research and surveys in detail and discussed the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no changes to the FEIS are warranted.
13169-022	The SEIS correctly indicates that impacts owing to inability of federal fisheries management agencies to conduct annual stock surveys within the wind area footprint will be major. However, the SEIS does not address the scale and scope of these impacts. Given the size and location of these wind leases, which overlap with important portions of many economically and culturally important stocks, the effect on scientific advice to inform management resulting from an inability to survey may be one of the biggest anticipated impacts of the wind project - but the scale of the consequences is not known. It is likely that the magnitude of the effect will vary by species, and that this uncertainty will be further compounded for fished species that are experiencing distribution shifts (both among and within years) due to climate change as the proportions of stocks being available/unavailable to monitoring will change as the spatial footprint of wind farm development changes (increases) over time during regional deployment, also exacerbating dynamic changes to biological reference points. This important information should be prioritized and addressed using management strategy evaluations and other modeling approaches. A benefit to doing this work would also be to demonstrate the value associated with developing alternative monitoring techniques and technologies within wind farm areas to mitigate scientific survey reductions.	Sections 3.11 and 3.14 of the SEIS consider the impacts of the Proposed Action and future projects on scientific surveys and the related impacts on fisheries management and the commercial and for-hire fishing industries. Section 3.14.2 addresses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental- studies/20-x07). Stock-specific assessments and management strategy evaluations are beyond the scope of this EIS and are not essential to a reasoned choice among alternatives. Therefore, no change to the FEIS is warranted.
13169-023	Thus, assessment of the cumulative impacts that result from integrating impacts from all IPFs remains undetermined. This is a significant omission for stocks of marine mammals (MMs) that already show signs of decline or very slow recovery such as the four ESA listed stocks (also strategic under	The FEIS has been updated and now provides an overall impact rating for marine mammals at several scales in Section 3.4.1. A moderate impact rating determination is provided for current ongoing activities. A minor impact rating determination is provided for reasonably foreseeable future activities

Index	Comment Text	Response
Number	status and the MMPA) and the additional seven MMPA strategic stocks (Hayes et al. 2019). In addition, in the analyses of each individual impact, the SEIS often justifies negligible or no impacts based on the premise that a small increase in the impact has little or no effect given the current level of disturbance from other sources. This approach is unwise for slow growing populations and discounts the cumulative nature of stressors that directly and indirectly decrease population growth, as is generally the case for MMs, or that impede growth to sustainable levels, as is typically the case for ESA listed species (NASEM, 2017). Since this SEIS is precedent-setting in methodology for assessing offshore wind energy impacts on marine mammals and considering the large spatial and temporal extent of these WDAs activities, foregoing a proper cumulative impact assessment that integrates the sub-IPFs and IPFs is unfortunate. A formal cumulative impact assessment that explicitly integrates the sub-IPFs and IPFs is needed to adequately assess impacts on MMs.	other than offshore wind development. BOEM anticipates that the combination of ongoing activities and future actions other than offshore wind would result in moderate impacts to marine mammals, primarily driven by ongoing noise impacts and interaction with commercial and recreational fisheries gear. Considering all the IPFs together, BOEM anticipates that the overall impacts associated with future offshore wind activities in the geographic analysis area would result in moderate adverse impacts because of the presence of structures and pile-driving noise. Additionally, the presence of structures could result in moderate beneficial impacts on marine mammals.
13169-024	Although for several of the IPFs, adverse impacts on behavior, essential biological activities (e.g., foraging, breeding and migration) and habitat utilization are described, the SEIS is limited in its consideration of the combined IPFs effects on potential decreases in individual fitness and population growth. A simulated harbor porpoise population subject to noise from wind turbines (mirroring the existent and planned wind turbines in the Inner Danish Waters) and shipping, plus bycatch rates of 4% suffered a substantial decrease and increasing bycatch rates over 10% led the population to extinction. These findings suggest that cumulative impacts of wind farms, shipping and bycatch are additive (Nabe-Nielsen et al. 2014).	The FEIS has been updated and now provides an overall impact rating for marine mammals at several scales in Section 3.4.1. A moderate impact rating determination is provided for current ongoing activities. A minor impact rating determination is provided for reasonably foreseeable future activities other than offshore wind development. BOEM anticipates that the combination of ongoing activities and future actions other than offshore wind would result in moderate impacts to marine mammals, primarily driven by ongoing noise impacts and interaction with commercial and recreational fisheries gear. Considering all the IPFs together, BOEM anticipates that the overall impacts associated with future offshore wind activities in the geographic analysis area would result in moderate adverse impacts because of the presence of structures and pile-driving noise. Additionally, the presence of structures could result in moderate beneficial impacts on marine mammals. Further, the conclusion of Section 3.4.1 has been updated to discuss the impact of the combined IPFs on individual fitness and population- level effects.
13169-025	The likely substantial intensification of MM-fisheries interactions with a potential significant increase in MM mortalities and serious injuries (MSI) inside and outside the WDAs (VW and future WDAs) due to entanglement (directly, in active fishing gear and indirectly, in lost gear) is not adequately considered. This results primarily from the lack of a formal analysis (even qualitatively) of the expected cumulative impacts on MMs stocks from three likely scenarios: 1. reduction in fishing area for some commercial fisheries due to safety considerations; 2. shift of some coastal	Section 3.5.1 of the SEIS discussed the potential for interactions with commercial and recreational fisheries as a result of either displacement of vessels out of the WDAs or an increased presence of recreational fishing vessels in the WDAs. While the reef effect may result in drawing in recreational fishing effort from inshore areas, an overall interaction between marine mammals and fisheries resulting from increased effort offshore would not change the overlap in recreational fishing effort and marine mammal distributions. Fishing in and around foundations may increase marine debris from fouled fishing gear in the area. However, entanglement and ingestion of

Index	Comment Text	Response
Number		
	recreational fisheries to the WDAs offshore areas and 3. an actual overall increase in recreational fisheries in the region.	marine debris, is not considered a new impact-producing factor but rather a change in the distribution of this factor if inshore fishing effort is moved offshore, with the potential for different species to be affected. Additionally, Section 3.5 of the SEIS discussed the potential effects of ghost fishing gear on marine mammals. Further, Appendix D of the DEIS discussed mitigation relative to the monitoring and removal of ghost fishing gear in the WDA. Therefore, no change to the FEIS is warranted. Sections 3.4.2 and Appendix D of the FEIS discusses mitigation relative to the monitoring and removal of end of the removal of ghost fishing gear in the WDA.
13169-026	So, for the purposes of this SEIS, it cannot be ascertained which mitigation measures will be in place, whether adequate survey standards will be required and which mechanism(s) will be implemented to enforce them. These uncertainties preclude evaluation of how effective mitigation may (or not) be in reducing or eliminating impacts. Finally, for minimization/mitigation and monitoring surveys and adequate automation and integration of data collected from GPS and other devices using customized software must be available to maximize acquisition of relevant information and ensure consistency, integrity, transparency, accuracy and rapid data dissemination and reporting In addition, all data collected should be made available on a public online repository no later than three months after the survey to allow implementation of adaptive management and independent review.	As noted in the SEIS, the summary of the Proposed Action and the alternative analyses in this SEIS did not assume that the proposed mitigation measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13169-027	To summarize, the uniqueness of the proposed wind energy development, unprecedent in terms of the large spatio-temporal footprint and the exceptionally large number of protected MM stocks affected (~15), requires further evaluation of impacts on individual MM stocks, especially regarding individual fitness and population level impacts, to establish whether a delay in recovery or a decline to levels that would warrant a downgrade in stock status (under the MMPA or the ESA) is probable for any of the stocks. For these slow-growing populations that are already adversely impacted by	NMFS is a cooperating agency for the development of the FEIS and as a cooperating agency, NMFS is making determinations relative to the MMPA and ESA based upon this information contained in this FEIS. As disused in the Section 3.4.2 of the FEIS and in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, as discussed in the Biological Opinion, take of whale species is expected to involve harassment and some injury to a limited number of
	multiple factors, further evaluation should explicitly account for the	individuals during the course of pile driving activities. No other take of

Index	Comment Text	Response
Number	detrimental imports caused by 1) any incremental increases in	maring mammala is avagated to again as a result of the project Future
	frequency/intensity of a given IPF relative to current levels from other sources (e.g, shipping, fishing), and 2) cumulative effects of all subIPFs for the proposed WDAs (VW and future) combined with projected levels of non-	offshore wind projects will require separate ESA Section 7 consultation, and a cumulative effects analysis will be completed based on the best available information and will include a discussion of all IPFs that could result in
	wDA sources. In particular, greater scrutiny at stock-level is needed for: 1) the expected increase in mortality/serious injury for each individual stock from changes in interactions with fisheries; 2) the impacts on foraging and breeding areas, as well as on migratory and other seasonal movement patterns, and 3) how WDAs might hinder existing MM management and conservation efforts.	impacts to marine mammals.
13169-028	It is mentioned that "the revenue exposure estimate is a very conservative estimate of actual impacts," as actual impacts depend on a variety of factors, including "the potential for continued fishing to occur within the footprint of the wind lease area" and "a vessel's ability to adapt by changing where it fishes" (section 3.11.1.1, pg. 124 / 3-97). This description appears to miss exposure of revenues occurring outside of wind lease areas arising due to potential changes in vessel transit routes that make certain areas no longer profitable to fish. If vessel transit to or from fishing grounds is impacted by the presence of wind energy structures, revenues occurring in locations outside wind lease areas, that are reached via transit through lease areas, might be considered exposed to wind energy development.	The Final MARIPARS (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. This indicates that the proposed development of the wind lease area would not prevent safe and efficient transit of said area. Therefore, locations outside of wind lease areas would remain available to fishing vessels.
13170-001	WITH A LIFETIME IN THE "STEM" FIELDS), IT IS MY CONSIDERED OPINION THAT EXTENSIVE DEVELOPMENT OF OFFSHORE WIND POWERRIGOROUSLY REGULATED TO MINIMIZE ADVERSE ECOLOGICAL EFFECTS SUCH AS LOSS OF BIOLOGICAL DIVERSITY (i.e., the resource cost of wind power in some corridors will exceed the benefits)IS ONE OF THE SEVERAL ESSENTIAL KEYS TO MEANINGFUL CONTINUATION OF HUMANKIND ON PLANET EARTH.	
13171-001	We recognize the importance of the Environmental Impact Statement on how it will affect all users of the ocean and we have personally experienced while operating our vessels offshore at the Block Island Wind Farm the last four years on how all users can co-exist. The emerging Offshore Wind market will create a monumental supply chain that will create tens of thousands of green jobs.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. Section 3.6.2 of the FEIS also notes a potential moderate impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind.
13173-001	I support the SEIS for Vineyard Wind! I live in Salem, MA and we will be building a family in this coastal town. My husband and I want to see an investment in renewable energy that goes back into our communities. Wind	Thank you for your comment.

Index	Comment Text	Response
Number		
	just makes sense for our region. As Salem is an Environmental Justice	
	community, it stands that we place wind near those closest to the effects of	
12174 001	environmental injustice.	
13174-001	In order that decisions be based on accurate facts and calculations, ACF	The USCG is a cooperating agency for the FEIS that is the leading agency on
	through this public comment, adopts and incorporates by reference the public	navigational matters; therefore, BOEM relies on, and does not question,
	comment submitted to this process by Dr. Thomas Sproul and the	the USCG's expertise and analyses for purposes of informing the navigational
	Responsible Offshore Development Alliance ("RODA"). It is regrettable that	impacts in the EIS.
	what should be an all-encompassing study (such as this SEIS) has partially	
	based its findings on the MARIPARS report, which used incomplete	
	information and contained inaccurate calculations according to its own	
	guidance standards, and used arbitrary justifications by the U.S. Coast Guard	
	in coming to its conclusions.	
13174-002	We are of the opinion that the Draft SEIS should not rely on the MARIPARS	BOEM has developed a reasonable range of alternatives to be assessed that
	report's findings and that the Draft SEIS must propose alternatives based on	could meet the purpose and need of the Vineyard Wind COP. In addition,
	corrected information and calculations. We strongly urge BOEM to account	alternatives are a result of public comments received. BOEM and the
	for Dr. Sproul's expert opinion on the issues present in the MARIPARS	Cooperating Agencies have concurred on the reasonable range of
	report and correct these issues as they present in the SEIS through the	alternatives.
	development of new alternatives. If not, BOEM is choosing to act arbitrarily	
	and capriciously in releasing clearly biased findings.	
13174-003	We wish to further note the draft EIS recognizes that Vineyard Wind,	Each future project will be evaluated and assessed based on the best available
	specifically, and offshore wind, generally, will visit major negative	information at the time of the assessment in terms of the proposed action and
	cumulative impacts on the commercial fisheries, including scalloping and	existing and future activities.
	clamming, the two major species ACF harvests. The draft EIS will clearly	
	serve as a template upon which many future wind array applications will be	
	reviewed and approved. Accordingly, the cumulative major negative impacts	
	this windfarm will have on our industry will be repeated as additional arrays	
	are approved and constructed.	
13174-004	As in the case of most commercial fishing companies, ACF is regional in	Section 3.10 and Appendix D of the FEIS discuss mitigation measures.
	scope. Our fleet is homeported in Cape May but we fish all along the eastern	Section 3.10 of the FEIS has been updated to include that Vineyard Wind has
	seaboard and land a significant percentage of our scallop harvest and	expressed that funding for fishing interests from all other affected states
	virtually all of our surf clams in Massachusetts. We have docks in Maryland	would be added to either of these existing funds or grouped into a third fund.
	and New Jersey and processing plants in Bristol, Rhode Island and Fall River	In the absence of a clear fund for fishing interests in other affected states,
	and New Bedford, Massachusetts. As evidenced in the Rhode Island and	Vineyard Wind has voluntarily committed to set aside \$3.3 million and
	Massachusetts negotiated mitigation agreements, it is abundantly clear that a	establish a voluntary fund for claims of direct compensation from other
	"balkanized" state by state approach to address mitigation and the absence of	affected states. BOEM is open to working with state partners and the
	an interstate/regional approach to address the admittedly major negative	commercial and recreational fishing industries to investigate alternative
	impacts offshore wind will have on our industry virtually guarantees that our	strategies to negotiate compensatory mitigation agreements.
	industry will be sacrificed on the "divide and conquer" altar of political	
	expediency. Neither fish swimming nor the vessels harvesting in federal	

Index	Comment Text	Response
Number		
	waters are constrained by state boundary lines while, at the same time,	
	individually negotiated, administered and regulated mitigation plans	
	apparently do.	
13176-001	The Vineyard Wind 1 project and the other future projects analyzed in the	Thank you for your comment.
	SDEIS will create thousands of jobs and help pump significant investment	
	into the nation's economy, as well as helping meet the nation's growing	
	appetite for clean energy. AWEA encourages BOEM to timely approve this	
	milestone offshore wind project and pave the way for responsibly developed	
	future projects.	
13176-002	AWEA and the offshore wind industry look forward to working with BOEM	Thank you for your comment.
	as it begins to process these permits, launching a process that will help	
	support a domestic energy transition, create tens of thousands of jobs, billions	
	in direct, private investments, and dramatically reduce the amount of carbon	
	emissions that are a driving factor of climate change. Any further delay in	
	processing these pending applications puts at risk the ability of the offshore	
	wind industry to have the needed certainty to grow in this nation and	
	jeopardizes the substantial industry-wide investments and benefits that will	
	flow from them.	
13176-003	The Vineyard Wind 1 project alone is projected, when it becomes	Thank you for your comment.
	operational, to reduce Massachusetts' carbon emissions by more than 1.6	
	million tons per year, or the equivalent of removing 325,000 cars from state	
	roads, while offering \$3.7 billion in energy-related cost savings to the New	
	England region over the life of the project.	
13176-004	Issuance of the final EIS by November 13, 2020, and a Record of Decision	Thank you for your comment.
	by December 18, 2020, approving Vineyard Wind 1, consistent with the	
	revised One Federal Decision Permitting Timeline issued earlier this year, II	
	will help set free a cascading effect that will pave the way for future	
	responsibly developed offshore projects, creating tens of thousands of jobs	
	and other economic benefits. On the other hand, not meeting these deadlines,	
	or imposing conditions on project approval that are uneconomical,	
	unnecessary, and impracticable would have a direct negative impact on	
	investor confidence in the U.S. offshore wind energy market and, in turn, job	
12176.005	and economic creation therein.	
13176-005	Finalizing the EIS, therefore, will be a critical step to narrowing this [as of	Thank you for your comment.
	July 2020, the U.S. has a total of just 30 MW (five turbines) of offshore wind	
	operating, with another 12 MW (two turbines) recently installed in federal	
	waters off the coast of Virginia being tested, compared to Europe's 21,900	
	MW and China's 6,800 MW installed through the end of 2019 gap.	

Index Number	Comment Text	Response
13176-006	It [finalizing the EIS] will put in place the structure for considering the cumulative impacts of offshore wind energy that can be used to help expedite future offshore wind projects and should provide the industry and investors with certainty that it can secure permits in reasonable time periods. It will also facilitate BOEM's ability to move forward in a quicker and more efficient manner with the environmental reviews for other offshore projects that are in the pipeline.	Thank you for your comment.
13176-007	Noticeable progress on the reviews for these offshore projects, including issuing multiple NOIs in the intervening months before the final EIS is issued for Vineyard Wind I, is critical for making cost-effective market and supply chain investment decisions. This will impact development and construction activities, as well as the ability to meet project timelines determined by power purchase agreements. Any further delays in conducting the environmental reviews for these other projects risks the creation of thousands of jobs, improvements to ports and other infrastructure development, and deployment of clean energy to meet public policy goals.	Thank you for your comment.
13176-008	With continued activity at the state level to procure offshore wind, a pause or further delayed pause on issuing these permits will create a bottleneck for offshore wind permit applications that are amassing at BOEM and impede states from achieving their clean energy targets. The federal government should be a partner to the states by establishing a reasonable permitting process to help achieve state goals, such as offshore wind development.	Thank you for your comment.
13176-009	The speedy development of offshore wind energy satisfies federal goals as well. As offshore wind energy projects can help speed up the nation's economic recovery, they fall within the purpose and intent of the June 4 Executive Order (EO), Accelerating the Nation's Economic Recovery from the COVID-19 Emergency by Expediting Infrastructure Investments and Other Activities.	Thank you for your comment.
13176-010	However, as part of this "hard look," BOEM tends to assume a worst-case scenario with many of the impacts in its discussion of the impacts of a future buildout of projects. Based on this approach, BOEM does not fully account for what can be done to ensure that the positive benefits of offshore wind easily outweigh the impacts. That is, to the extent that there are impacts, future projects should be able to mitigate most of these impacts. The impact of future projects should, thus, in actuality, be far less than the SDEIS might be read to suggest, as the proposed impact ratings did not fully account for reasonably foreseeable mitigation. That should be acknowledged and analyzed in the final EIS.	Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative. As noted in the SEIS, the summary of the Proposed Action and the alternative analyses in this SEIS did not assume that the proposed mitigation measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for

Index	Comment Text	Response
Number		
		future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information
13176-011	As will be discussed in more detail, the final FIS should accordingly more	As noted in the SEIS, the summary of the Proposed Action and the
	As will be discussed in more detail, the final ETS should, accordingly, more fully account for mitigation measures in the cumulative impacts assessment of future projects.	As noted in the SEIS, the summary of the Proposed Action and the alternative analyses in this SEIS did not assume that the proposed mitigation measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13176-012	With respect to the economic benefits assessment in the SDEIS, the rating	Section 3.6 of the FEIS has been updated to provide summary projections of
	appears unduly low, as the record supports a conclusion that offshore wind	regional and national job creation and investment from studies used in the
	energy provides greater benefits than recognized in the document.	analysis for the SEIS as well as additional studies. Although projections
	Specifically, the SDEIS's conclusion that future offshore wind development	specific to the geographic analysis area are not available, the FEIS uses the
	will only result in minor economic benefits to the region appears at odds with	larger scale projections to support a reasonable conclusion that impacts on
	the SDEIS's recognition of significant new investment in job development	employment and economic activity within the geographic analysis area

Index Number	Comment Text	Response
	and infrastructure development (such as ports and harbors), as well as support for manufacturing and supply chain activities. The final EIS should adopt a more beneficial economic impact rating for offshore wind consistent with the evidence in the record.	would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13176-013	The SDEIS correctly concludes that the contemplation of a broad transit lane to transect offshore wind projects (i.e. Alternative F) would have negative impacts to both vessel navigation safety and offshore wind deployment that would outweigh any minimal positive benefits from its deployment. As the final MARIPARS found, leaseholder commitments in New England to a uniform one-by-one nautical mile spacing (1 x 1 NM) between each turbine with an East-West orientation largely eliminates concerns regarding navigational and mariner safety. The robust evidence in the record of the SDEIS also supports the conclusion and that this layout will accommodate commercial and recreational fishermen and other vessels that are most prevalent in the Massachusetts-Rhode Island lease areas. The 1 x 1 NM layout would create more distance between turbines than any offshore wind projects operating globally and establishes more than 200 transit lanes in all directions through the lease areas . Therefore, Alternative F should be rejected, and Alternative D2 should be included in the final EIS as the Preferred Alternative for project layout in the Rhode Island and Massachusetts contiguous lease areas.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13176-014	In the final EIS, BOEM should be explicit that these impact ratings described in the cumulative analysis are based on worst-case projections rather than what is reasonably foreseeable. This is due to the fact that, for these cumulative impact assessments, BOEM did not fully account for generally recognized standard mitigation techniques—or the likelihood of incorporating reasonably foreseeable new ones—that will be employed by future offshore wind energy projects and would certainly decrease their impacts.	As noted in the SEIS, the summary of the Proposed Action and the alternative analyses in this SEIS did not assume that the proposed mitigation measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be

Index	Comment Text	Response
Number		
		adopted in the Record of Decision and required as conditions of approval.
12176 015		Section 2.2.1 of the FEIS has been updated to reflect this information.
13176-015	To the extent there are impacts from future projects, the offshore wind	Thank you for your comment.
	industry remains committed to collecting, using, and sharing credible	
	scientific data to ensure that any impacts from future projects are well	
	understood and to using science to inform mitigation to the greatest extent	
	possible—in other words, taking an adaptive management approach.	
	Additionally, the wind industry will continue to work collaboratively with	
	scientists, federal and state agencies, and local communities to ensure	
101-6016	responsible coexistence with all users of lease areas.	
13176-016	Considering either a combination or a choice between Alternative D2 and	Section 2.5 of the FEIS has been added which includes the agency-preferred
	Alternative F, the evidence in the record, including the USCG final	alternative.
	MARIPARS report,25 makes clear that the former, without being combined	
	with the latter, is the best choice from the perspective of navigation safety	
	and other factors. In fact, of all the alternatives in the SDEIS, Alternative D2	
	has the fewest conflicts with regard to impacts on navigation. Accordingly,	
	the final EIS should identify Alternative D2 as the Preferred Alternative.	
13176-017	The record demonstrates that this [Alternative D2] layout would lead to less	Section 2.5 of the FEIS has been added which includes the agency-preferred
	impacts on navigation and vessel traffic and provide numerous benefits to	alternative.
	commercial fishermen and for-hire recreational fishing compared to other	
	Alternatives.	
13176-018	the imposition of overly broad transit lanes (i.e., Alternative F) is	Section 2.5 of the FEIS has been added which includes the agency-preferred
	unnecessary and will pose a greater risk to navigation than the uniform grid	alternative. Section 3.11.4 and 3.11.5 of the FEIS includes a discussion of
	layout proposed in Alternative D2, as more traffic is likely to be funneled	potential effects of Alternative D2 and Alternative F, respectively.
	into the larger transit lanes.	
13176-019	Under Alternative D2, the wind turbine layout would allow vessels to	Section 2.5 of the FEIS has been added which includes the agency-preferred
	travel in an unobstructed path between them in an east-west direction—	alternative.
	respecting the ability of commercial fisherman and other vessels to transit,	
	reducing navigational complexity, improving vessel traffic safety, utilizing a	
	regular and predictable layout (thereby allowing vessel operators to set	
	predictable courses), and allowing the USCG to set predictable search and	
	rescue patterns and successfully complete more search and rescue missions.	
13176-020	This conclusion [Alternative D2 is the best option] has been confirmed by the	Section 2.5 of the FEIS has been added which includes the agency-preferred
	USCG, which has the statutory authority and expertise to create and enforce	alternative.
	regulations affecting the navigation safety of vessels.	
13176-021	In the final MARIPARS, the USCG determined that uniform 1 x 1 NM	Section 2.1.3 and Section 3.11 of the FEIS incorporate, where appropriate,
	spacing should be preferred over either a 2 NM or 4 NM transit lane corridor	the Final MARIPARS. Section 2.5 of the FEIS has been added which
	(like that proposed by RODA in Alternative F) because larger mitigation	includes the agency-preferred alternative.
	lanes pose more navigational risk	

Index	Comment Text	Response
Number		
13176-022	The USCG determined that the 1 x 1 NM layout pattern "will result in the functional equivalent of numerous navigation corridors that can safely accommodate both transits through and fishing within the [the lease areas]."	The FEIS addresses the USCG recommendations and findings in Sections 3.11.4 and 3.11.5. The Final MARIPARS study report (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study report (USCG 2020). The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13176-023	while the potentially larger footprint of the wind development area would increase the geographical scope of impacts under Alternatives D1 and D2, the draft [MARIPARS] report finds that the increased 1 x 1 NM spacing between wind turbines would incrementally decrease impacts on navigation and vessel traffic safety.	The FEIS addresses the USCG recommendations and findings in Sections 3.11.4 and 3.11.5.
13176-024	The Baird Report found most traffic in the general region transits around, or along the outside edges, of the wind energy area. In addition, most of the transiting vessels are fishing vessels, and they follow a wide range of transit paths through the wind energy area as they are coming from several different ports and heading to a variety of fishing grounds. Vessels up to 400 feet in length can safely operate within the proposed 1 x 1 NM layout, and historic transit data show vessels over this length tend to follow existing Traffic Separation Schemes that already exist outside the wind energy area.	The FEIS addresses vessel traffic in Section 3.11.2. Though findings of the Baird (2020) study were not included in the FEIS, the findings described here are consistent with findings in the FEIS. Information presented draws upon the COP, (Epsilon 2018a), including the Revised NRA for the Project (COP Volume III, Appendix III-I, Epsilon 2020a), and the Supplemental NRA (COP Volume III, Appendix III-I, Epsilon 2020a), which were prepared to comply with guidelines in the USCG's Navigation and Vessel Inspection Circular 02-07 (USCG 2007).
13176-025	Alternative D2 should be adopted as the preferred vessel transit and navigation alternative because it better accounts for the needs of vessels and fishing without compromising the technical needs and transmission capabilities of offshore wind projects, as well as state demand for offshore wind. We encourage BOEM to follow the recommendation of the USCG that the uniform 1 X 1 NM grid pattern is preferable to 2 NM and 4 NM grid patterns because of negative impacts to navigation from Alternative F	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13176-026	Because vessel traffic outside the Massachusetts and Rhode Island lease areas is likely to be very different, as the SDEIS seemingly recognizes, there should not be an assumption that the spacing layout will be employed outside the geographic area considered in the SDEIS, but it is reasonable to assume that PARS associated with other wind leases will be applied and Coast Guard recommendations will be adopted.	As noted in Appendix A of the SEIS, BOEM assumed that all offshore wind developments offshore Massachusetts and Rhode Island would have 1 x 1 nautical mile spacing. This assumption was made based on the developers' agreement made among the developers and does not preclude the selection of another alternative by the decision maker. BOEM further assumed that wind development offshore other states, with the exception Virginia, is assumed to occur at the same density as 1 x 1 nautical mile spacing, but no particular layout orientation or foundation spacing is assumed as ocean users offshore different states may have different patterns of movement or considerations

Index	Comment Text	Response
Number		
		than projects in leases offshore Massachusetts and Rhode Island. Therefore, no changes to the FEIS are warranted. Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
13176-027	As BOEM acknowledges in the SDEIS, "ocean users offshore in different states may have different patterns of movement or considerations than projects in leases offshore Massachusetts and Rhode Island." Thus, vessel navigation and transit issues will depend on project-specific considerations and, therefore, should be deferred to future environmental analyses.	As noted in Appendix A of the SEIS, BOEM assumed that all offshore wind developments offshore Massachusetts and Rhode Island would have 1 x 1 nautical mile spacing. This assumption was made based on the developers' agreement made among the developers and does not preclude the selection of another alternative by the decision maker. BOEM further assumed that wind development offshore other states, with the exception Virginia, is assumed to occur at the same density as 1 x 1 nautical mile spacing, but no particular layout orientation or foundation spacing is assumed as ocean users offshore different states may have different patterns of movement or considerations than projects in leases offshore Massachusetts and Rhode Island. Therefore, no changes to the FEIS are warranted. Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
13176-028	Therefore, even if BOEM is considering employing aspects of the cumulative impact analysis in the SDEIS as a template for future offshore wind projects in other areas, it should explicitly state in the final EIS that the layout expectations in the cumulative impacts analysis will not be used to set the standard for 1 x 1 NM spacing on projects outside of the Massachusetts and Rhode Island wind energy areas.	As noted in Appendix A of the SEIS, BOEM assumed that all offshore wind developments offshore Massachusetts and Rhode Island would have 1 x 1 nautical mile spacing. This assumption was made based on the developers' agreement made among the developers and does not preclude the selection of another alternative by the decision maker. BOEM further assumed that wind development offshore other states, with the exception Virginia, is assumed to occur at the same density as 1 x 1 nautical mile spacing, but no particular layout orientation or foundation spacing is assumed as ocean users offshore different states may have different patterns of movement or considerations than projects in leases offshore Massachusetts and Rhode Island. Therefore, no changes to the FEIS are warranted. Each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts and the selection of the preferred alternative.
13176-029	The SDEIS correctly points out that Alternative F would present "technical, operational, and economic challenges if selected, which makes Alternative D2 the more appropriate and more suitable alternative."	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. The SEIS and Section 2.1.5 of the FEIS address some of the technical and practical challenges of implementing Alternative F
12176 020	The SDEIS thus makes also that Alternative E will not increase a second of the	Section 2.5 of the EEIS has been added which includes the section of the section 1.
131/0-030	safety. This conclusion is consistent with the USCG's conclusion in the	alternative.
Index	Comment Text	Response
-----------	---	--
Number	MARIPARS report—that such broad transit lanes would increase risks to	
	navigation safety.	
13176-031	In addition to increasing navigation safety risks, Alternative F increases other	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	impacts as well. For example, implementing Alternative F would delay	that could occur in Alternative F were implemented. Therefore, no changes to
	proposed project construction as significant additional survey work would be	the FEIS are warranted.
	required. Namely, there would be additional site characterization surveys for	
	Alternative F with the attendant environmental impacts.	
13176-032	The potential construction delays from Alternative F could also create more	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	overlap with other future offshore wind project construction schedules,	that could occur in Alternative F were implemented. Therefore, no changes to
	potentially leading to increased cumulative impacts on resources that are	the FEIS are warranted.
	sensitive to overlapping construction activities.	
13176-033	The space required for implementation of the transit lane could reduce the	Thank you for your comment.
	area available to construct future projects within the lease area. As BOEM	
	notes, if all six transit lanes proposed were implemented, the technical	
	capacity of offshore wind power generation assumed in the SDEIS would not	
	be met. The magnitude of the diminished technical capacity would depend on	
	the width of transit lanes implemented but, ultimately, less clean energy in	
	the region would be produced. BOEM assumes this to be true of any	
	combination of alternatives that includes Alternative F.	
13176-034	One of the most critical and costly challenges of implementing Alternative F	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	is transmission. For example, Vineyard Wind 1's proposed 66-kilovolt inter-	that could occur in Alternative F were implemented. Therefore, no changes to
	array cables would experience additional transmission loss and unanticipated	the FEIS are warranted.
	costs if cables are lengthened to accommodate the transit lanes assumed	
	under Alternative F. Cable lengthening would require factory joints, which	
	are not currently technically possible by cable manufacturers. Joints could	
	increase the risk of potential cable failure and repairing such failures could	
	hettern disturbance and vessel traffic	
12176 025	Even though the SDEIS finds that Alternative E would present "technical	Although Vineward Wind has stated that Alternative E does not most its
13170-033	operational and economic challenges "it nevertheless states that it "could	Autought vineyard which has stated that Alternative F does not meet its
	technically and economically meet the nurnose and need" and could be	done for the SEIS). The SEIS as well as Section 2.1.5 of the EEIS describes
	reasonable. The final EIS should determine that since Alternative F is not	the technical and practical challenges that could result if Alternative F were
	technically and economically feasible, it is not a reasonable alternative for the	implemented
	purpose and need of the Proposed Action and therefore should be rejected as	implemented.
	unreasonable.	
13176-036	As the project was selected by a state to supply offshore wind energy to meet	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	state clean energy targets, and the proposed broader transit corridor in	that could occur in Alternative F were implemented. Therefore, no changes to
	Alternative F would impede offshore wind farms from helping to achieve	the FEIS are warranted.

Index	Comment Text	Response
Number		
	those targets, Alternative F is clearly not technically and economically	
12176.027	Teasible for meeting the purpose and need of the action.	
131/6-03/	BOEM also correctly recognizes that implementation of Alternative F could	Section 2.1.5 of the SEIS addressed the technical and practical challenges
	further crode project economics and viability, as well as pose greater	that could occur in Alternative F were implemented. I herefore, no changes to
12176 029	the USCC complementation that "follower have been and the second se	une reis are warranted.
131/6-038	the USCG corroborates that "[a] ithough these larger havigation corridors	Section 2.5 of the FEIS has been added which includes the agency-preferred
	may appear to provide more area for navigation, they actually provide far less	alternative.
	area than the numerous corridors that result from the recommended array and	
	spacing and would also largely preclude lishing in the wEA. Thus,	
	BOEM should, in the linal EIS, adopt Alternative D2 as the Preferred	
	alternative F as not being a reasonable	
12176 020	In Europe, nerrower distances between wind turbings then proposed in	The FEIS addresses this comment in Sections 2.11.4 and 2.11.5. The Final
13170-039	Alternative D2 have been demonstrated to be safe for vessel pavigation the	MADIDADS study report (USCG 2020) stotes that yessel transit longs that
	most common distance between a wind farm in Europe is approximately 1	$\frac{1}{2}$ are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to
	NM. These measures were put in place via project specific discussions	maneuver in accordance with the International Regulations for Preventing
	(assuming 300-400 foot vessels) and notably are less than those in	Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI
	Alternative F The experience in Europe demonstrates that vessel navigation	WFA Additional rationale is provided in the Final MARIPARS study report
	around and through a wind farm can be done safely through an approach	(USCG 2020)
	similar to Alternative D2.	(0500 2020).
13176-040	the evidence in the SDEIS itself—as well as the recommendations of the	Section 3.11.4 of the FEIS discusses Alternative D2. Alternative D2 would
	Department of Defense (DoD)—support revising the overall cumulative	result in 1 x 1 nautical mile spacing between WTGs, with WTGs arranged in
	impact rating for military and national security uses to minor or, at most,	east-to-west rows and north to south columns, matching the orientation that
	moderate.	BOEM assumes for all other future offshore wind projects. Impact ratings are
		based on consultations with cooperating agencies (specifically the USCG)
		and the definitions in Section 3.0. The overall reasonably foreseeable
		environmental trends and planned action impacts of Alternative D2 when
		combined with past, present, and reasonably foreseeable activities on
		navigation and vessel traffic within the geographic analysis area would be
		lower than under the Proposed Action-moderate- due to improved SAR
		access and reduced loss of life.
13176-041	of the particular potential impacts on military and national security uses	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1,
	identified by the SDEIS, search and rescue operations is the only one to have	E, and F with D1 in the context of reasonably foreseeable environmental
	an impact rating of major. Thus, it is unclear in the SDEIS why this one	trends and planned actions would have minor impacts on most military and
	factor alone warranted a major rating overall with respect to cumulative	national security uses, but major impacts only on USCG SAR operations. For
	impacts, in comparison to the lower rating the DEIS found for this area,	Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG
	especially when it does not appear that DoD advised BOEM to change that	SAR operations in the context of reasonably foreseeable environmental
	rating and the evidence in the record does not support that action.	trends and planned actions would be reduced to moderate. The impact ratings
		for military and national security uses and SAR activities were updated due

Index	Comment Text	Response
Number		
		to additional analysis and comments provided by the USCG and other entities in the course of the SEIS development. BOEM and Vineyard Wind have conducted extensive coordination with the DoD and the USCG, which is described in Section 3.12 of the FEIS.
13176-042	increased risk of military or national security vessel allisions with stationary structures—has a "minor to moderate" cumulative impact rating. This potential risk is low due to the lighting of offshore wind turbines, consistent with USCG and BOEM requirementsIt is safe to assume that similar engagement with the Department of Defense Clearinghousewill be required of other offshore wind projects as well, and this should be taken into account in the cumulative impacts analysis in the final EIS.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The impact ratings for military and national security uses and SAR activities were updated due to additional analysis and comments provided by the USCG and other entities in the course of the SEIS development. BOEM and Vineyard Wind have conducted extensive coordination with the DoD and the USCG, including coordination through the DoD Clearinghouse, which is described in Section 3.12 of the FEIS.
13176-043	the SDEIS finds that the primary concern is the potential impact on search and rescue operations, asserting that the presence of turbines "could make it more difficult for SAR aircraft to perform operations in the lease area, leading to less effective search patterns or earlier abandonment of searches." Again, this is the <i>only</i> potential impact for military and national security uses that has an impact rating of major.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate.
13176-044	all project developers will be required to liaise with military and national security personnel to mitigate potential impacts. This fact should be taken into account in the final EIS and supports a lower rating in this area.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The FEIS has also been modified to specify that other project developers would be required to coordinate with military and national security entities to identify and mitigate potential conflicts.
13176-045	With the exception of the increased risk to military vessels and aircraft due to increased navigational complexity (major) and increased risk of military or national security vessel allisions with stationary structures (minor to moderate), the individual potential impacts considered in the overall cumulative impact rating for military and national security uses range only	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG

Index Number	Comment Text	Response
	from negligible to minor. Since only one of the potential impacts considered in the SDEIS for military and national security has an impact rating of major, the SDEIS does not provide sufficient evidence to support a finding of major impacts.	SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate.
13176-046	in the SDEIS, BOEM states that the agencies with the greatest expertise in this area, the " <i>military entities have not identified moderate or major</i> <i>conflicts</i> " and that the "cumulative impacts would be highly similar under the No Action Alternative or under the Proposed Action." The SDEIS also states "the Department of Defense reviewed the [Vineyard Wind project] in its entirety and concluded that it would have minor but acceptable impacts on their operations." The Navy also determined that the Vineyard Wind project "does not raise concerns for [Navy] military operations." While it is unclear in the SDEIS, to the extent the primary reason for the major impact rating is related to wind turbine structures in the Massachusetts and Rhode Island lease areas interfering with the USCG's search and rescue operation, the MARIPARS report concluded that it can effectively execute its search and rescue operations in the spacing scheme proposed in Alternative D2. Further, if BOEM is basing this rating on USCG search and rescue missions, we question whether that issue appropriately falls within the ambit of military and national security operations as opposed to vessel navigation and safety. Ultimately, AWEA believes that the potential impacts on military and national security uses, when considered together, do not rise to major. If the	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. Following the layout recommendations in the Final MARIPARS would improve safety, but it would not remove the risk of allisions or collisions with WTGs during SAR operations particularly in challenging weather or visibility conditions (USCG 2020). The USCG is a branch of the armed forces that operates under the Department of Homeland Security during peacetime, and under the Navy during times of war (14 USC §101 - 102). Thus USCG SAR operations are discussed in SEIS and Section 3.12 of the FEIS, which includes military and national security uses.
	only major impact for military and national security risk is search and rescue operations, and those are atypical activities, it is unclear why the SDEIS made the finding it did. Instead, a minor, or at most, a moderate, impact rating would seem warranted, and BOEM should revise the overall rating in the final EIS accordingly.	trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. Following the layout recommendations in the Final MARIPARS would improve safety, but it would not remove the risk of allisions or collisions with WTGs during SAR operations particularly in challenging weather or visibility conditions (USCG 2020).
13176-048	Not only does the aforementioned evidence within the SDEIS support a revised cumulative impact rating for military and national security uses, but to the extent there are impacts, Vineyard Wind and other offshore wind developers are required to engage with DoD to mitigate impacts. As any impacts will likely be mitigated in this process, this adds greater support to the appropriateness of a revised rating in this area and should be accounted for in the final EIS.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The FEIS has also been modified to specify that other project developers would be required to

Index	Comment Text	Response
Number		
		coordinate with military and national security entities to identify and mitigate potential conflicts.
13176-049	BOEM and DoD's processes for evaluating the risk of offshore wind projects ensure that developers work with the DoD to mitigate those concerns and risks, and BOEM should include this fact in reevaluating the cumulative impacts on military and national security uses in the final EIS.	Section 3.12 of the FEIS has been edited to clarify that Alternatives A, C, D1, E, and F with D1 in the context of reasonably foreseeable environmental trends and planned actions would have minor impacts on most military and national security uses, but major impacts only on USCG SAR operations. For Alternatives D2, F with D2, and the Preferred Alternative, impacts to USCG SAR operations in the context of reasonably foreseeable environmental trends and planned actions would be reduced to moderate. The FEIS has also been modified to specify that other project developers would be required to coordinate with military and national security entities to identify and mitigate potential conflicts.
13176-050	AWEA agrees with this [minor impacts on aviation and air traffic uses] determination because not only would air traffic be able to continue over and around the Rhode Island and Massachusetts lease areas after any required changes to air traffic navigation patterns are made through established processes, but also more than 90 percent of existing air traffic over the wind development area occurs at altitudes that would not be impacted by the presence of wind turbines.	Thank you for your comment.
13176-051	AWEA agrees with BOEM's assessment that project proponents will conduct aeronautical studies to identify and resolve any aviation-related conflicts resulting in a "minor impacts" rating.	Thank you for your comment.
13176-052	Installation of wind turbines within the Rhode Island and Massachusetts lease areas is "unlikely to individually or cumulatively impact military and civilian radar systems" because developers will continue to coordinate with individual project operators and military, national security, and civilian stakeholdersAWEA, therefore, agrees with BOEM's minor impacts rating for radar systems and supports that determination being adopted in the final EIS.	Thank you for your comment.
13176-053	Importantly, the report [MARIPARS] concludes that, "the UK studies also show that general mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines and the use of AIS enable safe navigation with minimal loss of radar detection."	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of marine radar. The following information cited in this comment has been incorporated into these sections: The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13176-054	Despite significant evidence in the record to the contrary, the SDEIS incongruously determines that the overall cumulative impacts on demographics, employment, and economics from the full development scenario would likely only qualify as "minor and minor beneficial." The final	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the

Index	Comment Text	Response
Number	EIS should account for all the reasonably foreseeable demographic, employment, and economic benefits created by future offshore wind projects. In particular, BOEM should evaluate foreseeable economic impacts beyond the current geographic scope, to account for the significant domestic jobs and supply chain logistics that offshore wind energy will support, as well as the infrastructure benefits. Even if BOEM is unwilling to expand the geographic scope for considering such benefits, there is sufficient evidence in the record to support the final EIS adjusting its classification of demographics, employment and economics from "minor and minor beneficial" to either moderate beneficial or major beneficial.	larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13176-055	The SDEIS adopts inconsistent geographic scopes in evaluating demographic, employment, and economic effects of offshore wind as compared to fishing impacts. Fishing impacts are evaluated from the Gulf of Maine to Cape Hatteras, but economic and environmental justice impacts are assessed only for Southern Rhode Island and Massachusetts.	BOEM believes that the geographic analysis areas for each resource are adequate. Refer to Appendix A of the FEIS for representation of the geographic analysis areas for each resource. The geographic analysis area for environmental justice populations as well as economics includes the counties where proposed onshore infrastructure and potential port cities are located, as well as counties in closest proximity to the WDA. These counties, and environmental justice communities located within them, are the most likely to experience economic impacts from the Proposed Action.
13176-056	NEPA requires an appropriately broad geographic scope, beyond "the vicinity of [any] specific project," in situations where foreseeable impacts will be distributed more widely. This is certainly as true for economic impacts related to offshore wind energy as it is for fishing.	BOEM believes that the geographic analysis areas for each resource are adequate. The geographic analysis area for each resource was determined based on the intersection of that resource with the proposed Project activities. Refer to Appendix A of the FEIS for representation of the geographic analysis areas for each resource.
13176-057	Although the SDEIS identifies local port improvements as a significant cumulative economic benefit of future wind projects, it does not appear to take account of specific jobs and economic development commitments, or the foreseeable supply-chain effects throughout the country related to these projects—all of which support a final EIS determination of moderate to major economic benefit.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13176-058	Based on the growth of the onshore wind supply chain, and the initial comparable growth in the offshore wind sector, there is every reason to expect significant, multi-state economic benefits beyond the immediate project areas as offshore wind deployment increases.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to

Index	Comment Text	Response
Number		
		have a moderate beneficial rating and is a change from the minor beneficial
		impact given in the SEIS.
13176-059	The above investments [multiple investments cited] are just a sampling of the	Although listing information on specific planned projects related to national
	economic benefits that will flow from deployment of offshore wind in the	investment in offshore wind is outside the scope of the FEIS, the analysis
	U.S. The final EIS should reflect that Vineyard Wind 1, and the subsequent	provides input from studies of overall projected investment and employment
	projects included in the SDEIS cumulative impacts analysis, represent the	to revise the SEIS conclusions regarding impacts on employment and
	foundation of significant economic benefits linked to transportation,	economics within the geographic analysis area. The FEIS concludes that the
	manufacturing, installation, and operation of offshore wind facilities.	Proposed Action would have moderate beneficial impacts on employment
		and economics within the geographic analysis area.
13176-060	Several other economic impacts of the clean electricity provided by offshore	The SEIS cited several studies in Section 3.7 that provided projections of
	wind projects will be long-term and beneficial, beyond the coastal	economic impacts of offshore wind, both regionally and nationally. The FEIS
	Massachusetts and Rhode Island counties in the current geographic scope.	includes more detailed data from the MassCEC study, adds regional GDP and
		employment data for context, and two additional recent reports (Section
		3.7.1.1): projections of offshore wind capital investment from the University
		of Delaware Special Initiative on Offshore Wind, and employment
		projections from Georgetown Economic Services. These studies provide
		projections of economic impacts of offshore wind beyond the geographic
		analysis area. Thus, the SEIS cited projections of regional and national
		economic impacts, and the FEIS expands the information provided. Both the
		SEIS and FEIS use these projections to make reasonable conclusion on likely
		impacts within the Geographic Analysis Area for this particular EIS.
13176-061	In the case of carbon emissions (for which benefits will be global), AWEA	Thank you for your comment.
	estimates that each megawatt-hour of offshore wind energy generation will	
	avoid 0.49 metric tons of carbon dioxide emissions. For the full 22 gigawatts	
	of offshore wind projects evaluated in the SDEIS, this would result in	
	reductions of roughly 42.5 million metric tons of carbon dioxide annually,	
	equivalent to the emissions of over nine million cars.	
13176-062	The SDEIS also fails to directly connect the benefits of planned offshore	Section 3.6.1.1 of the FEIS is updated to acknowledge the need for energy
	wind projects to the challenges many coastal states face due to the imminent	generation and security resulting from closure of nuclear and fossil-fueled
	retirement of aging fossil-fueled and nuclear-fired generation facilitiesThe	power plants.
	planned offshore wind projects covered in the SDEIS are well-suited to	
10176.060	replace these conventional resources as they retire.	
13176-063	because wind is a zero-marginal cost resource, development of the projects	Thank you for your comment.
	covered in the SDEIS (particularly the replacement of older, higher-marginal	
	cost units) will tend to reduce energy prices in the New England and Mid-	
10156.055	Atlantic regions—which are the highest in the lower 48 states.	
13176-064	The SDEIS also correctly identifies that offshore wind will displace fossil	The SEIS stated that future offshore wind development would have a
	fuel-generated power plants and result in long-term benefits to communities	beneficial impact on energy generation and security (Section 3.7.1.1).
	as an environmental justice benefit. However, the SDEIS does not appear to	Additional analysis regarding the future benefit of reduced GHG emissions to

Index Number	Comment Text	Response
Tumber	credit these effects as <i>economic</i> benefits as well, despite the well-documented linkage between air quality and economic productivityThe final EIS should consider these improvements as economically beneficial to the region.	employment and economics are beyond the scope of and not necessary to support the conclusions of the EIS.
13176-065	Additionally, because future offshore wind facilities would produce fewer greenhouse gas (GHG) emissions than fossil-fuel-powered generating facilities with similar capacities, the reduction in GHG emissions due to future offshore wind projects (or avoidance of increased GHG emissions from equivalent fossil-fuel-powered energy production) would result in long- term beneficial impacts on demographics, employment, and economics. Again, the SDEIS uses a narrow geographic area to assess air quality, despite the regional shift from thermal, higher-emissions power plants to zero- emissions offshore wind.	The FEIS concludes that the Proposed Action in the context of other planned offshore wind development would have moderate beneficial impacts within the geographic analysis based upon anticipated growth in employment and economic activity. Section A.8.1 of the FEIS has been updated to include additional information on potential reductions in GHG emissions. Additionally, Sections 3.7.1 and 3.7.2 of the FEIS explain that reduction in fossil fuel energy generation could potential reduce air emissions affecting minority and low income populations.
13176-066	Offshore wind development has had a tremendous impact on the revitalization of coastal communities in Europe, turning once underutilized ports and their surrounding communities into booming economies. The east coast of the U.S. will benefit comparably, and these benefits will not be limited to the current geographic scope for evaluating demographic, economic, and employment impacts in the SDEIS.	Thank you for your comment.
13176-067	Even within the SDEIS' current scope, several factors should result in a higher beneficial impact finding than the current "minor" cumulative impact rating. As noted below, most adverse impacts identified in the SDEIS are transient and occur during project construction. These adverse impacts will largely be offset by concurrent construction and installation jobs. In contrast, once the construction phase is complete, there will be continued economic benefit and negligible adverse impact over the anticipated project lives.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.
13176-068	several known economic benefits in the existing Rhode Island and Massachusetts geographic scope do not appear to be referenced in the SDEIS. For instance, two new crew transfer vessels are being constructed in Rhode Island. Investments including direct grants to the port of New Bedford, developer-funded studies of potential land redevelopment, federal investment in port expansion, and \$12 million in supply chain acceleration and workforce development, and millions in leasing of port facilities are all foreseeable benefits on demographic, employment, and economic measures. In its final EIS, BOEM should fully account for all the foreseeable beneficial economic impacts, which in the aggregate support a moderate to major beneficial rating, even if limited to the geographic scope chosen in the SDEIS.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS. Within the scope of the EIS, it is not necessary to cite multiple specific examples of investment, given the availability of studies that use such information to create projections of the overall anticipated economic impact. However, the FEIS does cite port

Index	Comment Text	Response
Number		improvements, including improvements that are complete, in process, or planned, at the applicable port facilities.
13176-069	The SDEIS concludes that the cumulative impacts associated with the Proposed Action when combined with past, present, and reasonably foreseeable activities would result in moderate adverse impacts and minor beneficial impacts on recreation and tourism in the geographic analysis areaThe SDEIS correctly notes that the most comprehensive review of tourism impacts from the Block Island Wind Farm—located less than 3 miles from shore—has shown no effect on tourism, and has improved fishing opportunities in some locations. This suggests that BOEM is overestimating visual impacts from the Proposed Action and foreseeable wind farms much farther from shore. In addition, subsequent research has shown increased rentals of vacation property on Block Island, versus other comparable coastal communities. Polling of other communities similarly shows no likely net impact on tourism or recreation. These additional data points should inform the final EIS.	Section 3.4.4.3 of the DEIS cited findings from several studies on the impacts on tourism resulting from the visual impact of wind energy, including descriptions of the impacts of the Block Island Wind Farm. This source and information was also included in Section 3.10.1.1 of the SEIS and Section 3.9.1.1 of the FEIS. No changes to the FEIS are warranted.
13176-070	In the SDEIS, BOEM determines that the cumulative impacts of the Proposed Action and any alternative would be major if joined with past, present, and reasonably foreseeable activities on commercial fisheries and for-hire recreational fishing. We recommend revision of this finding to moderate.	Section 3.10.1 of the FEIS discusses that, even under the No Action Alternative, BOEM expects all foreseeable factors to result in major adverse impacts on commercial fisheries and moderate adverse impacts on for-hire recreational fisheries. This is consistent with the definitions of impact levels in Table 3-1 of the FEIS. The impacts on the fishing industry under the Proposed Action would not be substantially less than under the No Action Alternative.
13176-071	The SDEIS raises the level of impact for cumulative effects based largely on three findings. Only one of these findings is directly attributable to offshore wind. The offshore wind-related finding is that the permanent presence of structures will affect commercial and recreational fishing. The other two drivers of the "major" impact rating are reduced stock levels due to existing mortality caused by fishing and changes in fish distribution/availability due to climate change the conclusion that the Alternatives would have major cumulative impacts is not supported, and the conclusion for Alternative D2 is additionally inconsistent	Section 3.10.1 of the FEIS discusses that, even under the No Action Alternative, BOEM expects all foreseeable factors to result in major adverse impacts on commercial fisheries and moderate adverse impacts on for-hire recreational fisheries. This is consistent with the definitions of impact levels in Table 3-1 of the FEIS. The impacts on the fishing industry under Alternatives C, D1, D2, E, or F would not be substantially less than under the No Action Alternative.
13176-072	fisheries can not only continue to operate within wind farms, commercial fisheries can also avoid wind farms, as desired; therefore, the vast majority of fisheries activity would be unaffected by wind farms.	Section 3.11 of the SEIS discusses the potential for fishing vessels to transit wind development areas, to fish within wind development areas, and to relocate to other fishing grounds outside of wind development areas, although increased operating costs and decreased revenues may result; therefore, no change to the FEIS is warranted.
13176-073	BOEM appears to imply that wind energy would have a negative impact on climate change and fisheries-caused fish mortality when the opposite is the	Sections 3.10 and A.8.1 of the FEIS clarify the expected contribution of offshore wind activities to climate change. Section 3.10 of the FEIS was

Index Number	Comment Text	Response
	case. To remove this implication, BOEM should clarify in the final EIS that these impacts are from sources other than offshore wind energy and are being accrued as part of the baseline for its impact analysis.	updated to clarify that climate change and fisheries-caused mortality are ongoing activities.
13176-074	The final EIS should also account for real-world examples in assessing its impact rating regarding commercial fishing. 199 Michael Roach, et al., The effects of temporary exclusion of activity due to wind farm construction on a lobster (Homarus gammarus) fishery suggests a potential management approach, 75 ICES J. MARINE SCI. 1416 (Feb. 7, 2018), https://academic.oup.com/icesjms/article/75/4/1416/4841920. 200 V. Stelzenmüller, et al., Co-location of passive gear fisheries in offshore wind farms in the German EEZ of the North Sea: A first socio-economic scoping. Journal of Environmental Management, 183 J. ENVTL. MGMT. 1 (2016). 201 D.H. Wilber, et al., Flatfish habitat use near North America's first offshore wind farm, 139 J. SEA RES. 24 (2018).	Section 3.10 of the FEIS was updated to reference the real-world example from the Roach et al. 2018 study.
13176-075	Evidence from wind farm studies suggests that fishing is compatible with wind farms, and strategies have been developed in collaboration with the fishing community to ensure compatibility with fishing and compensation mitigation in the event of gear damage in U.S. Atlantic wind farms. The increment of impact of the Proposed Action and foreseeable offshore wind farms is slight compared with climate change and fisheries mortality	Sections 3.11.1.1 and 3.11.2 of the SEIS state that the consequences of all foreseeable factors on commercial fisheries and for-hire recreational fishing are primarily driven by the ongoing factors of regulated fishing effort and climate change. Section 3.10.1 of the FEIS discusses the potential for fishing operations to occur within wind turbine arrays, and Section 3.10.2 has been updated to discuss Vineyard Wind's plan to compensate fishermen for gear loss or damage.
13176-076	We agree that BOEM's definition of "moderate," which includes the fact that mitigation will substantially reduce impacts and that fisheries will have to somewhat adjust to the presence of structures, is supported for the potential direct and indirect impacts of the Alternatives in the DEIS. But the cumulative impact of adding this effect on top of past, present, and reasonably foreseeable effects is not an increment that changes the level of cumulative impact to major; it is a small increment of a pre-existing impact level. Although the project would affect fisheries in the short-term, BOEM's assertion that this impact may become neutral over time for Alternative D2 (because of beneficial impacts and adjustment by fisheries) suggests the increment of impact may be insignificant relative to the baseline.	Section 3.11.1.2 of the SEIS discusses that, even under the No Action Alternative, BOEM expects all foreseeable factors to result in major adverse impacts on commercial fisheries and moderate adverse impacts on for-hire recreational fisheries. This is consistent with the definitions of impact levels in Table 3-1 of the FEIS; therefore, no change to the FEIS is warranted. The impacts on the fishing industry under Alternatives A, C, D1, D2, E, or F would not be substantially less than under the No Action Alternative.
13176-077	The SDEIS does not consider many examples from operational projects where commercial fishing has continued during operations within arrays. Specifically, the SDEIS fails to include a discussion about operational projects in Europe and elsewhere where commercial fishing has continued within wind farms. As noted above, fisheries also operate outside of wind farms, and the bulk of commercial fishing activity off the coast of New England is not in the wind lease areas	Section 3.10 of the FEIS was updated to include a reference that discusses operational projects in Europe.

Index Number	Comment Text	Response
13176-078	The assertion in Section 3.11.2.4 of the SDEIS that Alternative D2 has <i>incremental</i> impacts that are "moderate" on commercial fisheries and for-hire recreational fishing is inconsistent with both the slight beneficial impact and the magnitude of other negative impacts unrelated to offshore wind.	In accordance with the revised NEPA regulations, Section 3.11.2.4 of the SEIS discusses the impacts of Alternative D2 alone as well as in the context of reasonably foreseeable environmental trends and planned actions; therefore, no change to the FEIS is warranted.
13176-079	The SDEIS assigned levels of incremental impact using definitions provided in the DEIS Table 3-1-1. In evaluating cumulative impacts, it is not necessary to assign the increment of effect to an impact rating level. Incremental impact levels should be defined specifically. For example, a moderate "increment" of impact would need to be defined relative to something, which is not the way the definitions of impact are framed in Table 3-1-1 of the DEIS.	In accordance with the revised NEPA regulations, the SEIS discusses the impacts of each action alternative alone as well as in the context of reasonably foreseeable environmental trends and planned actions; therefore, no change to the FEIS is warranted.
13176-080	In the case of incremental impact from structures, applying such an approach would result in a very small increment of impact relative to impacts unrelated to offshore wind, and this should be reflected in BOEM's assessment. The Proposed Action and foreseeable offshore wind farms will slightly offset fisheries-related mortality via reef effects. This should be taken into better account in the impact increment.	In accordance with the revised NEPA regulations, the SEIS and FEIS discuss the impacts of each action alternative alone as well as in the context of reasonably foreseeable environmental trends and planned actions. Sections 3.10.1 and 3.10.2 of the FEIS discuss how much of each IPF can be attributed to the Proposed Action and other offshore wind developments versus to other activities. Section 3.4 of the SEIS discusses the "reef effect" and the potential benefits to finfish and invertebrates; therefore, no change to the FEIS is warranted.
13176-081	it is safe to assume that there will be only a de minimis risk to a small percentage of recreational fishing activities.	Section 3.10 and 3.11 of the SEIS discuss likely adverse and beneficial impacts on recreational fishing and for-hire recreational fishing. The risk of allisions from the presence of structures would have minor impacts on recreational fishing (Table 3.10-1) and moderate impacts on for-hire recreational fishing (Table 3.11-1). The risk of impacts from this sub-IPF is affected by the amount and layout of structures, increases in recreational fishing vessels due to changes in areas of fish species aggregation, as well as changes in operational planning for vessels resulting in increased space use conflicts. The Proposed Action would add up to 102 foundations under various layout options, resulting in long-term, moderate impacts on all vessels transiting through or around the WDA. Additionally, Figure 3.10-11 of the FEIS shows the recreational fishing effort for HMS over the Rhode Island and Massachusetts lease areas (2002-2018). Therefore, no change to the FEIS is warranted.
13176-082	Relative to navigation, this rating [Major] for Alternative D2 is particularly unsupported by the evidence and should be revised to "moderate" as this alternative would minimize conflicts with existing ocean uses, such as commercial fishing, by facilitating the established practice of mobile and fixed gear fishing practices and vessels fishing in an east-west orientation. This would result in an outcome that meets the definition of "moderate" for socioeconomic resources in that impacts are unavoidable but with proper	Section 3.11.4 of the FEIS discusses Alternative D2. Alternative D2 would result in 1 x 1 nautical mile spacing between WTGs, with WTGs arranged in east-to-west rows and north to south columns, matching the orientation that BOEM assumes for all other future offshore wind projects. Impact ratings are based on consultations with cooperating agencies (specifically the USCG) and the definitions in Section 3.0. The overall reasonably foreseeable environmental trends and planned action impacts of Alternative D2 when

Index	Comment Text	Response
Number		
	mitigationThis reduction is "substantial" and not just "somewhat" (the difference between the definitions of moderate and major impacts) because the turbine configuration and spacing of Alternative D1 was found by the USCG to provide for "robust navigational safety and search and rescue capability."	combined with past, present, and reasonably foreseeable activities on navigation and vessel traffic within the geographic analysis area would be lower than under the Proposed Action—moderate— due to improved SAR access and reduced loss of life.
13176-083	The SDEIS states that Alternatives D1 and D2, combined with the artificial reef effects of the wind turbines would alleviate impacts to the commercial industry, which is not asserted by the other alternativesfuture mitigation of these impacts will likely include some form of uniform spacing and layout across adjacent projects. This will reduce impacts for future offshore wind projects and should be more fully taken into account in the final EIS for future projects. As a result of spacing and the beneficial impacts to climate change and fish via reef effects, Alternatives D1 and D2 would have an even smaller increment of impact than other Alternatives relative to other cumulative impact factors.	As stated in Section 3.10.4 of the FEIS, the wider spacing of Alternatives D1 and D2 could also cause an increase in displacement of fishing vessels as a result of now larger WDA, leading to increased conflict over other fishing grounds. However, these adverse impacts are at least partially offset by for some fisheries by the artificial reef effect associated with the infrastructure surface area (cable protection, foundations/scour protection) due to placement of the WTGs and ESPs. The wider spacing would also improve maneuverability in fishing locations and the ability of vessels to deploy mobile and fixed fishing gear given the east-west orientation (only Alternative D2) and increased spacing between the WTGs except for some commercial fisheries in the northern portion of the WDA. As stated in Section 3.10.1, the fish aggregation and reef effects of offshore wind structures would provide new opportunities for recreational fishing, although few recreational vessels presently travel as far from shore as the proposed offshore wind structures. The additional recreational vessel activity focused on aggregation and reef effects would incrementally increase vessel congestion and the risk of allision, collision, and spills near WTGs. Section 3.11.3 and 3.11.4 of the FEIS includes a discussion of potential effects of Alternative D1 and Alternative D2 on navigation and vessel traffic. Discussion of future mitigation of other offshore wind projects is outside the scope to evaluate environmental impacts of the Proposed Action
13176-084	There is no requirement that mitigation actually be adopted before it can be considered in NEPA analysis. Therefore, even though the compensation measures are not currently in place for other future offshore wind projects, BOEM should account for them when measuring impacts in the final EIS. Under NEPA, an EIS must contain a "reasonably complete discussion of possible mitigation measuresIt is reasonably foreseeable that BOEM can expect to see other financial compensation agreements, mitigation plans, or other dedicated expenditures to alleviate the concerns of the commercial fishing and for-hire fishing industries in all future projects. Indeed, all five developers with projects included in the scope of this SDEIS have already made commitments of some type to providing such mitigationAs such, BOEM should be able consider some approximation of financial compensation for fishing interests that act to mitigate effects to commercial fisheries for future projects.	scope to evaluate environmental impacts of the Proposed Action. As noted in the SEIS, the summary of the Proposed Action and the alternative analyses in this SEIS did not assume that the proposed mitigation measures discussed in the DEIS would be included to avoid or reduce potential impacts, but did include those measures voluntarily committed to by Vineyard Wind as part of the Proposed Action. The SEIS analysis was performed to addressed the potential impacts of Vineyard Wind 1 Project along with their voluntarily measures and was not a programmatic EIS. Table A-5 in Appendix A of the SEIS included best management practices for future offshore wind activities that future developers may implement, or BOEM could require. The best management practices were adopted from the Record of Decision on the 2007 Final Programmatic EIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is

Index	Comment Text	Response
Number		
		a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13176-085	The SDEIS concludes that recreational fishing would suffer long-term, continuous, minor to moderate impacts relative to gear loss due to offshore wind structures. While BOEM generally notes that bottom tending mobile gear, such as small mesh bottom-trawl gear, is more likely to be displaced than fixed gear, BOEM fails to adequately describe the type of gear anticipated to be lost that would exceed the existing gear losses that are already likely to occur in the area, and the reasoning for this assertionFishing occurs regularly throughout the U.S. EEZ where cables for a variety of purposes occur. PriMetrica provides the following map of subsea cables as part of its TeleGeography project, which indicates that subsea cables are common and that it would be considered normal practice for fisheries to safely and effectively operate in their presence. Further, as noted above, financial compensation agreements are often developed to address gear loss, should it occur on wind farm structures.	Table 3.10-1 of the FEIS discusses the type of gear most likely to be lost or damaged. Section 3.10 and Table 3.10-1 of the FEIS have been updated to discuss the existing level of risk for gear loss due to the presence of structures and an example of the public gear loss compensation program in the Gulf of Mexico (Fisheries Contingency Fund). Voluntary financial compensation packages are also discussed in Section 3.10, Table 3.10-13, and Appendix D.
13176-086	Fishing routinely occurs around oil and gas structures, such as those in the U.S. Gulf of Mexico, and BOEM's 2017-2022 Programmatic EIS for the Outer Continental Shelf Oil and Gas Leasing Program states that 13 lease sales are proposed over the period and concludes that cumulative impacts to commercial and recreational fisheries, including existing infrastructure, fisheries, and climate change, would be minor to moderate, with the proposed action having a negligible to minor incremental contribution to total cumulative impacts. This suggests that navigation around significant offshore infrastructure in other areas of the U.S. EEZ has not resulted in gear entanglements and losses that rise to a level that would drive "major" cumulative impacts to fisheries. The same seems to be true for offshore wind development in the Atlantic.	Section 3.10 of the FEIS discusses the impacts to navigational risks associated with offshore wind development, which includes the presence of structures from WTGs and interarray cables. Section 3.10 of the FEIS was updated to discuss the existing level of risk for gear loss due to the presence of structures and an example of the public gear loss compensation program in the Gulf of Mexico (Fisheries Contingency Fund), including the number of claims averaged from 2007 to 2017.
13176-087	The "major" impact rating for cumulative effects to fisheries is also driven by changes to fish distribution/availability due to reduced stock levels due to fishing mortality. To have fisheries mortality constitute a major impact on fisheries and conclude fisheries management (state and federal) should result in sustainable fisheries seems inconsistent, and would suggest that both fisheries and fish are not "majorly" impacted by fisheries mortality (i.e.,	The cumulative analysis considers all impact producing factors that impact commercial fisheries including regulated fishing effort (fisheries mortality).

Index	Comment Text	Response
Number	fisheries mortality should not be one of the drivers of a "major" impact finding for cumulative impacts on fisheries).	
13176-088	Further, as noted above, the increment of impact of the Proposed Action alternatives to fisheries relative to fishing mortality is extremely small, with any minor mortality or displacement of fish offset by reef effects and small protected areas surrounding turbines that promote fish aggregation and breeding. Thus, there is no expectation that fish stocks would be substantively negatively affected by offshore wind (thereby affecting fisheries) and many may experience beneficial effects, which could benefit fisheries.	BOEM believes that the impact levels assigned may be conservative but are based upon the best available information. The SEIS considers both beneficial and adverse impacts to finfish in Section 3.4; therefore, no change to the FEIS is warranted.
13176-089	With respect to reduced fishing, fisheries management impacts are described in the SDEIS as including measures such as quotas and closed areas that constrain fisheries ability to adapt to change; but this is not the case. Fisheries management is a tool used to optimize fisheries operating around offshore structures in other parts of the U.S., such as fisheries management for oil and gas structures in the Gulf of Mexico. There is no basis for not assuming the same in the context of offshore windThus, fisheries do adapt, and under MSA, there is an obligation for the implementing agency to revise fishery management plans to optimize yield in accordance with National Standards, so cumulative impacts to fisheries resulting from Alternatives evaluated in the SDEIS will be further addressed in appropriate and statutorily required adjustments to fisheries management. This management does not inherently have a negative impact on fisheries that accumulates with other actions, and in fact, is developed for the purpose of optimizing fisheries while maintaining sustainability that is necessary for realizing fisheries' maximum socioeconomic potential.	Predicting future fishing behavior and fishing regulations a difficult task. BOEM worked closely with NMFS- a cooperating agency-to develop the effects analysis and although conservative, it is based upon the best available information. Therefore, no change to the FEIS is warranted.
13176-090	BOEM's cumulative impact analysis should further account for the ability of the U.S. offshore wind energy to mitigate climate change. As a preliminary matter, there are certainly reasonably foreseeable impacts of climate change to marine species—unrelated to offshore wind energy—that will contribute toimpacts to commercial fishing and for-hire fishing.	Sections 3.11.1 and A.8.1 of the SEIS considered the influence of offshore wind energy development on climate change and state that offshore wind projects will likely result in a net decrease in GHGs. Section A.8.1 of the FEIS has been updated to include additional information. BOEM has updated Section A.8.1 of the FEIS to include an analysis using EPA's AVERT and COBRA tools to assess air quality and health benefits. AVERT uses information about the historical patterns of power generation throughout the year to evaluate the potential for emissions avoided on an hourly basis throughout the year in a specific region, for a given category and size of renewable energy or energy efficiency project. The avoided emissions output can then be analyzed with COBRA. The annual potential avoided emissions calculated by AVERT for an 800 MW offshore wind facility in the New England AVERT region are included in Table A.8.1-3 of the FEIS. An

Index	Comment Text	Response
Number		
		assessment of potential impacts from climate change on commercial and for-
		hire fishing was included in the SEIS and in Section 3.10 of the FEIS.
13176-091	Building out offshore wind, as contemplated in the reasonably foreseeable	Thank you for your comment.
	scenario in the SDEIS, would uncontrovertibly mitigate impacts from climate	
	change by displacing a portion of fossil-fuel power generation and, in turn,	
	help mitigate these impacts. As BOEM notes in the SDEIS, "[o]ffshore wind	
	projects will by themselves probably have little impact on climate change[,]	
	they may be significant and beneficial as a component of many actions	
	addressing climate change.	
13176-092	However, BOEM confusingly conflates the impacts to fishing caused by	Sections 3.10 and A.8.1 of the FEIS clarify the expected contribution of
	climate change used for assessing the baseline and the impacts caused by	offshore wind activities to climate change.
	offshore wind energy. While all the cumulative impacts need to be	
	aggregated to determine an overall level of impact, BOEM should not give	
	the false impression that the impacts from climate change and, in turn,	
	fishing would be the same regardless of whether or not future offshore wind	
	is deployed. Further, as noted above, the increment of impact is important in	
	cumulative effects analysis, and the increment associated with offshore wind	
	farms relative to climate change would be a meaningful beneficial impact. In	
	sum, in the final EIS, BOEM should rectify this and clarify that the beneficial	
	impact of wind facilities is a key to addressing climate change and not	
	suggest that offshore wind energy contributes to climate impacts to	
	commercial fisheries and for-hire recreational fishing.	
13176-093	While AWEA does not take a position on the area scoped, it appears to	The SEIS and FEIS do not assume that fish distributions are similar over
	assume that all commercial fishing operations and all fish/distribution and	space or time. SEIS Figure 3.11-1 through 3.11-6 and Table 3.11-3 and 3.11-
	availability is the same across this broad area. This is not the case. Fish	4 show the variability of commercial fishing operations and landings.
	populations ranging within this geographic area are diverse and can differ	Multiple figures from Section 3.10 of the FEIS show the variety of fisheries
	substantially between North Atlantic and Mid-Atlantic regions. Few	distribution across New England and the Mid-Atlantic; therefore, no change
	individual fish species or fisheries use the full extent of the geographic scope	to the FEIS is warranted.
	considered in the SDEIS.	
13176-094	While AWEA is not recommending changes to the analysis of the SDEIS	Each applicant is required to submit a COP with their proposed action for
	based on geographic scope in the final EIS, we recommend that, in future	BOEM's review at which time, triggers a NEPA EIS review. Each EIS will
	EISs, BOEM consider a similar approach to considering the geographic	require an analysis of impacts and the selection of the preferred alternative.
	scope of fish distribution and availability and considered populations in	
	smaller groups of geographic areas. This approach allows BOEM to identify	
	the potential lost revenues more accurately in each area and the actual	
10176.00-	Impacts to commercial fisheries.	
13176-095	BOEM's rating of "major" impacts for scientific research and surveys is	The level of impact to scientific research and surveys (major) was jointly
	unsupported. First, it erroneously assumes a worst-case scenario, which is	agreed to by NMFS and BOEM based on currently available information and
	specifically stated to be unnecessary in CEQ regulations The SDEIS also	remains unchanged in the Section 3.12 of the FEIS. BOEM is funding a

Index	Comment Text	Response
Number	finds that the uncertainty in management processes would in turn have short- term or long-term impacts on commercial and for-hire recreational fisheries operations based on the evidence in the record, BOEM should consider lowering the cumulative impact rating for scientific research and surveys to moderate in the final EIS.	process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long- standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13176-096	While activities associated with offshore wind development, such as site assessment activities, construction of wind turbines, associated cable systems, and vessel activity, could present minimal additional navigational obstructions for sea and air-based scientific surveys, the evidence in the SDEIS does not support a "major" impact finding because it is purely speculative and assumes mitigation has little effect on research access and research has no flexibility in its implementation.	Section 3.12 of the FEIS has been updated to acknowledge potential future developments in scientific research in surveys, including use of unmanned vessel and aerial vehicles. The level of impact to scientific research and surveys (major) was jointly agreed to by NMFS and BOEM based on currently available information and remains unchanged in the Section 3.12 of the FEIS. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13176-097	BOEM's cumulative impact rating for research is based on its assertion that the reasonably foreseeable build-out of offshore wind would result in navigational hazards that would affect the coverage of some survey areas used to estimate fishery stock abundances, oceanographic parameters, and protected species. In the case of Alternative D2, the adjusted spacing of the turbines was not determined to be sufficient mitigation to result in an impact rating of moderate rather than major despite the reliance on obstructions as the main cause of research disruption. We recommend reconsideration of this determination. Further, mitigation for noise and monitoring efforts required by statutes like the Marine Mammal Protection Act and Endangered Species Act will mitigate for effects to research for the Vineyard Wind 1 projectNational Historical Preservation Act consultation requirements also include potential investigation of submerged archaeological resources. Further, requirements associated with minimizing impacts to commercial and for-hire recreational fishing will also reduce impacts to agency and academic research activitiesA "substantial" reduction in impact via mitigation for wind farms should thus lead to a moderate impact finding.	Section 3.12 of the SEIS addressed potential project-related and cumulative impacts to scientific research and surveys in detail. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. NOAA and BOEM reviewed Alternative D2 and concluded that the adjusted spacing would still result an impact level of major due to survey vessel needs to avoid obstructions. Therefore, no changes to the FEIS are warranted.
13176-098	We recognize that reducing aerial or ship-based survey access may interrupt some survey tracklines, trawl areas, and pre-existing environmental data collection stations, but both the mitigation described above and the ability of	Section 3.12 of the FEIS has been updated to acknowledge potential future developments in scientific research in surveys, including use of unmanned vessel and aerial vehicles. The level of impact to scientific research and

Index	Comment Text	Response
Number	researchers to develop corrections for alternate data collection sites, adapt data collection protocols, use remote technologies, and extrapolate from other locations or use proxies for research, reduces this impact from major to moderate, as the mitigation substantially reduces impact and the affected community has to somewhat adjust to account for disruptions.	surveys (major) was jointly agreed to by NMFS and BOEM based on currently available information and remains unchanged in the Section 3.12 of the FEIS. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental- ctudiag/20 x07
13176-099	It is also worth noting that the operational maintenance on wind farms may provide a collaborative opportunity to collect more and different data than in the past by piggybacking on maintenance work to reduce survey costs.	Section 3.12 of the FEIS has been updated to incorporate additional information; however, a change to the level of impact was not warranted.
13176-100	The final EIS should consider developments already underway in survey methods that will lessen the impact of wind development on oceanographic surveys.	Section 3.12 of the FEIS has been updated to incorporate additional information; however, a change to the level of impact was not warranted.
13176-101	The SDEIS also fails to recognize adequately in its cumulative impacts rating the effect of the "considerable survey efforts underway for years using digital aerial surveys,"238 which include techniques and photos used "to define the national shoreline, create maps and charts, monitor environmental change, and provide damage assessment in response to manmade or natural disasters."	Section 3.12 of the FEIS has been updated to incorporate additional information; however, a change to the level of impact was not warranted.
13176-102	even though entities conducting surveys and scientific research could potentially need to make some investments to adapt methodologies in order to account for unsampleable areas, both the inherent flexibility and change associated with long-term marine research and the mitigation (including long-term data collection) required for wind farms under statutes like the ESA and MSA, result in moderate rather than major impacts to research. There would be no long-term and irreversible impacts on fisheries or protected species or their management; mitigation would reduce impacts substantially; and the affected community would have to adjust somewhat to account for disruptions. The final EIS should therefore change these impacts to moderate [for conducting surveys and scientific research].	Section 3.12 of the FEIS has been updated to acknowledge potential future developments in scientific research in surveys, including use of unmanned vessel and aerial vehicles. The level of impact to scientific research and surveys (major) was jointly agreed to by NMFS and BOEM based on currently available information and remains unchanged in the Section 3.12 of the FEIS. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07
13176-103	AWEA agrees that impacts to marine mammals would not be major, as defined by BOEM, but suggests the evidence supports a finding of minor cumulative impacts for marine mammals and sea turtles.	The FEIS addresses both adverse and beneficial impacts to marine mammals form the Vineyard Wind 1 Project from individual Impact Producing Factors and overall impacts. The potentially beneficial impacts are concluded for increased foraging opportunities created by the reef effect the WTG

Index	Comment Text	Response
Number		
		foundations will have, particularly for fish- and shell-fish eating marine
		mammals. The vertical WTG structures may also result in increased primary
		production and zooplankton abundance, increasing prey availability for
		mysticete whales, relative to surrounding locations. Section 3.5 of the SEIS
		concluded long-term, moderate beneficial impacts to some marine mammal
		groups that may benefit from increased foraging opportunities. BOEM
		believes that structures will not adversely impact the prey availability of
		NARWs. While the proposed I nautical mile spacing between WIGs would
		be sufficient to allow unimpeded movement within and between offshore
		wind facilities, there is a lack of information and a large amount of
		uncertainty relative to large whale responses to the presence of offshore
		w 1G structures. I herefore, long-term, intermittent impacts on foraging,
		the future offshore wind development. Description underwater poise on
		extensive mitigation and monitoring plan is proposed (Appendix D) that will
		avoid and minimize potential impacts from pile driving on NARWs Section
		3 3 7 3 of the DEIS and Section 3 5 1 of the SEIS discussed the expected
		distance that noise associated with operational WTGS would reach ambient
		levels. Based on measurements at the Block Island Wind Farm, low
		frequency noise generated by operating turbines reaches ambient levels at
		164 feet (50 meters: Miller and Potty 2017). Overall, considering all the
		individual impact determinations combined, both moderate beneficial and
		moderate adverse impacts may occur to some marine mammals. Some
		impacts of the Vineyard Wind 1 Project by itself may have negligible to
		minor, and moderate impacts on marine mammals depending on the impact-
		producing factor assessed. BOEM has considered that the cumulative impacts
		that may be expected by future offshore wind projects in addition to Vineyard
		Wind would have similar, but not exactly the same impacts depending on
		differences in project details, location, and other factors. However, overall
		similar impacts may occur, and as such, BOEM concludes a moderate
		cumulative impact may occur. As defined in Section 3.1 of the DEIS and
		Table 3-1 in Appendix B of the SEIS, the described impact rating
		determinations are appropriate. Therefore, no change to the FEIS is
101-6101		warranted.
13176-104	BOEM should consider the significant amount of directed mitigation and	As defined in Section 3.1 of the DEIS and Table 3-1 in Appendix B of the
	tindings requirements associated with the Marine Mammal Protection Act	SEIS, the described impact rating determinations are appropriate. Therefore,
	and Endangered Species Act in making a minor impact determination for all	no change to the FEIS is warranted.

Index	Comment Text	Response
Number		
131/6-105	The potential adverse impacts of structures are very speculative compared to the scientific support for reef effects and predators taking advantage of feeding opportunities that structure reef effects provide. [See references below] these results highlight thatfactors aside from wind farm presence (like actual abundance and trends) may be more important in driving use patterns of marine mammals. 243 Deborah .J.F. Russell, et al., Marine mammals trace anthropogenic	BOEM has considered both the beneficial and adverse impacts that manmade structures may have on marine animals and sea turtles. BOEM does not disagree that many there are many factors that drive habitat use patterns in marine mammals and sea turtles. However, the placement of large numbers of WTGs may have some localized impacts, while may not impact large scale habitat use patterns, may have some detectable localized effects within the lease area that are both beneficial adverse. Although some information is
	structures at sea, 24 CURRENT BIOLOGY R638 (2014). 244 Michael C. Barnette, NOAA Technical Memorandum NMFS-SER-5,	available for species such as sea turtles, harbor porpoises, and seals, a great deal is unknown how many protected species may be locally impacted within
	 Potential impacts of artificial reef development on sea turtle conservation in Florida (2017). 245 J. Teilmann & J. Carstensen, Negative Long-Term Effects on Harbour Porpoises from a Large-Scale Offshore Windfarm in the Baltic—Evidence of Slow Recovery, 7 ENVTL. RES. LETTERS 045101 (2012). 246 Meike Scheidat, et al., Harbour porpoises (Phocoena phocoena) and wind farms: a case study in the Dutch North Sea, 6 ENVTL. RES. LETTERS. 025102 (2011). 	the lease area. The references provided have been considered in the analysis in addition to the habitat conditions, species composition and behaviors, and project information in the lease area. Section 3.3.7.3 in the DEIS and Sections 3.5.1 and 3.5.2 of the SEIS provided a discussion of both the potential beneficial and adverse impacts that could arise as a result of the presence of structures and the associated reef effect. Therefore, no change to the FEIS is warranted.
13176-106	Scale, even across multiple foreseeable wind farms, is small compared to open ocean habitats, and when turbines and other structures are far apart relative to the size of animals, use of the area and animal navigation through wind farms should not be limited or be subject to any meaningful habitat fragmentation.	Section 3.3.7.3 of the DEIS and Section 3.5.1 and 3.5.2 of the SEIS discussed the assumed potential for marine mammals to safely navigate between WTGs given the spacing relative to animal size. Therefore, no change to the FEIS is warranted.
13176-107	continued use and sometimes directed foraging at offshore wind farms and oil platforms for a variety of marine mammals and sea turtles suggests impacts from wind turbine structures are much more likely to benefit than adversely affect these animals.	Section 3.3.7.3 in the DEIS and Sections 3.5.1 and 3.5.2 of the SEIS provided a discussion of the potential beneficial impacts that could arise as a result of the presence of structures and the associated reef effect. Therefore, no change to the FEIS is warranted.
13176-108	mitigation proposed by Vineyard Wind 1 [for pile-driving activities] should result in no more than minor impacts to these animals.	As defined in Section 3.1 of the DEIS and Table 3-1 in Appendix B of the SEIS, the described impact rating determinations are appropriate. Therefore, no change to the FEIS is warranted.
13176-109	BOEM correctly assumes that future COP approvals will include project- specific mitigation and monitoring measures developed through NEPA, ESA consultations, and ITAs that will be implemented by each future project that will be designed to avoid exposure of individuals to injurious levels of noise and minimize and monitor effects of exposure that would result in behavioral responses.255 This will certainly reduce the cumulative impacts on any individuals and populations by reducing project-specific impacts, but despite acknowledging these mitigation measures, BOEM concluded that cumulative	As defined in Section 3.1 of the DEIS and Table 3-1 in Appendix B of the SEIS, the described impact rating determinations are appropriate. Therefore, no change to the FEIS is warranted. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.

Index	Comment Text	Response
Number		
13176-110	the available literature suggests that individual marine mammals will avoid	Thank you for your comment.
	disturbing levels of noise by swimming away from the noise source, with the	
	duration of avoidance varying greatly, indicating that marine mammal	
	responses to pile driving in the offshore environment will likely be context-	
	dependent. Sea turtles are likely to be protected from impulsive sound like	
	pile driving because of their rigid external anatomy, and mitigation measures,	
	like clearance, are applied to sea turtles as well as marine mammals.	
13176-111	The SDEIS correctly concludes that pile-driving noise would have minor	Thank you for your comment.
	impacts to NARWs and should consider extending this finding to all marine	
	mammals and sea turtles	
13176-112	NARWs use a large area of habitat for feeding that includes the WEAs as a	As defined in Section 3.1 of the DEIS and Table 3-1 in Appendix B of the
	small area of that habitat. There have been more directed studies at NARWs	SEIS, the described impact rating determinations are appropriate. Therefore,
	in the MA/RI WEA in recent years, which has increased sightings of this	no change to the FEIS is warranted. Project-specific ESA consultations will
	species in that area, so observational effort should be considered when	be required for all future offshore wind development. Monitoring and
	evaluating the anticipated use patterns across feeding groundsit is	mitigation requirements for other future offshore wind development may be
	reasonably foreseeable that substantive mitigation to protect NARWs will be	driven by lessons learned from the Vineyard Wind 1 Project, but will be part
	part of all foreseeable offshore wind projects and so should be considered	of a separate decision making process.
	sufficient to contribute to a cumulative impact rating of minor, or at most	
	remain at moderate.	
13176-113	Birds navigate through storms and other weather and ocean conditions that	Thank you for your comment.
	cause variation in their migratory paths, so some flexibility would be	
	expected in terms of energy requirements for migration. Further wind	
	turbines spaced 1 x 1 NM apart would allow for considerable space for	
	maneuvering around or otherwise avoiding turbinesAs such, although	
	individuals [birds] might be affected if they collide with structures,	
	population-level impacts will not occur.	
13176-114	Further, mitigation measures are not included in the Band collision risk	At this time, the full suite of mitigation and monitoring measures that will be
	modeling method cited by BOEM, so the mitigation described in Table D-1	required as part of the proposed Project are not finalized. Additional
	of the SDEIS is not considered in the risk estimate—which would further	mitigation and monitoring measures may arise from consultations and
	reduce risk[for bird strikes].	coordination with Federal and State resource agencies. These additional
		mitigation measures could be considered by decision makers and
		incorporated into the Record of Decision. As such, the analyses provided
		include the max-case scenario, such that actual impacts of the proposed
		Project are equal to, or less than those described.
13176-115	BOEM rightly applies a published model for general collision risk, even	Thank you for your comment.
	though this model does not account for avoidance, attraction, and other	
	factors that could affect collision risk—either increasing or decreasing that	
	riskExposure risk is so low for seabird populations that, regardless of	
	collision risk for those exposed, population-level impacts would not be	

Index	Comment Text	Response
Number		
	expected, limiting the cumulative impacts to no more than moderate, and	
	potentially minor. Mortality of a few individuals [birds] does not inherently	
	raise the level of impact higher than minor, as resource impacts are	
	considered in the context of biological effects. Mitigation measures will	
	further reduce risk of collision and risk of disturbance to birds during	
	construction, cable laying, and land-based activities, as described in Table D-	
	1 of the SDEIS.	
13176-116	The Biological Assessment cites the literature that the primary threat to rufa	Thank you for your comment.
	red knot is reduced availability of horseshoe crabs,Rufa red knots breed	
	in the Arctic so offshore wind will not disturb breeding areas of this species.	
13176-117	It is reasonable to assume that mitigation and monitoring will be both	Thank you for your comment.
	required of wind developers and supported by regional academic efforts,	
	resulting in no more than moderate, and potentially minor, cumulative	
	impacts on birds. BOEM correctly concludes that no population-level effects	
	are expected for any bird species for the proposed project or cumulative wind	
	farm activities considered in the SDEIS. Most impacts will be avoided	
	through proper mitigation and the resource is expected to recover completely	
	once impact producing factors are eliminated.	
13176-118	AWEA respectfully urges BOEM to timely approve this milestone	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect BOEM's
	offshore wind project and pave the way for responsibly developed future	anticipated date for a decision on the COP.
	projects.	
13176-119	As BOEM is nearing the finalization of the EIS, we also encourage it to	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect BOEM's
	timely process the pending permits of other offshore wind applications. Any	anticipated date for a decision on the COP.
	further delay in processing these pending applications puts at risk the ability	
	of the offshore wind industry to have the needed certainty to grow in this	
	nation and jeopardizes the substantial industry-wide investments and benefits	
	that will flow from them.	
13177-001	In summary Nexans respectfully requests BOEM to (i) adopt the SEIS as	Thank you for your comment.
	currently written and to increase from minor to major (a) the positive	
	environmental impact of such a project as such a development when in	
	operation will generate energy without harmful emissions and (b) the positive	
	economic impact for the US economy as it will spur durable major	
	investments in this country, to (ii) reject Alternative F as harmful for the	
	growth of the US offshore wind industry, and to (iii) proceed with all	
	appropriate speed to issue the Environmental Impact Statement and the	
	associated Construction and Operations Plan for the project based on	
	alternative D2.	
13177-002	By approving the full Vineyard Wind project configuration conform to t	Thank you for your comment.
	Agreement Layout and the USCG MARIPA study's recommendations in	

Index	Comment Text	Response
Number		
	Federal Decision permitting timeline, the Department of Interior will sen	
	offshore wind industry, the firms that support it, and investors that the U is	
	supportive of this industry and intends to be a central player in the glo	
	Investment in offshore wind is expected to expand up to \$1 trillion by 2	
13177-003	Adopting or endorsing proposals that require a substantial reconfiguration of	Section 2.5 of the FEIS has been added which includes the agency-preferred
	the project (and therefore all projects in the area) as for example alternative F	alternative.
	requiring additional 2 NM or 4 NM wide transit lanes (which would be the	
	equivalent of not granting any approval) will have serious negative	
	consequences for this country and the industry.	
13177-004	For decades, the United States of America has lost industrial jobs that were	Thank you for your comment.
	sent abroad and never came back. If allowed to succeed, the offshore wind	
	industry will do its part to create well paid high-skills technical and industrial	
	jobs here. The ability to onshore the manufacture of durable goods is	
	something that our country should support. The failure to issue timely	
	permits with reasonable and predictable requirements would allow others in	
	China or APACs countries to develop preeminence in this sector which is	
	one in which the United State should play a leading role.	
13178-001	I support development of offshore wind energy on the outer continental shelf	Thank you for your comment.
	in federal waters near Massachusetts and Rhode Island. However, offshore	
	wind energy must coexist with commercial fishing, an industry that provides	
	about \$1 billion in local economic impact.	
13178-002	Alternative D2 is based on the offshore wind leaseholders agreement to	Section 2.5 of the FEIS has been added which includes the agency-preferred
	arrange surface piercing structures on a uniform 1nmi x 1nmi grid on NS-EW	alternative.
	axes. This agreement will serve to maintain a navigable space among the	
	hundreds of surface structures that will likely be installed in the lease areas.	
	BOEM should encourage adoption of D2. Such encouragement is entirely	
	within BOEM's purview since BOEM approves bottom locations.	
13178-003	BOEM should further advise leaseholders to arrange inter-array cables in	BOEM believes that measures proposed in the COP and enforced through
	such a way as to limit the number of NS crossings within the development.	terms and conditions of approval are sufficient to avoid interactions between
	Commercial fishermen work while sailing EW, so limiting NS crossings will	fisheries gear and cable infrastructure. This includes a target burial depth of 5
	reduce potential impact with fishing gear, particularly dredgers. Furthermore,	feet (1.5 meters), cable inspection surveys, and a Distributed Temperature
	BOEM should encourage leaseholders to arrange EW inter-array cables along	System on the export cable that will monitor if burial conditions have
	corridors just north (or south) of foundations. Such an arrangement has	deteriorated or changed significantly and remedial actions are warranted.
	several benefits: 1. reduce the impact on benthic communities by limiting	Additionally Vineyard Wind is required to submit an as-built cable
	areas disturbed by installation activities and scour protection (if required) 2.	installation report that will include location and burial depth. See the updated
	reduce potential for interference with fishing gear 3. improve efficiency of	FEIS Appendix D for details.
	subsea inspections	
13178-004	I think that establishing a uniform grid for foundation locations on bottom	Section 2.5 of the FEIS has been added which includes the agency-preferred
	and encouraging smart arrangement of inter-array cables can make offshore	alternative.

Index Number	Comment Text	Response
Tumber	wind energy developments more compatible with other users of the lease space.	
13180-001	The advancement of Vineyard Wind - the first large-scale offshore wind farm in the country - as well as other offshore wind projects in development, will be crucial to ensuring the U.S. can secure the benefits in job creation, industrial and port development and economic growth already delivered by offshore wind around the world. This tremendous potential is highlighted across several points below:	Thank you for your comment.
13180-002	The U.S., home to strong wind resources and with the right policy environment, can become a major anchor of the global offshore wind market, spurring the creation of a thriving domestic industry that will support generations to come with clean power and green jobs. Given sufficient planning and stakeholder engagement, this sector can also coexist harmoniously with other marine uses, such as commercial fishing and transit.	Section 3.6.2 of the FEIS has been updated to conclude that a moderate beneficial impact on employment and economic activity would result from offshore wind development in the RI and MA Lease Areas. It also notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind.
13180-003	Studies show that investing in renewables like offshore wind has a multiplier effect on economic growth: \$1 spent to advance the global energy transition returns \$3-8, according to the International Renewable Energy Agency, while clean energy infrastructure construction generates twice as many jobs per \$1 million spent as fossil fuel projects.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of a wind energy industry along the Atlantic coast. This information supports a finding that the Vineyard Wind 1 Project, in combination with other offshore wind development would have a moderate beneficial impact on employment and economic activity. The sources used for the FEIS did not support inclusion of the additional multiplier effect suggested by this comment, and that additional effect was not necessary to support the conclusions of Section 3.6.1.1 of the FEIS.
13182-001	I represent fishermen on the Pacific West Coast so my comments go to process rather than substance. BOEM has failed to bring the most impacted stakeholders in for their advice until the 11th hour, and by that I mean commercial fishermen who fish in the ocean. On the East coast there has been far too little attention paid to how electric wind farm fields could be constructed and how their physical layouts could be modified to actually be compatible with commercial fishing. In addition there has been very little meaningful research on radar interference which impacts the safety of the lives of commercial fishermen and their vessels.	Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing. Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses the voluntary compensation funds related to the proposed Project.

Index	Comment Text	Response
Number		
		Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments. Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1.
13182-002	the recent pandemic has demonstrated how important our food supply is and how necessary it is to be US based and available in a known and safe fashion to our citizens. There is no justification to close off large areas of the ocean to commercial fishing when if proper amount of research was done in advance methods could be found where fishing could be compatible with commercial fishing	The impacts to commercial and for-hire recreational fisheries are discussed in the Section 3.11 of the SEIS. As discussed in Section 3.11 of the SEIS, access to areas would be temporarily restricted during construction and maintenance (IPF anchoring, new cable emplacement and maintenance activities), but during operations fishing would not be restricted. In addition, through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing. Therefore, no change to the FEIS is warranted.
13182-003	The driving force of how offshore wind energy should not be lowering wind farm costs or using them as a silver bullet to alleviate concerns about global warming. Rather the emphasis should be on how to make their development responsible to what should be the US number one priority, and that is our food supply.	Thank you for your comment.
13183-001	Unfortunately, at no point during the BOEM process for creating and leasing the Rhode Island or Massachusetts Wind Energy Lease Areas was New York included in the federal consistency review process. Rhode Island made sure to include Massachusetts as part of the Rhode Island BOEM Task force efforts through the Ocean Samp and a signed Memorandum of Understanding on the last day before leasing was announced, giving Massachusetts federal consistency review over the RI-WEA. No such concern was given to New York, even though we are closer to some of the fishing areas in question than Massachusetts fishermen.	Section 1.1 of the DEIS and Appendix D (D.2.2.1) contained, as well as the FEIS, information on the background of the process and proposed Project and the coastal zone management act consultations required. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. At no point did the State of New York request a consistency review or change their geographic location description to include the Vineyard Wind 1 Project. The potential effects of commercial wind lease issuance and site assessment activities offshore Rhode Island and Massachusetts had notice and comment opportunities that resulted in the removal areas from consideration because of known fishing activity (e.g., Massachusetts [Nantucket Lightship], and Rhode Island/Massachusetts [Cox Ledge]). These areas were then evaluated and presented in an Environmental Assessment in 2013. A link to that document can be found here: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_E nergy_Program/State_Activities/BOEM%20RI_MA_Revised%20EA_22Ma y2013.pdf That process included and accounted for public input. In addition to project specific meetings as part of the NEPA process, BOEM also regularly briefs and solicits comments from the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils, as well as the Atlantic States Marine

Index	Comment Text	Response
Number		
		Fisheries Commission. These briefings are an important avenue for BOEM to make sure the fishing community is aware of the status of projects, when there is opportunity to comment on a project and for BOEM to receive important information from the fishing community regarding its leasing activities. BOEM has continued to engage with commercial fishing industry and interested stakeholders throughout the NEPA process for the proposed Project; BOEM engages with the public and stakeholders in each step of the process and takes public input into consideration when making any decision. BOEM has considered all comments throughout the Vineyard Wind 1 Project NEPA process. In addition, Appendix C of the FEIS provides information related to BOEM's consultation and coordination efforts.
13183-002	The BOEM process of creating wind energy lease areas without first	Section 1.1 of the DEIS contained, as well as the FEIS, information on the
	removing traditional and historic commercial fishing grounds, deconflicting them from the lease areas before a lease is made, is a slap in the face to the	background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the
	them from the lease areas before a lease is made, is a slap in the face to the hard-working commercial fishermen who continue to feed this nation a wild- harvested sustainable protein source.	Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing. BOEM also regularly briefs and solicits comments from the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils, as well as the Atlantic States Marine Fisheries Commission. These briefings are an important avenue for BOEM to make
		sure the fishing community is aware of the status of projects, when there is opportunity to comment on a project and for BOEM to receive important information from the fishing community regarding its leasing activities. BOEM has continued to engage with commercial fishing industry and interested stakeholders throughout the NEPA process for the proposed Project; BOEM engages with the public and stakeholders in each step of the process and takes public input into consideration when making any decision. BOEM has considered all comments throughout the Vineyard Wind 1 Project NEPA process. In addition, Appendix C of the FEIS provides information related to BOEM's consultation and coordination efforts.
13183-003	For the US commercial fishing industry, the BOEM "Smart from the Start" campaign has been nothing more than a "Ready, Shoot, Aim," process which has to date refused to deconflict commercial fishing grounds from lease	Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the

Index	Comment Text	Response
Number		
	areas, with BOEM creating winners and losersThe BOEM lease process for offshore wind risks destroying the majority of mom and pop shop commercial fishing businesses, devastating commercial fishing communities throughout the Eastern Seaboard, unless drastic changes are made to the process.	coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing.
13183-004	The BOEM Supplemental Environmental Impact Statement to the Vineyard Wind LLC offshore wind project is a step in the right direction to righting the wrongs that have occurred in the last ten years of BOEM's offshore wind development. There are many valid points re major impacts to commercial fishing, navigation, homeland security, and scientific surveys that have been noted and changes should be made because of them. But there are still many items that have not been thoroughly reviewed and vetted and must be before any Construction and Operation Plan is approved for any Foreign- government owned wind energy company that seeks to usurp US fishing grounds and US fisheries Exclusive Economic Zone. Much more review is needed because of the cumulative negative effects of offshore wind construction and operation, and the ocean and its denizens itself.	The FEIS has been updated to respond to public and agency comments received during the DEIS and SEIS public comment periods. In addition, the NEPA process was carried out in close coordination with BOEM's cooperating agencies. Furthermore, this EIS provides an evaluation of both beneficial and adverse effects of the Proposed Action and the alternatives to the Proposed Action. The SEIS discussed likely impacts from offshore wind development on commercial fisheries (Section 3.11), navigation (Section 3.13), and homeland security and scientific surveys (Section 3.14). BOEM is confident that the information included in the FEIS is adequate to support the evaluation of the merits and drawbacks of each alternative with respect to the potential impacts the project could have on commercial and recreational fishing within the WDA.
13183-005	On page 19 of the (SEIS) document, the first "Reasonably Foreseeable Assumptions" lists the "For those projects with announced WTG sizes, BOEM assumed an 8 or 12 MW WTG. BOEM understands that turbine capacity may exceed 12 MW in the future. However, for future procurements and projects under this cumulative analysis, BOEM evaluates potential impacts assuming that 12-MW WTGs will be used—since it is the largest turbine now commercially available (Appendix A)." However on page 9, Table ES-1 below, (also called Table 2.2-1 page 23) it discussed the changes to the VW Project Design Envelope, a 14 MW WTG is listed. Because there seems to be a disparity between future projects and the cumulative analysis being evaluated based on a 12 MW turbine, and the PDE which reflects a 14 MW WTG, please explain this disparity and explain why for future procurements and the cumulative analysis, why you chose a smaller turbine? Especially in light of 20 MW turbines being developed and possibly being utilized for the Empire Wind project and other future projects?	As noted in Section 1.7.1.1 of the SEIS, it is difficult to predict turbine capacity and spacing or other future engineering for planned but currently unscheduled offshore wind awards. Therefore, BOEM used reasonably foreseeable assumptions for the analysis and no change to the FEIS is warranted. In addition, BOEM's analysis in the DEIS, the SEIS, and the FEIS assumed a maximum-case scenario approach for each resource analyzed, so although 14 MW turbines were assessed, Vineyard Wind could implement a smaller one. As specified in the SEIS and Section 2.1.1 of the FEIS, implementation of fewer, larger turbines could be less impactful to many resources, such as benthic, marine mammals, and sea turtles due to decreased pile driving activities. However, utilizing larger turbines could have greater visual impacts, and the magnitude of positive economic effects would be less with fewer turbines when compared to utilizing a greater number of smaller turbines. Last, each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts.

Index	Comment Text	Response
Number 13183-006	SEIS Section 1.2.1.2.2 "Call Areas are then narrowed into Wind Energy Areas (WEAs), which are areas that appear to be most suitable for commercial wind energy development while presenting the fewest apparent environmental and user conflicts." To date there have been multiple user conflicts with commercial fishing and offshore wind leases. At no point, have commercial fishing areas been removed from consideration for any present BOEM offshore wind lease area.	Section 1.1 of the DEIS contained, as well as the FEIS, information on the background of the process and proposed Project. Appendix C (formerly Chapter 4) of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for
		south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing.
13183-007	SEIS Section 1.2.1.2.3 page 20 footnote 14 "The actual capacity of a particular lease may vary (higher or lower) due to turbine sizes, turbine field density, or navigation corridors. Average offshore wind turbine size in U.S. waters should average at least 12 MW, and the largest turbines could exceed 15 MW before 2025." Again, in relationship to the future procurements and the cumulative analysis discussion on 1.2.1.1, why was a 12 MW WTG chosen for the cumulative analysis when in fact based in part on the cumulative analysis, full buildout would take at least ten years and in your own document, you note turbines could exceed 15 MWs before 2025.	As noted in Section 1.7.1.1 of the SEIS, it is difficult to predict turbine capacity and spacing or other future engineering for planned but currently unscheduled offshore wind awards. Therefore, BOEM used reasonably foreseeable assumptions for the analysis and no change to the FEIS is warranted. In addition, BOEM's analysis in the DEIS, the SEIS, and the FEIS assumed a maximum-case scenario approach for each resource analyzed, so although 14 MW turbines were assessed, Vineyard Wind could implement a smaller one. As specified in the SEIS and Section 2.1.1 of the FEIS, implementation of fewer, larger turbines could be less impactful to many resources, such as benthic, marine mammals, and sea turtles due to decreased pile driving activities. However, utilizing larger turbines could have greater visual impacts, and the magnitude of positive economic effects would be less with fewer turbines when compared to utilizing a greater number of smaller turbines. Last, each applicant is required to submit a COP with their proposed action for BOEM's review at which time, triggers a NEPA EIS review. Each EIS will require an analysis of impacts.
13183-008	For New York's commercial fishermen, coming from the ports of Shinnecock/Hampton Bays and Montauk, regarding transit lanes, the only alternative that would allow for New York's commercial fishing fleet to travel safely from port east to what's left of their fishing grounds south of Nantucket would be Alternative F, the RODA alternative with four mile wide transit lanes. Without the East-West transit lanes and the North-South transit lanes in the RODA alternative, NY fishermen cannot travel directly from our home port east to squid grounds south of Nantucket or further south from our whiting grounds directly back home to port in New York without being forced to travel within a windfarm. To go around the eventual full estimated 1500 MW buildout of the RI-MA WEAs would equal a 50 nm go-around,	Section 3.11.2 of the FEIS has been revised to include updated data to support the discussion of impacts on vessel traffic. Section 3.10 has been updated to include additional information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind. Section 3.11.5 of the FEIS analyses Alternative F and addresses this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.

Index	Comment Text	Response
Number		
	which in addition to taking additional hours of travel, thereby possibly	
	missing shipping catch to market same day, we risk additional time at sea and	
	fuel, no matter the weather.	
13183-009	As you can see from the NROC map footnoted below, Montauk and Shinnecock are virtually absent from the map AIS Data 2015-19 fishing vessels tracks based on boats leaving from both ports. However for New York commercial fishermen, they heavily fish the area within and outside of the RI- MA WEAs. As stated before, since 2000, New York's fishermen have caught over 100 million pounds of squid; some years, 40% of that catch has come from the fishing grounds south of Nantucket, which is right in the middle of the RI-MA WEA. Yet none of those trips are logged via AIS tracking of the top one and two ports on Long Island. A majority of Montauk and Shinnecock's boats (our state's top two ports) do not have any AIS data. As such, we request that AIS cannot be utilized to determine port access routes and transit lanes to and from our fishing grounds from within the RI-MA WEAs. We do not have the AIS data to show we were there. Some of the New York fleet has VMS data via Boatracs or Skymate, but there is probably not enough data to show active fishing routes for New York fishermen without FOIA'ing data from NMFS.	Section 3.11 of the FEIS has been updated to incorporate newer vessel traffic data, including both AIS and VMS data for the WDA and RI and MA Lease Areas. This information is sufficient to support the conclusions in Section 3.11. Section 3.11.2 of the FEIS has been updated to include the SNRA estimation of the percentage of fishing fleet covered by AIS data. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind. Alternative F was proposed by the Responsible Offshore Development Alliance through a collaborative process with commercial fishermen and the offshore wind industry. Section 3.10 of the FEIS has been updated and relies on several sources of information to characterize the use of the area by commercial fishing industry including AIS, VMS, and VTR data. All of these data sources individually have limitations but combined, they are the best available information to characterize the fishery use.
	As such, using AIS would create great hardship to New York fishermen. Once again being left out of the entire BOEM process with regard to safety at sea, New York fishermen would be put at further risk compared to fishermen from Rhode Island and Massachusetts.	
13183-010	Regarding using VMS, there is also a huge issue with using VMS heat maps to determine New York's fishing effort and transit lanes through the RI-MA WEAs. As you can see from the picture below of the Northeast Ocean Data Portal, https://www.northeastoceandata.org/data- explorer/?commercialfishing vessel-activity VMS heat maps and data are only available for the fisheries circled, multispecies (groundfish,) monkfish, scallops, pelagics, surfclam and squidOf the other fisheries circled, only one of those species is caught within RI-MA WEA by New York fishermen, squid. However, VMS was not required on all squid boats until 2014, so squid VMS data from New York pre 2014 will be incomplete, and any data re the other NOAA permitted fisheries that take place from within the RI-MA WEAs or east and south of the RI-MA WEAs, such as whiting, ling, butterfish, scup and fluke fisheries will not be accounted for from the VMS model, because up until I believe 2018 there was no VMS data on DOF/DOF (Declared out of Fichery) fisheries like scup. etc.	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. Section 3.10 of the FEIS has been updated and relies on several sources of information to characterize the use of the area by commercial fishing industry including AIS, VMS, and VTR data. All of these data sources have limitations but they are the best available information to characterize the fishery use. Section 3.10.1 of the FEIS acknowledges that VMS was only required for squid vessels starting in 2014 and may underrepresent some fishing activity.
13183-011	Below is a picture from the FV Caitlin & Mairead heading Southeast from Montauk in black fog on May 10, 2018. The five targets on the left are the	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on

Index	Comment Text	Response
Number		
Number	actual turbines at the Block Island Wind Farm, with 6 MW turbines. The other five on the right side of the screen are ghost radar that could not be removed from the screen. As you will note on the picture, the screen itself with a width of 6 nautical miles, has barely 3.5 nm of actual space where the ghost radar did not bleed into the area. This is for only five windmills that are far smaller than the 84 being placed in Vineyard Wind's WEA and the associated other wind farms with a full build out of hundreds, if not thousands of windmills. Additionally, the two pictures below were taken inside the Thanet Wind Farm, with 3.6 MW turbines spaced 0.7 nm apart. As you can see, with line of site turbines, the bleed over due to ghost radar scatter makes traversing the area with radar impossible. According to Appendix B to COMDTINST 16003.2A, a FNSRA is for a major project of unique or extraordinary natureNothing could describe the RI- MA WEA site more definitively than a major project of extraordinary nature. 1418 square miles of offshore wind turbines, that may exist every 0.8 nm, for miles, along with thousands of miles of transmission cables and Electric Service Platforms. Thousands of recreational motorboats, sailboats and commercial fishing vessels all being channeled into specific "tunnels" as it were, with the issues of radar scatter and offshore wind turbines three times	marine radar in Section 3.11.1. Section 3.11.5 of the FEIS has been updated to include additional information regarding Alternative F. The USCG, a cooperating agency for the FEIS that is the leading agency on navigational matters, did not find the expanded transit lanes in Alternative F to be necessary. BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the FEIS.
	the size of anything done in Europe, we are looking to the USCG to address both recreational and commercial fishing, radar and cumulative impacts	
13183-012	Additionally, information must be gathered, as per the Maritime and Coast Guard Agency MGN 543, pg 17 of 23, in relationship to larger offshore wind developments, since the Ri-MA WEA is 1418 square miles, the geographic size of Long Island, ³ / ₄ of the size of the Grand Canyon National Park, and three times the size of the largest offshore project in Europe, the Hornsea project presently being built in stages in the North Sea. Even within those projects, the MW of the turbines in the first two areas were only 6.5-8 MW.	Thank you for your comment.
13183-013	Safe access to fishing grounds and home to our New York ports must be the paramount decision maker, with transit lanes that take the least amount of time to go from port to grounds and back, and allow for safe widths of corridors without the need to discern radar scatter. We believe that unobstructed lanes of at least 5.5 nm must be instituted, as per MGN 543 pgs 17-20 of 23.	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. Section 3.11.5 of the FEIS has been updated to include additional information regarding Alternative F. The USCG, a cooperating agency for the FEIS that is the leading agency on navigational matters, did not find the expanded transit lanes in Alternative F to be necessary. BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the FEIS. Section 3.10.2 of the FEIS was updated to include the comment that transit lanes should be a minimum 5.5 nm wide.
13183-014	Additionally MGN 543 discussed the issues of wind farm arrays over time because of sedimentation and scour could cause changes to tidal depths that	Thank you for your comment.

Index	Comment Text	Response
Number	could impact transit routes, and as such, it is of utmost importance that the lanes decided upon do not risk being impacted by sedimentation and shoaling	
13183-015	A secondary concern for sailing vessels was the issue of wind shear from behind the arrays, and how that would affect the transit of recreational sailors, and how that could impact commercial vessels sharing the same space when transiting to or from fishing grounds in bad weather. As such, that too should be investigated.	BOEM is not aware of studies documenting the hydrodynamic effects of atmospheric turbulence from WTGs on sailing vessels. Typical operations of sailing vessels include continuous adjustment to changing wind conditions, including otherwise unpredictable movements. As a result, a vessel collision or allision can be adequately avoided by adherence to COLREGS and applicable USCG regulations. The requested analysis is beyond the scope of this FEIS.
13183-016	Since April of this year, the Department of Energy has been holding Wind Turbine Radar Interference Mitigation Group webinars to discuss the cumulative problems of radar and offshore wind. The first webinar, on April 20th, included these presentation slides, which lay bare some of the serious concerns re offshore wind and its ability to create false images, ghost radar, scatter, and clutter that renders radar uselessRegarding radar interference and navigation and Search and Rescue Activities of the USCG through high frequency radar through wind farms, the July 27, 2020 webinar of the Wind Turbine Radar Interference Mitigation Group took place and specifically laid bare the severe major effects that offshore wind will have affecting High Frequency radar that is responsible for SAR (Search and Rescue) and NOAA IOOS current data, which is also used for SARFrom the report "However, the rapidly emerging offshore wind energy industry in the U.S. has the potential to degrade the performance of HF radar systems operating in the vicinity of wind turbinesSouth of Martha's Vineyard, Massachusetts, construction in the Vineyard Wind lease area, will begin in the fall of 2019. The developer of this first major U.S. wind farm has proposed significantly larger turbines (9.5 MW) than those located in land based wind farms, increasing the impact of each turbine on radar observations. Additionally, their proposed array of 80-100 turbines would result in significantly more interference signals than were seen in initial studies using the small Block Island wind farm." Report: https://darchive.mblwhoilibrary.org/bitstream/handle/1912/25127/HFRadar_ 2019_WindTurbineInterferenc e WorkingGroupReport Final2.pdf?sequence=1&isAllowed=y	Section 3.12 of the FEIS has been revised to include a discussion of impacts on HF radar.
13183-017	According to Cristina Forbes of the USCG, there are huge problems for SAR modeling due to wind losses within a wind farm, and how those losses would affect their ability to locate someone as part of a SAR activity.	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. As described in Section 3.11.4, the Alternative D2 layout would allow vessel operators to set predictable courses. Furthermore, this layout would be consistent with the

Index	Comment Text	Response
Number		
		recommendations in the Final MARIPARS study (USCG 2020). USCG would need to adjust their SAR planning and search patterns to allow aircraft to fly within the geographic analysis area leading to a less optimized search pattern and a lower probability of success. The USCG is a cooperating agency to the EIS, and is the leading agency on navigational matters; therefore, BOEM defers to the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13183-018	Ms. Angel McCoy of BOEM also discussed a recent but as of yet unreleased study on radar interference from Booz Allen Hamilton, in which the study found that at least 36 different radar systems are affected by the nine present BOEM offshore proposals.	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13183-019	Additionally, re Homeland security, ROTHR type radar facilities like the ARSR-4 which are considered the first line of site protection from 240 km out could be greatly affected by Offshore Wind especially as the turbine heights get larger and larger.	Section 3.12 of the FEIS has been updated with additional details regarding radar systems and concludes that the Proposed Action alone would have minor impacts to radar systems, but moderate impacts in the context of reasonably foreseeable environmental trends and planned actions. As described in Section 7.9.2.1.2 of the COP, Vineyard Wind conducted a basic radar line-of-sight analysis for the North Truro ARSR-4 and Riverhead ARSR-4 radar systems, and determined that the Proposed Action WTGs would not be visible or interfere with either system. The DoD Clearinghouse would coordinate with military and national security agencies for each offshore wind project proposed in the RI and MA Lease Areas to de-conflict potential impacts to radar systems on a project-by-project basis.
13185-001	For years, and since they were first aware of the possibility of large fields of turbines being built on fishing grounds, commercial fishermen have stated that impacts to both marine resources and their livelihoods will occur far beyond a state- or project-specific level due to the regional nature of fishing and the interconnectedness of marine ecosystems. Until the preparation of the SEIS, no effort had ever been made to understand impacts on the appropriate scale.	The potential effects of commercial wind lease issuance and site assessment activities offshore Rhode Island and Massachusetts had notice and comment opportunities that resulted in the removal areas from consideration because of known fishing activity (e.g., Massachusetts [Nantucket Lightship], and Rhode Island/Massachusetts [Cox Ledge]). These areas were then evaluated and presented in an Environmental Assessment in 2013. A link to that document can be found here: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_E nergy_Program/State_Activities/BOEM%20RI_MA_Revised%20EA_22Ma y2013.pdf That process included and accounted for public input. In addition to project specific meetings as part of the NEPA process, BOEM also regularly briefs and solicits comments from the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils, as well as the Atlantic States Marine Fisheries Commission. These briefings are an important avenue for BOEM to

Index	Comment Text	Response
Number		
		make sure the fishing community is aware of the status of projects, when there is opportunity to comment on a project and for BOEM to receive important information from the fishing community regarding its leasing activities. BOEM has continued to engage with commercial fishing industry and interested stakeholders throughout the NEPA process for the proposed Project; BOEM engages with the public and stakeholders in each step of the process and takes public input into consideration when making any decision. BOEM has considered all comments throughout the Vineyard Wind 1 Project NEPA process. In addition, Appendix C of the FEIS provides information related to BOEM's consultation and coordination efforts.
13185-002	Unfortunately, while the SEIS represents a vast improvement over past practices, its analysis highlights the severity of impacts to fishing resources, businesses, and communities. United States OSW development from the very beginning has never been approached as a process to balance the needs of multiple ocean users and thoughtfully consider important environmental goals: maintaining sustainable seafood production and reducing carbon emissions. Rather, the statutory authority lacks specificity on how to effectively plan for OSW development, and BOEM's regulatory process is driven by a propensity to "unleash markets" by getting a project—any project—to the other end of a perceived minefield of adversity, rather than a thoughtful and deliberate approach to maximize our ocean's conservation and natural resource potential. This flawed approach, in which other interests have been deconflicted through site avoidance up front, with commercial fishing relegated to consideration only at the end-stages of project permitting, could have been avoided had previous requests from fishermen been heeded.	Chapter 1 of the DEIS contained information on the background of the process and project. Appendix C of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. Prior to preparation of a DEIS, BOEM held five public scoping meetings near the proposed Project area to solicit feedback and identify issues and potential alternatives for consideration. The topics most referenced in the scoping comments include commercial fisheries and for-hire recreational fishing, Lewis Bay, the Project description, socioeconomics, and alternatives. Additional public input opportunities occurred during the proposed Project's planning and leasing phases between 2009 and 2015. BOEM also consulted with state, federal, and tribal agencies. BOEM considered all of the resulting comments while preparing this EIS. Furthermore, BOEM published a DEIS on December 7, 2018, which initiated a 45-day comment period open to all. In addition, BOEM published a SEIS in June 2020 which initiated a 45-day comment period open to all. BOEM used the comments received to inform preparation of the FEIS.
13185-003	To that end, the SEIS makes clear these major fundamental flaws in the OSW planning process, long raised by fishermen, that have led to the failure to adequately mitigate impacts. Its numerous analytical deficiencies also plainly evidence an unacceptable level of uncertainty and risk at this late phase in the planning for this large-scale new ocean use.	Chapter 1 of the DEIS contained information on the background of the process and project. Appendix C of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. Prior to preparation of a DEIS, BOEM held five public scoping meetings near the proposed Project area to solicit feedback and identify issues and potential alternatives for consideration. The topics most referenced in the scoping comments include commercial fisheries and for-hire recreational fishing, Lewis Bay, the Project description, socioeconomics, and alternatives. Additional public input opportunities occurred during the proposed Project's planning and leasing phases between 2009 and 2015. BOEM also consulted with state, federal, and tribal agencies. BOEM considered all of the resulting comments while preparing this EIS. Furthermore, BOEM published a DEIS on December 7, 2018, which initiated a 45-day comment period open to all. In addition, BOEM published a SEIS in

Index	Comment Text	Response
Number		
		June 2020 which initiated a 45-day comment period open to all. BOEM used the comments received to inform preparation of the FEIS. Appendix H of the FEIS includes a discussion on incomplete and unavailable information at the time of the EIS.
13185-004	We repeat here that the procedure for developing this new ocean-based industry of unprecedented scale is fundamentally flawed. Indeed, from the vantage point of fishermen, fisheries scientists, or managers, it is nothing short of chaotic. While the SEIS partially evaluates impacts to fishing, its range of alternatives is already constricted by the most important decisions that have already been made at state- and projectspecific levels. There has never been a dedicated, equitable, comprehensive advance planning process that included fishermen or fisheries experts and such a process is urgently needed.	Chapter 1 of the DEIS contained information on the background of the process and project. Appendix C of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project. Prior to preparation of a DEIS, BOEM held five public scoping meetings near the proposed Project area to solicit feedback and identify issues and potential alternatives for consideration. The topics most referenced in the scoping comments include commercial fisheries and for-hire recreational fishing, Lewis Bay, the Project description, socioeconomics, and alternatives. Additional public input opportunities occurred during the proposed Project's planning and leasing phases between 2009 and 2015. BOEM also consulted with state, federal, and tribal agencies. BOEM considered all of the resulting comments while preparing this EIS. Furthermore, BOEM published a DEIS on December 7, 2018, which initiated a 45-day comment period open to all. BOEM used the comments received to inform preparation of the FEIS. Alternatives considered for detailed analysis were developed following public input during the scoping process and were also developed and concurred upon by the cooperating agencies.
13185-005	Decentralization of key project decisions among various state and federal processes, each with limited coordination with the others, leads to a permitting process in which there is no meaningful ability to plan OSW in a way that minimizes fisheries conflicts.	BOEM, as the lead federal agency, is responsible for organizing the federal environmental review and authorization processes for a proposed project, including the preparation of a single EIS and ROD for the project in coordination with the other federal cooperating agencies. Chapter 1 of the DEIS contained information on the background of the process and project. Appendix C of the FEIS has been updated with information on the coordination and consultation process to date for the proposed Project.
13185-006	Balancing fisheries interests with OSW interests cannot be adequately addressed through the NEPA process alone as it is currently implemented. BOEM has only conducted this SEIS at the penultimate stage of project permitting, and decision points in the SEIS are limited to those with a federal nexus. In reality, most project decisions have already occurred at the state level—most without any meaningful opportunity for consideration of fisheries or even public comment opportunities.	The impacts of opening the continental shelf to wind energy development have already been assessed in BOEM's 2007 Final Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf (MMS 2007). BOEM's decision on Vineyard Wind's COP is needed to execute its duty to approve, approve with modifications, or disapprove the proposed Project in furtherance of the United States' policy to manage the development of OCS energy resources in an expeditious and orderly manner, subject to environmental safeguards including consideration of natural resources and existing ocean uses (43 USC § 1332(3)). Pursuant to the

Index	Comment Text	Response
Number		
13185-007	This process stands in stark contrast to how other conflicting ocean uses are addressed in the "Smart from the Start" regulations and in practice. The Outer Continental Shelf Lands Act, as amended by the Energy Policy Act of 2005, provides a list of items to be "considered" in planning for OSW, but little guidance as to how to do so. BOEM has been consistent in its interpretation that essentially all potential OSW conflicts are considered and addressed through the Call Area and Area Identification processes. For example, BOEM's proposed Path Forward included "Proposed Factors for Identification of Offshore Wind Forecast Areas" which exclude areas for leasing based on National Sanctuary or Monument status, Department of Defense activities, and traffic routing schemes, and promote leasing in areas that are greater than 10 km from shore (to minimize viewshed conflicts), those with economic incentives (i.e., state subsidies), and those in which the wind industry has expressed interest. High-value fisheries areas—either by economic value or ecological importance—were not included.	OCSLA, BOEM is required to manage the development of OCS energy resources in an expeditious and orderly manner, subject to environmental safeguards including consideration of natural resources and existing ocean uses (43 USC § 1332(3)). This mandate requires BOEM to not only consider how impacts to natural resources and existing uses could be avoided, minimized, or mitigated, but also to consider factors that concern the technical and economic feasibility of developing the Project. The potential effects of commercial wind lease issuance and site assessment activities offshore Rhode Island and Massachusetts had notice and comment opportunities that resulted in the removal areas from consideration because of known fishing activity (e.g., Massachusetts [Nantucket Lightship], and Rhode Island/Massachusetts [Cox Ledge]). These areas were then evaluated and presented in an Environmental Assessment in 2013. A link to that document can be found here: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_E nergy_Program/State_Activities/BOEM%20RI_MA_Revised%20EA_22Ma y2013.pdf That process included and accounted for public input. In addition to project specific meetings as part of the NEPA process, BOEM also regularly briefs and solicits comments from the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils, as well as the Atlantic States Marine Fisheries Commission. These briefings are an important avenue for BOEM to make sure the fishing community is aware of the status of projects, when there is opportunity to comment on a project and for BOEM to receive important information from the fishing community regarding its leasing activities. BOEM has continued to engage with commercial fishing industry and interested stakeholders throughout the NEPA process for the proposed Project; BOEM engages with the public and stakeholders in each step of the process and takes public input into consideration when making any decision. BOEM has considered all comments throughout the Vineyard Wind 1 P
		related to BOEM's consultation and coordination efforts.
13185-008	In contrast to its early recognition of other interests, BOEM has consistently	This comment does not concern the adequacy of the FEIS; therefore, no
	stated that the entire planning and surveying process, from area identification	changes to the document are needed.
	to lease issuance to survey and assessment activities, has negligible impacts	
	to fishing, and only once a Construction and Operations Plan (COP) is	
	reviewed do fisheries impacts merit analysis. Their argument is that no	
	binding or irreversible project decisions have been made to that point, and	
	that fisheries interactions can be effectively de-conflicted through preparation	
	of the Environmental Impact Statement immediately preceding final project	

Index	Comment Text	Response
Number	approvalDespite these clear statements that project-controlling design decisions cannot be made before project finalization, BOEM, states, and developers have already made project-controlling decisions regarding design parameters that have now severely restricted the range of alternatives in the SEIS.	
13185-009	A prime cause of the lack of fisheries considerations in the OSW process is the decentralization of decision making between federal and state governments. While the "One Federal Decision" policy clearly delineates roles and responsibilities for large infrastructure projects amongst federal agencies, there is no similar authority that describes such relationships with states. As a result, federal and state regulators each appear to be reacting to the others' actions in the following feedback loop that prevents any meaningful or deliberate consideration of seafood productionAt the point BOEM conducts its review (i.e. now), there is almost no flexibility within the project price or design to accommodate project changes. To the extent that certain states have attempted to include policies on the front or back end of this process—that is, through procurement requirements or federal consistency review under the Coastal Zone Management Act—they are only concerned with fishermen living in their state.	This comment does not concern the adequacy of the FEIS; therefore, no changes to the document are needed. BOEM, as the lead federal agency, is responsible for organizing the federal environmental review and authorization processes for a proposed project, including the preparation of a single EIS and ROD for the project in coordination with the other federal cooperating agencies. BOEM was therefore responsible for leading the scoping and public hearing meetings and other agencies are welcome to attend. Massachusetts and Rhode Island were cooperating agencies on the EIS, and information on Coastal Zone Management Act compliance is included in Appendix C, Section C.1.2.1 of the FEIS.
13185-010	What happens throughout this process is that, at each of these phases, fishermen ask states, OSW developers, and BOEM to consider their input and modify the projects to minimize fishing impacts. In response, states argue that such modifications are within BOEM's purview as the lead action agency on environmental review. BOEM indicates (as evidenced in the DEIS and SEIS) that the states' power goals and contracts set the range of alternatives for consideration. And OSW developers interpret this infuriating cycle as fishermen simply trying to unfairly delay their projects. So tell us, who is responsible for ensuring "coexistence?" A possible solution that RODA has attempted to foster is increased interstate coordination. If states could set aside the atmosphere of competition surrounding power contracts, it would greatly improve outcomes for regional fisheries, which do not occur along state lines. To date, our requests to this end have been largely ignoredWe recommend that BOEM take a leading role in fostering interstate coordination, and actively support others' efforts to do so. This would be expected to increase the likelihood of successful integration of offshore energy development into current activities such as fishing.	This comment does not concern the adequacy of the FEIS; therefore, no changes to the document are needed. BOEM has conducted a robust stakeholder engagement process, including a variety of public comment and public meetings, as described in Section C.1.3 of the FEIS. In addition, as part of the scoping process, alternatives were developed for consideration in the DEIS.
13185-011	Compensatory mitigation, in its current form, is insufficient and must be revised with direct and comprehensive consultation with the fishing industryRODA repeats, and cannot emphasize enough, the comments it submitted to the DEIS docket regarding mitigation: "RODA strongly	BOEM is open to working with state partners and the commercial and recreational fishing industries to investigate alternative strategies to negotiate compensatory mitigation agreements.

Index	Comment Text	Response
Number		
	disagrees with the approach vineyard wind has taken to addressing the	
	nitigation of impacts to fishing activities and resources, which has	
	been nearly integrated into the federal approach. A swe have	
	expressed in the past, we believe that the development of a common	
	framework for such "mitigation" must be done in a transportent balistic and	
	well structured manner that includes impacts from the wide variety of	
	affected fishing businesses. Moreover, an appropriate mitigation plan must	
	follow the principles of first avoiding conflicts, then minimizing those that	
	are unavoidable mitigating the impacts from new development through	
	appropriate use of communications and technology and finally—only once	
	those have been adhered toconsidering compensation for any residual	
	losses " The single most important question underlying the responsible	
	development of OSW—and whether it can be completed in a way that does	
	not nose intolerable risk to fishing and marine ecosystems—is whether	
	adequate mitigation has been incorporated into project design. Mitigation can	
	take the form of avoiding, minimizing, or compensating for effects caused by	
	a proposed action or its alternatives. The most important mitigation measures	
	are the first two, as fishermen's shared goal is to preserve healthy ecosystems	
	and continue fishing, rather than be paid for damages.	
13185-012	Unfortunately, avoiding and minimizing impacts are not prioritized in the	Thank you for your comment.
	OSW process. The SEIS references the Vineyard Wind COP at Volume III,	
	Table 4.2-1 and 4.2-2 for a list of mitigation measures that are considered in	
	its analysis. For fisheries, these include: (1) the lease area being sited to avoid	
	locations of high fisheries value, (2) ensuring project activities are	
	communicated to fishermen; (3) development of a fisheries monitoring	
	program (discussed in Section IV (c) below); (4) commitment to display	
	required lighting; (5) provision of electronic charts to fishermen; (6) marking	
	turbines for visibility; (7) leaving a large portion of the WDA undisturbed;	
	and (7) a reiteration that ongoing activities will be communicated to	
	fishermen. These commitments—although they do follow BOEM's Best	
	Management Practices, further highlighting structural flaws in the process—	
	have nothing to do with minimizing and avoiding impacts to fishing and are	
	purely informative in nature.	
13185-013	Further, the SEIS indicates on p. 3-101 that "Vineyard Wind has committed	Thank you for your comment.
	to voluntarily establish gear loss and revenue compensation funds for fishing	
	interests in Rhode Island and Massachusetts, which is intended to	
	compensate for gear and/or revenue losses over the life of the Project	
	Future mitigation measures may reduce some of the economic impacts on the	
	commercial and for-hire fleet." Due to the significant procedural	
Index	Comment Text	Response
-----------	--	--
Number		
	shortcomings in OSW to date failing to minimize conflicts through siting and	
	design, this compensatory mitigation has become a central focus of fishermen	
	with regard to the project review. Disturbingly, these state-required (or	
	requested, depending on who you ask) "agreements" actually occurred before	
	BOEM or any state fully considered how to mitigate impacts through	
	avoidance or minimization.	
13185-014	In its comments on the Vineyard Wind DEIS, RODA urged BOEM to	Section 3.10 and Appendix D of the FEIS discuss mitigation measures.
	coordinate, or at least require development of, an appropriate, regional-scale	Vineyard Wind has expressed that funding for fishing interests from all other
	fisheries compensatory mitigation plan. It did not. We now face the bizarre	affected states would be added to either of these existing funds or grouped
	outcome that two states were, in practice, deputized to devise payment plans	into a third fund. Vineyard Wind has voluntarily committed to set aside \$3.3
	from the project developer through their Coastal Zone Management Act	million and voluntary establish a fund for claims of direct compensation from
	review authority. Despite compensatory mitigation requirements not being an	other affected states. BOEM is open to working with state partners and the
	enforceable policy under the Act, a series of political twists and turns has led	commercial and recreational fishing industries to investigate alternative
	to BOEM considering—as the primary fisheries mitigation tool for a federal	strategies to negotiate compensatory mitigation agreements.
	waters project— payments made to one state. These decisions were	
	negotiated with no public comment process (or private comment process, for	
	that matter, as no fishing experts were consulted including Vineyard Wind's	
	own Fisheries Representatives) with payments made to an as-yet defined	
	Trust in a second state that were "negotiated" through a public process but	
	universally loathed, and absolutely no payments at all in others.	
13185-015	This process for direct negotiation with states made sense when originally	BOEM is open to working with state partners and the commercial and
	envisioned in the Rhode Island Ocean Special Area Management Plan, which	recreational fishing industries to investigate alternative strategies to negotiate
	was developed through extensive public input and review to facilitate the	compensatory mitigation agreements.
	Block Island Wind Farm in RI state waters. However, leaving compensatory	
	mitigation to individual states to design (or not design) through their widely	
	varying Coastal Zone Management Plans for projects that span multiple	
	states in both geography and impacts makes no logical—or legal—sense. As	
	we, and others, have pointed out previously, the Comity Clause of the U.S.	
	Constitution prohibits discrimination based on state residency. It is unclear	
	how BOEM's enforcement of state-led policies that result in different	
	outcomes for federally permitted fisheries participants based on their state of	
	residence could be constitutionally defensible, unless BOEM does not	
	consider them in its decision whatsoever.	
13185-016	In addition to these disparate outcomes, these payment schemes grossly	Under the current model for compensatory mitigation each project would
	undervalue likely fisheries losses from the project as they are not calculated	negotiate an appropriate voluntary compensation package with affected
	on a cumulative scale in the state agreements.	entities. Thus affected entities would be availed to compensation
		cumulatively across projects.

Index	Comment Text	Response
Number		
13185-017	The SEIS also failed to consider cumulative impacts of these mitigation	For the purposes of the assessment of impacts from the Vineyard Wind 1
	plans, without any prediction or assurance of how compensatory mitigation	Project it was not necessary to develop or specify compensatory mitigation
10105 010	for other projects will be decided.	programs for other projects that are under development.
13185-018	The plans also did not include analysis of indirect impacts or multiplier	Section 3.10 and Appendix D of the FEIS discuss the details of the voluntary
	impacts to shoreside businesses, and were not subject to peer review or	revenue compensation funds. Vineyard Wind has established voluntary gear
	public input.	loss and revenue compensation funds for fishing interests based in Rhode
		Island and Massachusetts, which includes owners and operators of vessels,
		other entities that can demonstrate leases directly related to the Viney and
		Wind 1 Project
13185-019	We are immensely grateful that the SEIS includes Alternative E with transit	The FFIS discusses the need for spacing greater than 1 x 1 nautical mile for
15105 017	lanes based on the input from RODA and fishing constituents of the region	some fisheries in Section 3 10.4 and cites RODA comments related to space
	From the numerous conversations with fishermen we reiterate that for the	between turbines
	majority of fisheries and gear types found in the area. 1x1 nautical mile	
	spacing between turbines is too narrowly spaced for most fishing operations.	
	Thus, if spacing remains prohibitive, access to viable and safe transit options	
	becomes the single most important mitigating factor to the project design.	
	RODA strongly urges BOEM to adopt Alternative F presented in the SEIS.	
13185-020	During public hearings, comments were made in support of OSW	The USCG is a cooperating agency to the FEIS that is the leading agency on
	development and included claims that removal of wind turbines to	navigational matters; and, therefore, BOEM relies on - and does not question
	accommodate transit lanes will make the project financially unsound. Many	- the USCG's expertise and analyses for purposes of informing the
	of these claims also cited that transit lanes would be unnecessary based on	navigational impacts in the EIS. The FEIS has been updated, in appropriate
	the findings of the MARIPARS. We are concerned by these comments	sections, to reflect the Final MARIPARS results. Dr. Sproul's studies were
	because the MARIPARS has several shortcomings, as stated in our "Request	provided to USCG as comments on their Draft MARIPARS. USCG
	for Correction" submitted to USCG on June 29, 2020.	considered those comments in formulating the Final MARIPARS, which did
12195 021	Dens down the fort the Africa CEIC velice on the MADIDADC evolution the	not adopt Dr. Sproul's recommended transit lane widths.
13185-021	Based on the fact that the SEIS relies on the MARIPARS analysis, the	The USCG is a cooperating agency to the FEIS that is the leading agency on
	have a subject to near review and IOA review. The final study fails to address	the USCC's expertise and analyses for purposes of informing the
	several issues brought forth during public comment on the draft MARIPARS	navigational impacts in the FIS. The FFIS has been undated in appropriate
	by Dr. Thomas Sproul and RODA	sections to reflect the Final MARIPARS results. Dr. Sproul's studies were
		provided to USCG as comments on their Draft MARIPARS USCG
		considered those comments in formulating the Final MARIPARS, which did
		not adopt Dr. Sproul's recommended transit lane widths.
13185-022	Until the identified concerns are addressed, it is irresponsible to solely rely	The USCG is a cooperating agency to the FEIS that is the leading agency on
	on the highly influential MARIPARS study to draw the conclusion that	navigational matters; and, therefore, BOEM relies on - and does not question
	transit lanes are unnecessary in the MA/RI lease block. The SEIS does not	- the USCG's expertise and analyses for purposes of informing the
	correct the deficiencies in the MARIPARS, therefore there is not an adequate	navigational impacts in the EIS. The FEIS has been updated, in appropriate
	basis for the 1x1 nautical mile spacing for the WEAs. In the interim, we	sections, to reflect the Final MARIPARS results. In addition, the SEIS and

Index	Comment Text	Response
Number	request BOEM use the best available information in regards to practical fishing operations and transit, which has been provided by fishermen and fishing groups in numerous comment letters and during public workshops	FEIS include the best available information and data to support the findings presented. The analysis of effects to commercial fisheries was supported by the National Marine Fisheries Service.
	[Transit Corridor Workshops]. Based on the outcomes of the workshops and engagement with the fishing industry, RODA reiterates our request to a) address the concerns presented in regard to the original MARIPARS study, which will support b) adoption of Alternative F.	
13185-023	USCG personnel have indicated since the MARIPARS publication that this study is not intended to replace meticulous review of project-specific proposals for wind energy facilities in federal waters off of New England. We request that BOEM base forthcoming regulatory actions on a full, Information Quality Actcompliant review of the record rather than the flawed MARIPARS.	Forthcoming regulatory actions are outside the scope of a typical NEPA or beyond what is necessary to evaluate environmental impacts and mitigation measures. BOEM considers USCG to be the expert agency on navigational matters and, thus, used their expertise and analyses (e.g., MARIPARS) for assessing the navigational impacts of the project. Further, the USCG is a cooperating agency, and reviewed the analysis for purposes of assessing consistency of BOEM's analysis with the findings presented in the MARIPARS. BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13185-024	While we do not agree with the premise that 1 nautical mile wide "transit" lanes provide adequate spacing between turbines for safe and efficient navigation, we would like to draw attention to the false concession that this orientation and spacing will benefit transiting mariners. The 1 nm spacing proposed is along the N-S and E-W lines of orientation but along the diagonal the spacing is reduced to 0.7 nm. Yet based on the polar histograms in the SEIS (Figure 3.11-3 & 3.11-5), there are clear transit patterns for vessels in the NWSE orientation. This demonstrates that fishermen and mariners were obviously insufficiently engaged in the final "transit" discussions. It seems unfair that the people who utilize the space the most, have the highest risk, and most to lose, were circumvented in the final discussions and the input they consistently provided (through workshops cited above, public comment, and conversations with developers) was ignored.	Alternatives D1 and D2 were the direct result of scoping comments received from the commercial fishing industry (see April 30, 2018 comment from Tkjedle Law on behalf of the East Farm Commercial Fisheries Center on the Notice of Intent to Prepare an EIS). Section 2.1.3 of the FEIS has been updated to include how Alternatives D1 and D2 were developed through the scoping process for the DEIS and additional information provided as a result of comments from the fishing industry. These comments regarding a minimum of a 1nm spacing and an east-west layout were supported by members of the Commercial Fisheries Center of Rhode Island, including RI Commercial Fishermen's Association, RI Lobstermen's Association, Eastern NE Scallop Association, Ocean State Fishermen's Association, RI Party and Charter Boat Association, Town Dock Commercial Fishing Fleet, and Newport Fishermen's Association. Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13185-025	Finally, if the Vineyard Wind 1 project is approved, RODA stresses that it is absolutely necessary to use this as a study site to understand and mitigate interference with marine radar. Conclusions thus far from the WTRIM, MARIPARS, and developers indicate not enough is known about impacts to radar on fishing vessels. Limited information can be learned from European	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind

Index	Comment Text	Response
Number		
	WEAs and the Block Island Wind Farm, but the full extent of possible radar interference should be studied if this project is approved. The proposed larger turbines, gridded array layout, and specific radar units used on U.S. vessels are not fully understood. In particular, it should be stressed that any study should utilize active fishing vessels, outfitted with radar technology used by the industry. By better understanding marine radar interference fully, mitigation measures should then be implemented to improve the navigational safety for all mariners. No additional OSW projects should be approved unless navigational risk is mitigated through layout design and/or technology, based on the findings from a robust analysis of radar interference.	turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13185-026	The use of offshore wind as a source of renewable energy is effectively a large-scale experiment to determine the impacts of an unprecedented amount of physical structure in our outer continental shelf ecosystem. There are major flaws in this experiment: (1) we have insufficient baseline data against which to measure induced effects; and (2) the rapid timing of construction across multiple projects does not afford the opportunity to evaluate impacts from the first, or others incrementally afterward. The latter makes it difficult to fully mitigate the impacts of these turbines because we simply do not know what all the impacts will be and have left no room for adaptive management.	Best available data and relevant information was used throughout the NEPA process for the proposed Project. Appendix H of the FEIS provides an analysis of incomplete or unavailable information. Through BOEM's Environmental Studies Program BOEM invests in science to support agency decisions. Since 2009 BOEM has awarded over \$12 million for 22 fisheries related studies on the Atlantic. Studies have ranged from baseline characterization of fish movement and habitat in leased areas to studies of specific stressors such as sound and electromagnetic fields (EMF). BOEM has also invested in looking at the effects of authorized projects such as the Block Island Wind Farm and the Coastal Virginia Offshore Wind project on the environment through the Real-time Opportunity for Development Environmental Observations (RODEO) project.
13185-027	RODA's comment letter on the DEIS described some of the many gaps in the biological and habitat impacts analyses that included the need for species-specific research, the lack of underwater noise research, no consideration of changes in water flow or larval dispersion, the need to research impacts of wind energy removal to physical oceanographic processes and dependent biological processes, the assumption that a "reef effect" will occur and be positive, localized temperature changes, interactions with electromagnetic fields, and consequences of scour and other benthic alterations. The SEIS does not improve our understanding of these issues, which is unsurprising given that no directly relevant research has been done on wind energy areas comparable in size to what is proposed in the Vineyard Wind project SEIS. The analysis, while incorporating a larger spatial scale, still insufficiently analyzes the cumulative impacts for the entire region and instead focuses mainly on the Vineyard Wind project.	Section 3.4 of the SEIS addressed underwater noise, water flow and larval dispersion, potential effects on oceanography and productivity, reef effect, temperature changes, and EMF. Section 3.3 of the SEIS addressed scour and other seafloor impacts. Species-specific assessments are beyond the scope of this EIS. This is a single-project EIS, not a Programmatic EIS, and it complies with the requirements of NEPA. Therefore, no change to the FEIS is warranted.
13185-028	We remain highly concerned that OSW development will occur along the coast in the absence of research that would provide a better understanding of the realized impacts. There is some research from Europe that can inform our inferences, however, some structures, e.g. the Mid-Atlantic cold pool, are	The revised Sections 3.3.1.1 and E.4.1 of the FEIS discuss potential changes to the cold pool and primary productivity, and the revised Section 3.4.1 discusses the potential consequences of such changes for marine mammals.

Index	Comment Text	Response
Number		
	unique to the U.S. because of their size and level of stratificationForaging,	
	and other biological necessities, by marine mammals may be affected by	
	changes in the cold pool. If the cold pool is disrupted and primary production	
	is reduced, prey species would also be expected to decline, negatively	
	affecting marine mammals' food sources.	
13185-029	Climate change has already begun; the SEIS analysis should acknowledge that the Northwest Atlantic Ocean has already experienced shifting populations of fish and invertebrates. As part of its ecosystem approach to fisheries management, the Mid-Atlantic Fishery Management Council (MAFMC) has already begun discussing the impacts of climate change on fishery science and management. It is disingenuous for the SEIS to disregard in-progress changes by concluding that the ecosystem, to be further impacted by development, was stable and would recover after the impacting agent was removed or mitigation was undertaken. Resource: Mid-Atlantic Fishery Management Council (MAFMC). "A White Paper to Inform the MAFMC on the Impact of Climate Change on Fishery Science and Management." (available at: https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/5c5c8fa9 652dea319f3f8fe6/1549569962945/MAFMC-Climate-Change-and-	Section 3.4.1 of the SEIS discussed current and potential future impacts from climate change; therefore, no change to the FEIS is warranted.
13185-030	The water temperatures in this region are already changing; as they change, they will dictate where fish and their prey are distributed. An example provided in the SCEMFiS report highlights the need for such an analysis; mussels (Mytilus edulis) are expected to attach to structure, such as a turbine, and locally affect the level of primary production depending on the level of filtration they might achieve. The SEIS is silent on the preferred temperature range of M. edulis; if temperatures continue to rise it is unclear whether this species will be present in the wind energy area by the end of the lease period. This example highlights that research is needed on species found in our region in order to mitigate species-specific impacts. Available research is limited and while it may appear to inform analyses, it likely doesn't given the specific life history characteristics, behavior, and localized food web dynamics that are unique to any ecosystem. It is imperative that we study impacts on each component of the ecosystem including the benthic community and its reaovery from construction	The data used are the best available and reflect the state of the science at the time of publication of the EIS. Section 3.4.1 of the SEIS discussed current and potential future impacts from climate change. Species-specific assessments are beyond the scope of this EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments (https://www.boem.gov/environment/environmental-studies/renewable-energy-research).
13185-031	The SEIS dismissed interactions between fish and exposure to EMF from exposed cables based on the assumption that exposure would be of short duration; it was not discussed as an impediment to migration.	Section 3.3.1 of the FEIS has been updated to state that EMF does not appear to constitute a barrier to migration.

Index	Comment Text	Response
Number		
13185-032	The SEIS does its best to describe the impacts on larval dispersion but nonetheless remains uninformative.	The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments, including larval transport modelling at a regional scale (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). This is a Project-specific EIS, not a Programmatic EIS or assessment.
13185-033	The SEIS makes assumptions based on research not designed to answer the question being addressed. For example, to discuss the impacts on larval dispersal, the SEIS references a study (Chen et al., 2016), which explicitly states that it was not designed to evaluate larval dispersal impacts.	The data used are the best available and reflect the state of the science at the time of publication of the EIS. Therefore, no change to the FEIS is warranted. BOEM continues to fund studies to address concerns raised in public comments, including larval transport modelling at a regional scale (https://www.boem.gov/environment/environmental-studies/renewable-energy-research). This is a Project-specific EIS, not a Programmatic EIS or assessment.
13185-034	The SEIS also discusses the potential for the wind energy areas to serve as artificial reefs, which would be expected to have a positive impact on the density of structure loving fish. If this reef effect was realized this would result in the largest artificial reef program in U.S. waters, if all possible leases were built out. It is not known whether the lease areas will result in a larger reef complex with interaction effects. Looking at tropical reef systems indicates a limitation to the positive benefits of reefs because of the "halo effect" where the behavior of coral head reef residents results in rings of sea grass surrounded by a maintained, grazed white sand ring termed halos. Under high densities, these halos can merge and eliminate the sea grass altogether. The behavior of these fish affects the ecosystem function, particularly under high density scenarios.	Section 3.4.1 of the SEIS considered the potential for fish aggregation and the reef effect, and reflected reports of the reef effect extending usually 30 to 60 meters, but possibly up to 600 meters (0.32 nautical miles) from a structure. This is a single-project EIS, not a Programmatic EIS. Therefore, no change to the FEIS is warranted.
13185-035	The SCEMFiS report further highlights the importance of species-specific impact analysis. Species like surfclams that live for 30-35 years are vulnerable to the installation of turbines. These are not highly mobile species that can simply relocate to an area outside of the construction zone. We do not know what the longterm impacts on such long-lived, sessile species will actually be.	These data are the best available sources for assessing impacts. The FEIS also was updated to discuss the large mollusks that are not represented well in grab samples. Sections 3.3 and 3.10 of the FEIS were updated to discuss additional information and analysis of commercially important species, including scallop, ocean quahog, and surfclam, using additional data sources, including fishing effort.
13185-036	The SEIS is also deficient in its analysis relating to marine mammals. Such species are vulnerable to structure in the water because of the risk of collision or entanglement. This risk increases when marine mammals and structures or gear/lines from fishing activity (or floating turbines) interact. The SEIS does not sufficiently discuss changes in interactions between marine mammals and fishing gear; if both are either excluded from the wind energy areas then it	Section 3.3.7.3 of the DEIS discussed the presence of structures and the potential for exclusion of fishing or marine mammals from the Project area. Furthermore, Sections 3.5.1 and 3.5.2 of the SEIS discusses displacement of fishing effort and marine mammals from all wind development areas on the Atlantic OCS. Additional discussion of commercial fisheries displacement was provided in Section 3.4.5 in the DEIS and Section 3.11.1 and 3.11.2 of the SEIS. As such, no change to the SEIS is warranted.

Index Number	Comment Text	Response
Number	restricts the amount of ocean available and would be expected to result in increased interactions.	
13185-037	Alternatively, fishing or service vessels and marine mammals could interact within the wind energy area and have limited maneuverability because of the turbine layout. This may delay recovery of stocks, which is of particular concern for northern right whales (which in recent years have had significant presence in the New England project areas).	As described in Section 3.5.1 of the SEIS, the proposed 1 nautical mile spacing would allow sufficient area for even large marine mammals to safely navigate between WTG structures. As such, no change to the SEIS is warranted.
13185-038	A simulation study on a harbor porpoise population in Europe indicated the population was vulnerable to turbine and shipping noise and bycatch rates; these effects were additive. The extent of the proposed wind energy areas in U.S. waters could have substantial impacts on the fitness and population growth of marine mammals, including one of our most vulnerable species (northern right whale). It is unclear what mitigation plans would be feasible given the permanent structures being pile driven into the seabed.	Section 3.3.7.3 of the DEIS and Section 3.5.2 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. One major difference between the European studies on harbor porpoises is that there is no time of year restriction on pile driving to avoid porpoises and large monitoring zones such as those required for NARWs. BOEM is not aware of any harbor porpoise studies showing turbine operational noise adversely effects the species and population level effects may occur. The best available information shows that porpoises return to offshore wind farm areas shortly after pile driving ceases. No new information has been provided that requires the assessment in the SEIS be revised. Additionally, harbor porpoises and NARWs have very different hearing abilities and a life history strategies such that a comparison of porpoise impacts to NARWs is highly speculative and uncertain. Section 3.5.2 and Appendix D discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals. These measures include, but are not limited to avoidance of peak NARW presence, enhanced measures during the month of May to detect and avoid right whales, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures. In addition, monitoring of the effectiveness of sound attenuation methods will be conducted and secondary measures would be implemented if the required sound reduction is not met. With this full suite of mitigation measures, impacts to NARWs and other marine mammals will be greatly avoided or minimized.
13185-039	The plans for mitigation of cumulative right whale impacts are too vague to properly comment on, and are not even available for projects other than Vineyard Wind. Nor do best management practices provide standard protocols or performance measures. We would hope that mitigation of any negative impacts on marine mammal populations would not affect the fishing industry by further excluding fishing from areas to compensate for the wind farm impacts.	Section 3.3.7.3 of the DEIS and Section 3.5.2 of the SEIS discussed the potential impacts of the proposed Project on marine mammals, including the NARW. Additionally, Section 3.5.2 and Appendix D discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures shut down procedures and other measures. These

Index	Comment Text	Response
Number		
		measures would apply to only the Vineyard Wind 1 Project, but not other future offshore wind development. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13185-040	If BOEM does approve the Vineyard Wind project in the absence of an adequate scientific understanding of environmental impacts, we urge that Vineyard Wind be used as a research platform, with further construction of other lease areas delayed until sufficient efforts are underway to address inadequacies in research. Research projects should be designed in conjunction with fishermen to ensure sampling design is adequate.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information. Future offshore wind projects will undergo separate NEPA reviews, and similar or different measures could be required for those projects to avoid or reduce the potential effects anticipated.
13185-041	Offshore wind development will prevent the Northeast Fisheries Science Center from completing its annual surveys. The SEIS itself concludes that the Vineyard Wind project will have major impacts on scientific research and surveys. This directly impacts fishermen by increasing uncertainty in stock assessments, which typically results in reduced quotasThe National Standard 1 guidelines require the acceptable biological catch to account for any scientific uncertainty in the estimate of the overfishing limit. Scientific uncertainty is directly related to information regarding the status of the stock, e.g. stock assessments, which may be based solely on federal surveys depending on the stock. This represents a major unknown for the fishing industry because the magnitude of impacts will vary by species. These concerns have been widely cited, including through comments from NMFS.	The SEIS discusses these issues throughout Section 3.14 (Other Uses, Scientific Research and Surveys), and Section 3.14.2 addresses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. The level of impacts was determined to be major. Therefore, no change to the FEIS is warranted. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07).
13185-042	Fisheries monitoring will be insufficient for the Vineyard Wind project and other near-term offshore development. OSW developers are required to develop fisheries monitoring plans; this is essential, however, their utility will be limited. They are likely to have less than two years of baseline data making it difficult to understand true impacts to stocks with high interannual variability. It is imperative to be able to detect any changes in abundance and distribution of fish and invertebrate species resulting from OSW development. The fishery monitoring plan for the Vineyard Wind project was only originally submitted to the National Marine Fisheries Service for review on February 25, 2019. At the time, NMFS didn't consider it to be a viable	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.

Index	Comment Text	Response
Number	monitoring plan, stating "the submitted plan lack[ed] sufficient detail and critical information to evaluate its efficacy." Though Vineyard Wind has since made revisions to its monitoring plans, the planning flaws referenced above and the absence of clear requirements for fisheries monitoring have led to the loss of critical knowledge. It is of utmost importance that all fisheries monitoring plans for any offshore wind development project are scientifically sound and help to answer critical questions regarding impacts to populations and their stock assessments.	
13185-043	We request funding be allocated to federal agencies and research institutions in order to be able to address these uncertainties. Priority for funding should be given to fisheries-related research, ideally through existing cooperative research programs, e.g. NMFS wind team, the regional fishery management councils and the Responsible Offshore Science Alliance (ROSA). Fishermen and developers have come together as part of ROSA to increase mutual understanding and this cooperative effort should be supported; research that directly involves fishermen would greatly benefit from fishermen's expertise and would also have a higher acceptance from the fishing industry as a whole.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13185-044	We maintain that the economic importance of fishing, and economic losses associated with loss of fishing grounds and indirect effects, have been systematically underrepresented, both through this federal environmental review and throughout the OSW development process.	Section 3.11 of the SEIS and the FEIS discusses the economic importance of fishing (landings and revenue), potential impacts, mitigation, and includes a cumulative assessment of potential revenue exposure by fishery for New England and the Mid-Atlantic; therefore, no change to the FEIS is warranted. The extensive analysis of impacts on the commercial fishing industry provided in the SEIS and included in the Section 3.10 of the FEIS resulted in findings of moderate to major impacts on this industry. This finding was reflected in the SEIS and FEIS economic analysis. The FEIS also adds updated data on the Port of New Bedford commercial fishing and seafood processing industries. Section 3.6.2 of the FEIS concludes that the Proposed Action, as well as reasonably foreseeable offshore wind development, would have a moderate impact on economics and employment for the commercial fishing industry in the geographic analysis area. The FEIS (Appendix F) provides 2018 U.S. Census data on employment by industry sector and 2017 NOAA data on the "living resources" sector (fishing, seafood processing, seafood markets, and aquaculture) in the geographic analysis area. The data support the conclusion that a moderate impact on commercial fishing would result in a minor adverse impact on employment and economics in the geographic analysis area as a whole, due to the relative size of the fishing industry in terms of employment and GDP.

Index	Comment Text	Response
Number		
13185-045	Furthermore, the SEIS analysis is at odds with information often put out by OSW advocates as the primary justification for rapid development: the creation of huge numbers of U.S. jobs.	Section 3.7 of the SEIS and Section 3.6 of the FEIS rely upon projected job creation resulting from the Proposed Action. Section 3.6 of the FEIS also cites Massachusetts and national job projections from three sources and uses these to evaluate impacts on employment within the geographic analysis area, but is careful to state both the low and high employment projections. The analysis is based upon the lower estimates of employment. It is beyond the scope of the Vineyard Wind 1 Project EIS to draw conclusions with regard to east coast or national economic impacts. Where the numbers in the EIS differ from numbers cited by OSW advocates, it is due to the variation between low and high projections, different assumptions about growth of domestic offshore wind manufacturing and installation capabilities, or use of different parameters (direct vs. direct plus indirect/induced jobs, or jobs at a given time vs. job years).
13185-046	The SEIS lacks key information regarding the cumulative economic projections of full build-out of the MA/RI lease areas, including how much economic growth is attributable to the projects when federal and state renewable subsidies and rate payers' increased costs are considered.	The SEIS relied on projections of employment, economic activity, local/state tax revenues, known investment in local ports and job programs, and grants to local communities and organizations, to reach a reasonable conclusions of beneficial impact within the geographic analysis area. The FEIS in Section 3.6.1.1 has been updated to include additional information on ongoing port facility improvements and projections of economic investment. The projections support reasonable conclusions that offshore wind would support jobs and businesses within the geographic analysis area. The analysis of employment and economic impacts within the geographic analysis area is valid regardless of federal and state subsidies. Ratepayer costs depend on numerous variables beyond the scope of the EIS.
13185-047	It also fails to clarify significant uncertainty regarding how much of the promised economic and employment benefits from OSW will accrue to the United States, vs. how much will be directed abroad.	The FEIS has been updated in Section 3.6.1.1 to clarify that it provides no conclusions with regard to regional, national, or world-wide economic impacts outside the geographic analysis area. Because the FEIS is for the Vineyard Wind 1 Project (and is not a programmatic EIS for east coast offshore wind development), the FEIS must provide analysis specific to the economic impacts of the Vineyard Wind 1 Project within the geographic analysis area that would reasonably be expected to experience economic impacts. In addition, BOEM is not required to estimate international employment and economic impacts, because the action contemplated in this FEIS is not anticipated to significantly affect a foreign nation and a foreign nation is not participating in the action (see EO 12114).
13185-048	Nor does it even attempt to predict how many fishing jobs will be lost or otherwise impacted due to this new ocean use, which may occur based on a number of reasons including resource impacts, induced management changes, insurance cost and availability, increased operational costs from factors such as transit time, market impacts, and so on.	The SEIS used the analysis of impacts to the commercial fishing industry in Section 3.11 to reach a reasonable conclusion in Section 3.7 that the Proposed Action would have a moderate impact on the commercial fishing industry within the geographic analysis area. This conclusion did not change in the FEIS. Specific estimates of job impacts on the commercial fishing

Index	Comment Text	Response
Number		
		industry and related business would be speculative and unnecessary to support this conclusion. Section 3.11 of the SEIS and Section 3.10 of the FEIS discusses the economic importance of fishing (landings and revenue), potential impacts, mitigation, and includes a cumulative assessment of potential revenue exposure by fishery for New England and the Mid-Atlantic; therefore, no change to the FEIS is warranted. The SEIS and FEIS rely on the best available information. Specific estimates of job impacts on the commercial fishing industry and related business would be speculative and unnecessary to support this conclusion.
13185-049	We also reference several items in our DEIS comments that were not considered at the time, such as calculations of shoreside impacts to fisheries, and these remain unaddressed.	Section 3.7.1.1 of the SEIS acknowledged that shore-based supporting services could experience impacts from offshore wind development; this was part of the basis for the finding of a moderate impact on the commercial fishing industry in Section 3.7.2. In addition, Section 3.10 of the FEIS has been revised to address this topic in greater detail. Section 3.10 of the FEIS discusses the impacts on seafood dealers and processors, which are expected to be minor to moderate.
13185-050	With regard to job creation, the SEIS does little to build on the DEIS analysis, except for incorporating arecent report from the American Wind Energy Association absent any review of its methodology. Even absent an unbiased analysis, it concludes that future OSW activities will cumulatively have "overall minor beneficial impacts" to new employment and economic activity.	The DEIS used projections of job creation from the Massachusetts Clean Energy Center and BVG Associates for comparison with the Vineyard Wind- submitted job projections. The SEIS (Section 3.7.2.1) added national job projections from the American Wind Energy Association to inform the analysis. BOEM reviewed the methodology of the studies to determine whether projections were reasonable. The FEIS was updated to include in Section 3.6.1 projections from the Georgetown Economic Services study submitted by RODA. The FEIS uses only the conservative estimates from these studies, in concert with other economic impacts (economic and infrastructure investment, tax revenues, grants, job training and diversification) to arrive at reasonable conclusions that the Proposed Action would have a minor beneficial impact, and ongoing and planned actions including the Proposed Action would have a moderate beneficial impact, on employment and economics in the geographic analysis area.
13185-051	In order to provide more transparency in the job creation projections, we reference a study completed by Georgetown Economic Services (submitted under this docket and attached as Appendix X, referred to as GES report in this letter). This study found that the projected job creation for the Mid-Atlantic and New England region was inconsistent with the AWEA input/output model cited by the SEIS. Utilizing the NREL Jobs and Economic Development Impacts model the GES report found for the Mid-Atlantic and New England region "2.06 - 3.17 local job-years per MW (as opposed to permanent jobs) could be created during the construction phase in the region, and 0.18 - 0.26 permanent jobs per MW could be created during	 The GES study provides alternative job estimates for the proposed Project and planned actions, but does not ultimately provide meaningfully different findings. Sections 3.6.1.1 and 3.6.2 of the FEIS discuss the GES study, which was not available to BOEM before publication of the SDEIS. Key findings related to the GES study include: GES total job estimates are similar to those provided by Vineyard Wind and other offshore wind developers. As compared to the AWEA estimates for jobs supported by east coast offshore wind development, GES estimates higher employment for construction and lower employment for operations and maintenance. BOEM's internal review finds AWEA's methodology to be

Index	Comment Text	Response
Number		
Index Number	Comment Text the operations and maintenance phase." Reference: Potential Employment Impact from Offshore Wind in the United Stated - The Mid-Atlantic and New England Region Georgetown Economic Services, LLC. Dated July 27, 2020	Response defensible. Additional detail has been added to the FEIS in Section 3.6.1.1 (for jobs supported nationwide) and 3.6.2 (for jobs supported in Massachusetts) to include the GES study in the discussion of employment. The FEIS consistently relies on lower or base case job estimates, and construction of the proposed Project involving 57, 14MW WTGs, as the least economically beneficial scenario. • Vineyard Wind has established spending commitments to the State of Massachusetts that will need to be met either through investment or through direct payment. It is unclear whether the GES study incorporates those commitments. Much of the GES report focuses on qualitative arguments that are not specific to the SDEIS, including the following: • A dynamic analysis should be used rather than a static analysis that assumes productivity improvements over time. BOEM does not believe that sufficient information exists to justify migration to dynamic modeling; moreover, the probable differences in model results would not be disparate enough to justify this change, or to revise the findings in the FEIS. • Offshore wind is heavily subsidized through ORECs or PPAs, and is not an economically efficient use of resources. Decisions about subsidization are policy choices by federal and local governments. NEPA requires evaluation of impacts, given existing conditions, not consideration of the validity of such policies. • The bulk of offshore wind jobs will be created overseas rather domestically, and total domestic employment in manufacturing and construction is small when compared with employment in manufacture of conventional equipment for power generation. This may be true for the construction phase, but is irrelevant for the NEPA analysis because the FEIS only evaluates domestic jobs supporte
		 future job growth based on assumptions about the growth of the domestic offshore wind industry. There are no sound economic arguments to support an assertion that offshore wind investments will increase the total level of employment in the longer run when we hold macroeconomic conditions constant. This is true,
		 but is also not a claim made in the FEIS. The claim that the huge investments on offshore wind would provide significant job and economic benefits in the U.S. has been grossly inflated.
		This may be true for some sources; however, the AWEA and Vineyard Wind estimates included in the FEIS are realistic estimates based on actual projects and/or conservative assumptions.

Index	Comment Text	Response
Number		
		The FEIS bases its determination of a minor economic benefit (for the Vineyard Wind 1 Project) or a moderate economic benefit (for east coast offshore wind development) on measurable benefits within the geographic analysis area (Barnstable, Bristol, Dukes and Nantucket Counties, Massachusetts; Providence and Washington Counties, Rhode Island). A minor benefit (for Vineyard Wind 1) would result primarily from support for a measurable number of jobs, establishment of the operations and maintenance facility on Martha's Vineyard, grants and cooperative agreements that benefit local communities, port utilization, and local tax revenues. The finding of moderate benefit (for east coast offshore wind development) is also limited to the geographic analysis area and results primarily from potential employment; support for construction-related jobs and business activity over a longer period; support for port infrastructure improvements and re-use of waterfront industrial properties; job training; and
13185-052	The inconsistencies in estimated jobs created using the same model is curious. One potential explanation is that the assumption of domestic versus foreign jobs is different between the two reports. In the GES report, the materials and services resulting from direct and induced jobs (estimated to about 60 percent of jobs in the offshore wind industry) during the construction phase are nearly 100% sourced locally as they are widely available in the U.S. As stated in the GES report, if the AWEA report input/output analysis assumed lower local sourcing assumptions, this may explain the difference in results between the two reports. Lower estimates of job-years by AWEA is problematic if the OSW industry does not plan to maximize U.S. hiring, especially if domestic labor is possible in the states supporting OSW. If developers know that most jobs will be foreign, jobs and	potential development of manufacturing and other support facilities. The SEIS used the AWEA report as a source for national offshore wind job projections. The FEIS added the projections of the Georgetown Economic Services report in Section 3.6.1.1. Both reports use the National Renewable Energy Laboratory's Jobs and Economic Development Impact model for offshore wind. The two reports' assumptions about the proportion of domestic manufacturing and amount of offshore wind developed by 2030 have differences. The range of projected jobs is broadly compatible with each other and with Vineyard Wind's job projections for the Proposed Action. The projections are nationwide and therefore were used in the FEIS only to support reasonable conclusions about economic activity within the geographic analysis area that were arrived at based on known planned offshore wind activity and investments.
13185-053	economic stimulus should not be a selling point for OSW. Equally concerning is the differences in the estimated permanent jobs (or operations and maintenance jobs) between these two reports. The operations and maintenance phase of an OSW project is much less labor intensive, provides employment long term and lasts the lifetime of the project, therefore a correct and realistic estimation of these types of jobs should be paramount and the total sum of job-years driven by the higher number of construction jobs should not be conflated with permanent jobs.	The DEIS, SEIS, and FEIS have all made distinctions between short-term construction phase jobs and long term operational jobs in reaching conclusions regarding employment and economic impact. Section 3.6.2.1 of the FEIS has been updated to more clearly explain that the estimated direct job creation by Vineyard Wind in Massachusetts alone, approximately 3,100 to 3,600 FTE job years, would consist of 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. Section 3.6 of the FEIS has been updated to add job projections from the Georgetown Economic Services study submitted by RODA and provides text clarifications to more clearly explain the distinction between jobs and job years.

Index	Comment Text	Response
Number		
13185-054	Lastly, the analysis of the input/output models only account for gross employment impacts and does not include displacement of other industries. This needs to be looked at more holistically, accounting for the impacts of fishermen's employment including from displacement, impacts to the resource, management constriction, indirect costs such as insurance and fuel, transit time and other cost prohibiting results.	The impacts from offshore wind development on displacement, the resource, fisheries management, operating costs (fuel and insurance), and transit time are discussed qualitatively throughout Section 3.11 in the SEIS and Section 3.10 in the FEIS and employment is discussed in Sector 3.6. Although fishing activity may change, employment in the fishing sector is not anticipated to change as a result of the proposed action. The SEIS acknowledged anticipated adverse impacts on the commercial fishing industry. The detailed analysis of commercial fishing impacts in Section 3.11 of the SEIS included such factors as displacement, resource impacts, and increased indirect costs (insurance, fuel, transit time, other) to conclude that the Proposed Action would have moderate to major impacts on the commercial fishing industry. The qualitative assessment in Section 3.6.2 relies upon the detailed analysis in Section 3.11 to conclude that there would be a moderate impact on employment and economics related to the commercial fishing industry within the geographic analysis area (Section 3.6.2). In the context of all economic sectors within the geographic analysis area. While Section 3.7.2 of the SEIS concluded that growth of the offshore wind industry would also have beneficial impacts within the geographic analysis area. While Section 3.7.2 of the SEIS concluded that growth of the offshore wind industry would also have beneficial impacts on employment and economics regarding potential minor impacts of negate or eliminate the finding of minor adverse impacts. Both the adverse and beneficial impacts on employment and economics regarding potential impacts of the proposed action and other reasonably foreseeable offshore wind development. The FEIS retains the same adverse impact findings for employment and economics as the SEIS (Section 3.7.2): moderate impact on the commercial fishing industry and supporting industries (for Proposed Action combined with other planned actions), and minor impact overall on
12195 055		employment and economics in the geographic analysis area.
13185-055	The SEIS analyses impacts to environmental justice communities in Massachusetts and concludes that the cumulative impacts to these communities from the proposed OSW projects would be overall minor, but potentially major depending on the specific impact factor and alternative chosen. While RODA agrees that these impacts will be major, the SEIS analysis is purely qualitative and contains several analytical flaws. This section of the SEIS is too narrowly focused on Massachusetts and fails to describe or account for lowincome and diverse communities in other states	The geographic analysis area for environmental justice populations includes the counties where proposed onshore infrastructure and potential port cities are located, as well as counties in closest proximity to the WDA. Inclusion of additional areas (whether qualitative or otherwise) is beyond the scope of this analysis. Section 3.7 focuses on the population in the geographic analysis area, and references the assessments for commercial/for-hire fishing, which has a larger geographic analysis area. The environmental justice analysis of impacts on low income workers relies on data and assessments of

Index	Comment Text	Response
Number		
	such as Rhode Island and New Jersey that are heavily dependent on seafood production in these WEAs.	economics. The data provided in the DEIS is updated in the FEIS, Sections 3.6.1 and 3.7.1 and the conclusions are unchanged, except for the elimination of the New Hampshire Avenue landfall. No additional changes to the FEIS are warranted.
13185-056	It also makes no attempt to characterize demographics in the fisheries sector nor what is expected in the OSW sector.	Section 3.4.1.3 of the DEIS provided average wage data for commercial fishing and related businesses and for the ocean economy as a whole, as well as information on the size of the commercial fishing sector as a proportion of county economies. The environmental justice analysis mentions the possible benefits of job opportunities from offshore wind but this is not part of the assessment. Overall, the average wage in the "Living Resources" industries (commercial fishing, seafood processing, seafood markets) is higher than the average wage in all "ocean economy" sectors combined, although this varies by county. A detailed breakdown is not necessary to support reasonable projections that impacts on commercial fishing and associated businesses (detailed in Section 3.11 of the SEIS) would have an adverse impact on some low income workers in these sectors, with minor impacts overall on low income residents of the geographic analysis area counties. No changes to the FEIS are warranted.
13185-057	While we are not experts on the types of jobs that will support OSW construction, we do understand that the huge majority of them require highly specialized certifications and eligibility criteria. There is no indication whatsoever, in the SEIS or elsewhere to our knowledge, of how many of these jobs will be sourced from these communities, or on what timeline.	Section 3.4.1.3 of the DEIS provided projections of Proposed Action job creation in southwest Massachusetts, including types of jobs, projected salary ranges, and the estimated number of operational jobs that would be located on Martha's Vineyard, and noted the local hiring plan that Vineyard Wind would implement (Section 3.6.2 of the FEIS.) As discussed in Appendix D, the Local Hiring Plan to be prepared by Vineyard Wind will provide more details about the share of Project-related jobs sourced from local communities. Section 3.6.1 of the FEIS has been updated with information on the offshore wind job training program at Bristol Community College, and efforts between the New Bedford Port Authority, MassCEC, and Vineyard Wind to develop supply chain and support opportunities, with a focus on fishing businesses.
13185-058	The fishing industry—for which there is documented workforce information—supplies significant employment, if not the majority of jobs, in environmental justice communities up and down the coast,	Section 3.4.1.3 of the DEIS provided average wages for the commercial fishing industry and discussed the industry's likely employment of a workers who meet environmental justice "low income" criteria. The DEIS also provided county data indicating the relative size of the commercial fishing industry (including support businesses) as a portion of the County economies. Section 3.9 provides a detailed discussion of impacts on the commercial and for-hire fishing industry. The DEIS data is updated and included in Section 3.6.1 and 3.7.1 of the FEIS. No changes to the FEIS are warranted.

Index	Comment Text	Response
Number 13186-001	To rectify these harms, a just transition from our current carbon emitting	Thank you for your comment.
	energy systems to more environmentally-informed energy systems is direly	
	required. I have learned of the many socio-economic and environmental	
	benefits the offshore wind industry brings to our region and country. This	
	to recover economically improve our citizens guality of life and create	
	opportunity for industrial growth with holistic environmental health more at	
	the forefront, where it belongs.	
13193-001	I am surprised to learn that the United States Government is considering to	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore
	another off shore wind farm like Vineyard Wind to be built after knowing the	wind development on commercial and for-hire fisheries. Section 3.10 and
	harm it would cause to our fishing industry. Even knowing the negative	Appendix D of the FEIS also discusses voluntary compensation funds related
	impact, there are no plans for compensation or consideration.	to the proposed Project and the methods used to set the value of the voluntary compensation funds. Table 3.10-3 shows a cumulative assessment of
		projected revenue exposure from all potential offshore wind lease areas if a
		harvester opts to no longer fish in the area and cannot recapture that income
		in a different location. Furthermore, the FEIS includes a different
		methodology submitted by RIDEM (3.10-3a) to provide a greater range in the
		impact assessment. The data used in the FEIS are the best data available to
		considers all substantive comments, including public testimony, the relief
		the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct
		result of commercial fishing industry comments.
13193-002	it is well known that ocean wind energy is only effective one third of the time	Thank you for your comment.
	and all electric consumers get is an increased bill	
13193-003	The wind farm developers tell us about job creation, but they do not mention	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard
	that they themselves are European companies using materials made in	Wind I Project for Massachusetts jobs only. While the Vineyard Wind I
	factories in Europe and China, and use ships and crews from Europe. Where is the encounter that US, other than increased costs?	Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for accommiss, and thus are not considered. For
	is the opportunity for the OS, other than increased costs?	Atlantic coast offshore wind development. Section 3.6.1.1 of the FEIS has
		been updated with data from several studies that provide projections of U.S.
		versus foreign economic activity, depending upon the growth of the domestic
		offshore wind supply chain. The FEIS relies upon the projections of jobs and
		investment within the United States only to determine likely impacts within
		the geographic analysis area.
13194-001	I cannot believe that the U.S. government is even considering to allow a wind	Tables 3.10-2 and 3.10-7b of the FEIS allow for a comparison of the total
	farm similar to Vineyard Wind to be built. We know the negative impact it	volume of seafood landed at affected ports compared to seafood harvested

Index	Comment Text	Response
Number		
13194-002	there have been no considerations or compensation planned for the U.S. fishing industry.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Table 3.10-3 shows a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments
13194-003	This harm will be caused, even knowing that ocean energy is only effective about 1/3 of the time.	Thank you for your comment.
13194-004	The European developers will not create new jobs in the quantities they claim, how could they? They will use turbines and cables produced in Europe and China, installed with European ships and foreign crews.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13195-001	I am surprised to learn that my US Government is considering to allow a wind farm like Vineyard Wind to be built, knowing full well the negative impact it will have on our fishing industry without consideration or compensation .	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Table 3.10-3 shows a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.

Index Number	Comment Text	Response
13195-002	In addition, wind energy is known to be effective about 1/3 of the time! US consumers will only get larger energy bills from this wind farm.	Thank you for your comment.
13195-003	The Wind Farm company tells us all about job creation. Why don't they tell us that the farms are made with equipment made in Europe and China using European ships, foreign materials and European crews. Where do Americans see the benefit?	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13197-001	I am writing in response to the consideration for a wind farm like Vineyard Wind to be built knowing full well the damage it would cause to our nation's fishing industry. Have you considered what this will do to their industry and US food supply as well as job loss?	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries and Section 3.7 discusses impacts on employment and economic activity in the commercial fishing industry. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Table 3.10-11 shows a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments. Additionally, FEIS Tables 3.10-2 and 3.10-7b allow for a comparison of the total volume of seafood landed at affected ports compared to seafood harvested just from the Vineyard Wind Development area.
13197-002	Wind energy is known to be effective only about one third of the time of the time, all we will see is increased electric bills.	Thank you for your comment.
13197-003	Developers keep talking about creating American jobs, but how? The turbines and cables are made in Europe and China. They will use European ships, foreign materials and European crews. They get the work, we get the bills.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S.

Index	Comment Text	Response
Number		
		versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13198-001	Foreign companies are being considered to build Wind Farms using foreign labor and foreign materials. Where are the jobs and opportunity for American workers and American factories?	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13198-002	It is well known that ocean wind energy is effective less than half of the time. All we will see is increased bills for consumersIt has not been proven that these wind farms will reduce the electric cost, in fact we will see increased costs.	Thank you for your comment.
13198-003	These Wind Farms will have a negative impact on our fishing industry. The Commercial fishing industry is critical to America for not only food supply but employment of many. Has there been consideration and compensation for the fishing community?	Section 3.10.1.1 and 3.10.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries and Section 3.7 discusses impacts on employment and economic activity in the commercial fishing industry. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13199-001	This will cause harm to our domestic commercial and recreational fishing industries. What considerations have been made for the fishing industry, how will they be compensated?	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all

Index Number	Comment Text	Response
		substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13199-002	It is known that wind energy from ocean wind turbines is only effective about 1/3 of the time. Our electric bills go up, not down.	Thank you for your comment.
13199-003	The wind developers talk about job creation but they forget to tell us that the factories making the turbines and cables are in Europe and China and they use European ships and crews to install and maintain.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13200-001	I am writing because I am astonished that our US Government is considering to allow a wind farm like Vineyard Wind to be built while knowing the harm and devastation it will cause to our domestic fishing community and Industry without any consideration or compensation.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13200-002	The developers talk about job creation, yet forget to tell us they will be using European crews, ships and materials to build these wind farms which produce energy about 2/3 less effectively than stated. Oh yes, and they are European developers so all Americans will see is big bills.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13201-001	It is well known that ocean wind energy is only effective about a third of the time and electric bills go up, not down.	Thank you for your comment.

Index	Comment Text	Response
Number		
13201-002	The fishing industry will lose revenue and jobs, has any consideration or compensation been developed for our Americans?	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries and Section 3.7 discusses impacts on employment and economic activity in the commercial fishing industry. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13201-003	The Wind Developers talk about creating American jobs but are foreign companies using foreign workers and foreign supplies and equipment. This does not have any positive impact on us, they get the work, we get big bills.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13202-001	I write to you in strong support of the Vineyard Wind 1 projectThe offshore wind industry offers tremendous potential to create thousands of jobs, secure the United States' energy future, and supply reliable power to millions of homes and businesses.	Thank you for your comment.
13202-002	Advancing Vineyard Wind 1 is the first step in what could be a transformative industry for New England and the whole United States. This approval will unlock the offshore wind industry and usher in a new era of manufacturing and energy independence. Analysis by the American Wind Energy Association (AWEA) concludes the offshore wind industry could support over 83,000 US jobs by 2030. In the wake of a global pandemic that has left millions of Americans unemployed, the offshore wind industry is poised to become a cornerstone of our recovery.	Thank you for your comment.
13202-003	The industry has already begun investing in the US. We at MHI Vestas have invested \$35 million in a gearbox testing facility at Clemson University. Last year we opened our first US office in Boston, MA, and we continue to grow	Thank you for your comment.

Index Number	Comment Text	Response
Number	our team. Advancing the Vineyard Wind 1 project will accelerate the growth not only of MHI Vestas, but of the entire offshore wind industry.	
13202-004	Offshore wind has the power to revolutionize the US energy sector, put thousands of Americans back to work, and supply clean, reliable, and affordable domestic power to our families and businesses.	Thank you for your comment.
13203-001	I am surprised that the US Government would consider to allow a wind farm like Vineyard Wind to be built all while knowing the negative impact it will have on our country's fishing industry without any consideration or compensation of the harm it would cause.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13203-002	It is well known that all the electric consumer will get out of the wind farm is an increased electric bill as ocean wind energy is only effective one third of the time.	Thank you for your comment.
13203-003	The wind developers talk about job creation but yet forget to tell Americans that the factories, crews and ships are all foreign and all Americans will get out of this is higher bills.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13204-001	LFF strongly supports Alternative G, No Action, at this time, in the Supplement to the Draft Environmental Impact Statement (SEIS) and requests the Bureau of Energy Management (BOEM) to immediately implement a 5 year moratorium on the development of offshore wind energy projects because the process of developing wind energy in the Exclusive Economic Zone (EEZ) has been fraught with improper planning, mismanagement, and total disregard for current stakeholders whose livelihoods and fishing communities depend on their continued safe operations in areas that BOEM has misguidedly leased to wind energy companies for development. Alternative G, No Action is supported by the	Thank you for your comment.

Index Number	Comment Text	Response
Trumber	recognition in the SEIS that there will be major negative impacts on commercial fisheries and scientific surveys and research due to the cumulative impacts in the foreseeable future from the development of 17 commercial and 1 research identified wind energy lease areas from ME through NC covering 1.7 million acres.	
13204-002	Coexistence has to be part of the leasing conditions. There are ways to build wind farms without eliminating fishing access to those areas, but that can only happen when the developers work closely with the fishing industry. Coexistence will require more work but will yield better outcomes.	Thank you for your comment.
13204-003	 The surfclam industry has repeatedly advised BOEM that the following minimum specifications must be followed by wind energy companies when constructing wind energy fields: 1. Vertical structures within the array must be spaced a minimum of 12,000 feet (approximately 2 nautical miles) apart. 2. All vertical structures must be placed in straight rows in both directions. 3. The rows of vertical structures must be pointed into the tide or any other prevailing current along the long axis of the array. 4. Submerged cables must be a minimum of 2 meters below grade and the cables must be run to the bottom of all turbines. 5. Transit zones through wind farms, if necessary, should be 4 nautical miles wide to allow for the safe passage of many vessels in transit through highly used portions of the EEZ. 	The FEIS addresses this comment in Section 3.10.1.1 and 3.11.2. The Final MARIPARS study report (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study report (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Section 3.10.1 and 3.11.2 of the FEIS addresses this comment. According to the AIS data, trawling vessels required 180-degree turning diameters between 0.16 nautical mile and 0.86 nautical mile in good weather and sea conditions (larger diameters would be required in poor weather and sea conditions, and to account for trawling equipment) (COP Volume III, Appendix III-I; Epsilon 2020b). These diameters were found to be possible within the Vineyard Wind turbine layout, where vessels could turn either within a row of WTGs or from one row to another (COP Volume III, Appendix III-I, Epsilon 2020a). The offshore export cables would have a target burial depth of 5-8 feet (1.5 - 2.5 meters). A 4 nautical-mile wide transit lane, Alternative F, is analyzed in the EIS (Section 3.11.5 for Navigation and Vessel Traffic).
13204-004	If Vineyard Wind has seen fit to ignore the needs of the surfclam industry, it has also failed to recognize the major impacts that will be experienced by scientific and research surveys necessary for the sustainable harvest of surfclams and every other species monitored by the Northeast Fisheries Science Center (NEFSC) managed through the Greater Atlantic Fisheries Regional Office (GARFO).	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential impacts on radar. The Final MARIPARS study report (USCG 2020) states that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study report (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study report (USCG 2020). Further, the analysis of AIS data in Section 3.11.1 indicates that many vessels already transit north of the WDA. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly

Index	Comment Text	Response
Number		
		trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. As discussed in Section 3.10.2, Vineyard Wind's proposal includes establishment of a voluntary financial compensation program for documented loss of income due to inability of fishing vessels to access previously fished locations within the WDA and temporary loss of use during cable maintenance. Direct impacts or losses for which claims may be filed include, but are not necessarily limited to, lost or damaged gear associated with fishing within the Project area and lost revenues related to the Project's interference with fishing activities (if any). Section 3.14 of the SEIS addressed potential project-related and cumulative impacts to scientific research and surveys in detail. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. The level of impacts was determined to be major. Therefore, no change to the EEIS is warranted
13204-005	If vertical structures are sited at only I nautical mile apart and contain no acceptable transit zones, the surfclam industry will be faced with a series of exclusion zones all along the Atlantic coast from NC to ME.	The FEIS discusses navigational safety in Sections 3.11.1, 3.11.2, 3.11.4, and 3.11.5. Section 3.11 of the SEIS and Section 3.10 of the FEIS acknowledges that some fisheries would require greater than 1 nautical miles between vertical structures.
13204-006	The lease areas were not selected and auctioned to the potential wind energy developers with the consideration of where commercial fisheries operate and the wind energy companies secured purchase power agreements with the states before engaging with the commercial fisheries which has all resulted in COPs that make commercial fishing in wind energy arrays unsafe and/or prohibitive.	This comment does not concern the adequacy of the FEIS; therefore, no changes to the document are needed. Chapter 1 of the FEIS provides a description of the background that BOEM has undergone for the lease areas. The potential effects of commercial wind lease issuance and site assessment activities offshore Rhode Island and Massachusetts were initially evaluated and presented in an Environmental Assessment in 2013. A link to that document can be found here: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_E https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_E https://www.boem.gov/sites/BOEM%20RI_MA_Revised%20EA_22May2013.pdf That process included public input, and took into account commercial fisheries concerns as well as other factors and use conflict concerns as specified in Section 1.5 of that document. Since that time, BOEM has events were the state of the section o
		interested stakeholders throughout the NEPA process.
13204-007	Any state's commercial fishing industry is a water dependent entity, either within a State's waters or in the EEZ and, by rights, should take precedence over proposed construction projects, especially if non water dependent in the	The comment does not concern the adequacy of this EIS and, thus, no changes to the document are needed. Both the State of Rhode Island and the Commonwealth of Massachusetts have concurred that the proposed activities

Index	Comment Text	Response
Number	EEZ that are likely to impact their continued safe operations. The development of wind farms in the EEZ are not water dependent activities and, as per the priorities of a State's CZM Rules and Program, must accommodate the water dependent activity, in this case, commercial fishing, by minimizing and/or eliminating impacts.	are consistent to the maximum extent practicable with the enforceable policies of the state's coastal management plans. Appendix C, Section C.1.2.1 of the FEIS provides additional information on the Coastal Zone Management Act.
13204-008	A major failing of the wind energy companies has been the inability to display the grid of buried transmission cables that unite the wind turbines within an array. The wind energy companies have only, thus far, displayed options for the transmission of electricity from the turbine grid through substations to the shore. Surfclam vessels using mobile bottom tending hydraulic dredges are particularly susceptible to possible interactions with cables that are not buried deep enough or become exposed following initial installation. The interaction between a bottom tending dredge and a live electric transmission line is a serious threat to the surfclam vessel and this threat goes way beyond the possible loss of a valuable dredge due to entanglement with an underwater cable.	Sections 3.10.2 and 3.10.8 of the FEIS have been updated to discuss potential mitigation measures, long-term monitoring of cable burial and cable protection to help avoid conflicts with bottom-directed fishing gear.
13204-009	at a BOEM outreach meeting on wind energy, BOEM stated that the contractors for wind farms must post sufficient bond to cover the costs of removals of wind farms after they become obsolete or the lease agreement ends for some other reason. BOEM was unable, however, to document who would be the owner of the electric power grid, the underground cables that transmit the generated electricity. The owner of the transmission lines must have similar financial demands for the removal of these submerged cables.	As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and other BOEM requirements, Vineyard Wind would be required to remove or decommission all installations and clear the seabed of all obstructions created by the proposed Project. Vineyard Wind would need to obtain separate and subsequent approval from BOEM to retire any portion of the Proposed Action in place. If the COP is approved or approved with modifications, Vineyard Wind would have to submit a bond that would be held by the U.S. government to cover the cost of decommissioning the entire facility. This explanation has been added to Section 2.1.1.3 of the FEIS.
13204-010	These submerged cables will not only pose a potential risk to the surfclam industry's bottom tending mobile hydraulic dredges while the wind farm is active, but equally important is the fact that in any decommissioning of a wind farm, there must be money obligated to the removal of all submerged cables. It is equally important that all submerged cables also be removed immediately following the decommissioning of any wind farm array.	As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and other BOEM requirements, Vineyard Wind would be required to remove or decommission all installations and clear the seabed of all obstructions created by the proposed Project. Vineyard Wind would need to obtain separate and subsequent approval from BOEM to retire any portion of the Proposed Action in place. If the COP is approved or approved with modifications, Vineyard Wind would have to submit a bond that would be held by the U.S. government to cover the cost of decommissioning the entire facility. This explanation has been added to Section 2.1.1.3 of the FEIS.
13204-011	The cumulative impacts of a string of approximately 2,000 turbines, scattered throughout the series of wind farm arrays from ME to NC, in the foreseeable future will cripple the ability of the NEFSC to continue decades long fishery independent surveys that, by design, must have sampling stations chosen randomly in pre-determined sampling strata that share common	Section 3.14 of the SEIS addressed potential project-related and cumulative impacts to scientific research and surveys in detail. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes

Index	Comment Text	Response
Number	environmental attributes. This inability to collect samples within wind farm arrays will leave data gaps in long term data bases that cannot be simulatedThis is a major consequence for the entire domestic commercial fishing industry which is touted as the world's best managed program under the Magnuson Fishery Conservation and Management Act	to surveys. The level of impacts was determined to be major. Therefore, no change to the FEIS is warranted.
13204-012	What happens to the multitude of organisms in the Mid-Atlantic and New England waters and their associated habitats when over 2,000 pilings are driven into the sea floor and allowed to operate over a 20 year lease period?That is an unfortunate but true assessment of what the cumulative impacts will be on the marine resources and their habitats in the next 20 years or so. The federal regional fishery management councils have put a premium on the essential fish habitat for every stage in an organism's life, from egg to adult, and have mapped essential fish habitat for every species managed in the EEZ. Before and after resource monitoring programs are a necessity when considering the development of any one of these wind farms and those data are lacking.	Section 3.3 of the FEIS has been revised to consider the impacts of the proposed Project in the context of environmental trends and planned actions. This is a single-project EIS, not a Programmatic EIS, and it complies with the requirements of NEPA. The COP includes before-and-after monitoring plans for benthic resources and fisheries.
13204-013	It has become readily apparent over the last three years, at least, to anyone associated with any commercial fishery in the EEZ where wind energy development is being planned that the entire process has not been SMART FROM THE START, as promised by BOEM many years agoHowever, the leasing, bidding, and planned development of a series of lease areas extending from ME to NC are all moving forward in a disconcerted manner where lease areas have been inappropriately outlined and unrealistic power purchase agreements have been made for a leased area that have not taken into consideration major stakeholders whose livelihoods may very well be sacrificed as a result of poor planning and greed.	Chapter 1 of the FEIS provides a description of the background that BOEM has undergone for the lease areas. The potential effects of commercial wind lease issuance and site assessment activities offshore Rhode Island and Massachusetts were initially evaluated and presented in an Environmental Assessment in 2013. A link to that document can be found here: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_E nergy_Program/State_Activities/BOEM%20RI_MA_Revised%20EA_22Ma y2013.pdf That process included public input, and took into account commercial fisheries concerns as well as other factors and use conflict concerns as specified in Section 1.5 of that document. Since that time, BOEM has continued to engage with the commercial fishing industry as well as other interested stakeholders throughout the NEPA process for the proposed Project.
13205-001	Therefore, we are left with no options but to strongly demand that the permitting process be stopped until either the developers layout the wind farms to allow large fishing and clam vessels to operate efficiently and safely with enough space between the turbines.	Thank you for your comment.
13205-002	In addition, to provide adequate turbine spacing that allows the National Marine Fisheries Service's research vessels to conduct finfish, scallop, and clam surveys within the leases areas. The clam survey had been ongoing since mid-1960s and will not be possible if the current turbine spacing is the	Section 3.14 of the SEIS addressed potential project-related and cumulative impacts to scientific research and surveys in detail. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to

Index	Comment Text	Response
Number		
	final layout. If the developers will not make concessions then they need to	assess uncertainties in scientific data collection and implement any changes
	compensate these vessel and IIQ owners for the clams that they have	to surveys. Therefore, no change to the FEIS is warranted.
	exclusive rights to harvest and that they will not be available for them to	
12205 002		
13205-003	The clam industry would like to point out the obvious, if Vineyard Wind is	Thank you for your comment.
	allowed to proceed with	
	construction of their wind farm as currently proposed, that will set a	
	precedent that will undermine	
	every fishery in New England and the Mid Atlantic. The long-term effect is	
	going to have, as BOEM put it, a MAJOR negative impact on the U.S.	
	fishing industry and is a violation of the idea that the U.S.	
1.0.0.0	needs food security.	
13205-004	With the proposed 1 X 1 nautical mile separation of the turbines in both	Section 3.11 of the SEIS and Section 3.10 of the FEIS acknowledges that
	direction, there will be no large fishing vessels operation within the lease	some fisheries would require greater than I nautical miles between vertical
	areas. That is a violation of the entire Magnuson /Steven Fisheries	structures and that offshore wind development could indirectly influence
	Conservation and Management Act, (MSFCMA) These leases would in	regulated fishing effort by influencing the management measures chosen to
	fact create de facto Marine Protected Areas (MPAs} which legally	support fisheries management goals, which may alter the nature, distribution,
	undermines the fishery management council's responsibility under the	and intensity of fishery-related impacts on finfish, invertebrates and EFH
	MSFCMA principle of sustainable food production by protecting the fish	(Table 3.11-1 pg. B-20 of SEIS). Therefore, no change to the FEIS is
	population, fishers, and the marine habitat and providing food and recreation.	warranted.
13205-005	A complete disregard by the developers is managed under Individual	Section 3.10 and Appendix D of the FEIS discuss the details of the voluntary
	Transferable Quotas (ITQ). ITQs are a fishery management tool that gives	revenue compensation funds. Vineyard Wind has established voluntary gear
	the ITQ owners the exclusive rights to the clam biomass. However, if the	loss and revenue compensation funds for fishing interests based in Rhode
	clams are in an area that has become controlled by some other entity other	Island, Massachusetts, and other states, which includes owners and operators
	than the regional councils then the clam fishery cannot fish there for non-	of vessels, vessel crews, shoreside processors, vessel supplier and support
	fishery management reasons, the restricting party must be responsible jar the	services, and other entities that can demonstrate losses directly related to the
1000	harm that they causes. Clam ITQs are a valuable commodity.	Vineyard Wind I Project.
13205-006	The surfclam and ocean quahog fishery represented by this office strongly	The comment does not concern the adequacy of this EIS and, thus, no
	demands that BOEM not Issue any additional permits to any of the wind	changes to the document are needed.
	developers until a fair and reasonable set of rules are put together by all	
	ocean users and BOEM incorporates them into the final COP for every ocean	
10005.005	wind project in the north east Unites States.	
13205-007	The developers say that one by one mile layout is safe to transit even when	The DEIS (Section 2.1.7), SEIS (Section D.1 of Appendix D) and FEIS
	approaching another ship going in opposite direction or meeting in a crossing	(Section C.5 in Appendix C) include a discussion of alternatives considered
	pattern. The fishing industry strongly disagrees. While some of the other	but not analyzed in detail.
	tisheries wanted four NM transit lanes the clam industry suggested that the	
	turbines be spaced in the same pattern but Two X Two NM apart.	
13205-008	interference from the turbines on the ship's radar makes that tool almost	Sections 3.11.1 and 3.11.2 of the FEIS include discussions of potential
	useless when it is needed most. Therefore, all vessels that must steam many	impacts on radar. The Final MARIPARS study report (USCG 2020) states

Index	Comment Text	Response
Number		
Number	miles to navigate around this large wind array in time lost and extra fuel burned and under the worst circumstances Steaming many extra hours cost them time that is only an extra expense and reduced fishing time that equates in less income. So steaming around the wind farms is more expensive and cause lost income, which is a double loss.	that vessel transit lanes that are 0.6 NM to 0.8 NM wide are wide enough to allow vessels the ability to maneuver in accordance with the [International Regulations for Preventing Collisions at Sea 1972 (COLREGS)] while transiting through the MA/RI WEA. Additionally, the Final MARIPARS study report (USCG 2020) states that east-west vessel corridors are wide enough to facilitate the traditional fishing activity in the MA/RI WEA. Additional rationale is provided in the Final MARIPARS study report (USCG 2020). Further, the analysis of AIS data in Section 3.11.1 indicates that many vessels already transit north of the WDA. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. Finally, as discussed in Section 3.10.2, mitigation includes Vineyard Wind's proposal to establish a voluntary financial compensation program for documented loss of income due to inability of fishing vessels to access previously fished locations within the WDA and temporary loss of use during cable maintenance. Direct impacts or losses for which claims may be filed include, but are not necessarily limited to lost or domesed acer accessing with fighting within the Project area and
		lost revenues related to the Project's interference with fishing activities (if
		any).
13205-009	There is no known information what effect [the 1 x 1 NM array] will have on the climate, fisheries, oceanography, Essential Fish Habitats, or marine protect species. However, we know that if they are developed as design it will cause substantial damage to the fishing industry for loss of fishing ground especially for those that fish for shellfish that do not move.	Section 3.4 of the SEIS discusses impacts from the 1 x 1 nautical mile design on finfish, invertebrates, and EFH. Section 3.5 of the SEIS discusses impacts from the 1 x 1 nautical mile design on marine mammals. Section 3.11 of the SEIS discusses impacts from the 1 x 1 nautical mile design on commercial and for-hire fisheries. Therefore, no change to the FEIS is warranted.
13205-010	There are many [federal fisheries] sample stations within the lease area for fisheries and protected species but because of the turbine, spacing the NOAA research vessels will not be able to do their surveys in the areas leave big holes in the data that has been collected for years on most of the species that are found in the area. Because fisheries is managed under a precautionary approach, if data is not validated on a regular basis then it must be assumed the species is not there, which reduces the biomass estimate which then reduces in fin fish or shellfish quotas. This is a very serious and expensive problem for the fishing industry.	Section 3.14 of the SEIS addressed potential project-related and cumulative impacts to scientific research and surveys in detail and discussed the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no change to the FEIS is warranted.
13205-011	the U.S. has neither the equipment nor the skilled workers to build the turbines or install them. While the U.S. could build and install them, it would require a design of all the components parts for the turbines, cables, at sea substations and construction ships. The supply chain here in the U.S. does not exist and there is a great risk in building the construction ship because the	Section 3.6.1.1 of the FEIS references several studies that provide projections of economic investment from offshore wind. The numbers of estimated jobs shown in the FEIS are only domestic jobs, and for the Vineyard Wind 1 Project are specifically jobs in Massachusetts. Referenced studies incorporate varying projections of foreign versus domestic economic activity, depending

Index	Comment Text	Response
Number		
	developers want to install the largest turbines possible but it is very	upon the anticipated growth of the domestic offshore wind supply chain, and
	expensive to build a ship that can construct a 12 MW turbine and then use it	the FEIS consistently uses the base or lower projections of domestic
	to build an 8 MW arrayThe point is that most of the turbines that are going	economic activity in arriving at conclusions. Consideration of the nationality
	to be installed here will come from Europe for at least years while U.S. yards	of the applicants is not required under NEPA and is not necessary to support
	gear up to build the components. The blades must also be made in a factory	the findings in Section 3.6.1.1.
	on the water because they cannot be shipped over land at about 320+ feet in	
	length. Moreover, the shaft bearing is very complex and is about 12 feet in	
	diameter. So at this time all of these turbine parts must be made elsewhere.	
13205-012	There is a lot of hype about wind farms having a near zero carbon footprint.	As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and
	That is not the caseMost of [a turbine's] components are made of steel	other BOEM requirements, Vineyard Wind would be required to remove or
	except for the blades and the cables. All of those components require energy	decommission all installations and clear the seabed of all obstructions created
	generated from mostly fossil fuels to make the steel and then installing the	by the proposed Project. Vineyard Wind would need to obtain separate and
	turbines, substations and cables. Decommissioning the wind farms requires	subsequent approval from BOEM to retire any portion of the Proposed
	will require large amount of energy to transport then melting down the steel	Action in place. If the COP is approved or approved with modifications,
	and finding a place to bury the cablesand the blades, which will also last for	Vineyard Wind would have to submit a bond that would be held by the U.S.
	nundreds if not thousands of years. In the case of the blades, there is no	government to cover the cost of decommissioning the entire facility. This
	materials that can be recycled I herefore, they would put them in a landfill	explanation has been added to Section 2.1.1.3 of the FEIS. All foundations
	or dump them in the deep ocean. Alternatively, leave them on the bottom in	would need to be removed 15 leet (4.6 meters) below the mudine (30 CFR §
	bettom. They may attempt to leave the tower foundation and the apples	Broiget are outside the seene of this EEIS
	where they are if they can get away with it. The government does not have to	Floject are outside the scope of this FEIS.
	where they are in they can get away with it. The government does not have to	
	oilrigs in the Gulf of Mexico	
13205-013	Wind Turbines operate at about 35 percent efficiency so an 800 MW array	Please note that the canacity of an energy facility (MW) is not necessarily the
15205 015	produces about 300 MW per year and in no order of when the wind is going	same as the energy generated at any given time (MWh) A discussion of
	to blow. The result is that conventional power plants must be on line. all of	power plants, generation, and capacity can be found here:
	the time, to carry the power load for the other two thirds of the time when the	https://www.eia.gov/energyexplained/electricity/electricity-in-the-us-
	wind stops blowing. The conventional power plants using natural gas, coal,	generation-capacity-and-sales.php In addition, a detailed analysis regarding
	or nuclear fuel to carry the load most of the time. Therefore, the questions is,	the comparison of energy efficiency of the proposed Project to alternate
	if you build these wind arrays, have you reduced the carbon footprint? The	sources is outside of the scope of this NEPA analysis. BOEM's NEPA
	answer is there is a very small amount of carbon reduction. Nuclear power	process for the proposed Project evaluates the potential effects of an 800 MW
	plants are much more reliable and cleaner with a low carbon overall footprint	facility as presented in the COP as well as a range of reasonable alternatives.
	while providing power to the customer 100 percent of the time.	
13205-014	Is the federal government going to allow the clam fishermen that invested	Section 3.11 of the SEIS acknowledges that some fisheries would require
	millions to purchasing clam ITQs [Individual Transferrable Quotas] to have	greater than 1 nautical miles between vertical structures. It also discusses the
	them taken away by European companies free? The developers have two	potential revenue exposure for the surfclam/ocean quahog fishery and
	options, install much larger turbines spread out to two X two NM or pay the	voluntary compensation agreements (Appendix D). Therefore, no change to
	ITQ holders for the loss of their valuable assets.	the FEIS is warranted.

Index Number	Comment Text	Response
13214-001	As the owner of the port, we foresee an addition of up to 50 positions being created to specifically support the OSW industry. Delays in the Vineyard Wind 1 project will delay these additional positions and slow the progress of the upcoming projects as well. This may also force the developers to look overseas for components to meet their strict timelines.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13214-002	Prior to the delay of Vineyard Wind 1, major international manufacturers and suppliers were moving operations to the United States and existing US suppliers were working to meet the unique needs of the offshore wind industryFurther delay or no action may dampen these efforts and limit local economic investment.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13214-003	If the Department of Interior gets behind this industry now, the potential for additional jobs and economic investment multiplies exponentially, with the potential for hundreds of thousands of jobs throughout the nation from shipbuilders to turbine and cable manufacturing to companies like mine in the Ports and Transportation logistics fields.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13215-001	On behalf of the town of Somerset, as the Board of Selectmen we collectively write to you regarding our strong support of Vineyard Wind's proposed 800-megawatt (MW) wind farmWe also extend our full support to the eerging offshore wind industry in our regionCurrently, the former Brayton Point coal-fired power station is being redeveloped into a world class logistical port and support center for offshore wnd. This redevelopment, along with port upgrades, will revitalize these areas, create new business opportunities, and result in hundreds of new jobs.	Section 3.6.1.1 of the FEIS was updated to include recent information on the redevelopment of Brayton Point as one demonstration of economic activity within the geographic analysis area that has begun in preparation for the anticipated offshore wind industry.
13215-002	Advancement of Vineyard Wind will generate at least 3,600 jobs for local residents, and reduce costs for ratepayers by \$1.4 billion according to the Massachusetts Department of Energy Resources.	Section 3.6.1.1 of the FEIS has been updated to provide more explanation of the job projections provided by Vineyard Wind, which are based on the University of Massachusetts at Dartmouth economic analysis for the COP. The total projected jobs in Massachusetts range from 3,100 FTE job years (base scenario) to 3,600 FTE job years (high scenario). The FEIS analysis relies on the more conservative base scenario (3,100 FTE jobs years. Estimated direct job creation by Vineyard Wind in Massachusetts would include 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS.
13215-003	In a recent report from the American Wind Energy (AWEA), the offshore wind industry will employ more than 80,000 people from North Carolina to Maine, and lead to \$25 billion in economic output by 2030.	Section 3.6.1.1 of the FEIS has been updated to provide additional detail and analysis related to the AWEA report. The FEIS cites the AWEA high scenario estimate of 82,500 FTE jobs supported by offshore wind (direct, indirect and induced) in 2030, as well as the \$25 billion in economic output, based on a projected 30 GW of east coast offshore wind development by 2030. Although the FEIS cites both the low and high scenario projections, the

Index	Comment Text	Response
Number		
		FEIS analysis and impact findings rely on the AWEA lower scenario (20 GW of offshore wind by 2030). The lower AWEA projections are used because these are much closer to BOEM's estimates, explained in SEIS Appendix A, Section A-4, of reasonably foreseeable offshore wind projects, which would result in 22 GW by 2030.
13215-004	Just as important as the economics is the positive impact renewable energy will have on our environment and our efforts to reduce the devastating impacts of climate change. Vineyard Wind 1 will make a significant effort to tackle climate change by avoiding the emission of almost 1.7 million tons of carbon dioxide per year, the equivalent of removing 325,000 cars off the road. These benefits can be multiplied by each new project that is constructed in the near future.	Thank you for your comment.
13215-005	The fishing industry has proposed additional transit lanes of at least 4 nautical miles reflective in Alternative F in the SDEIS, a move that would constrain clean energy production, but not improve navigation. The selection of Alternative F would set a precedent for including all four nautical mile transit lanes that would result in the reduction of approximately 3,000 MW. This would threaten the viability of offshore wind in the region and their ability to address climate change with real meaning.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13218-001	It is very well known that ocean wind energy is only effective one third of the time. All energy consumers will see are increased electric costs.	Thank you for your comment.
13218-002	Job creation is mentioned by the wind developers, yet they fail to tell Americans that the jobs will be filled by European crews on European ships, using turbines and cables made in factories in Europe and China. Americans will only see increased energy costs.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13219-001	It would not only harm our domestic fishing industry but our food supply as well. This negative impact has not been addressed with the fishing community; there are no plans for compensation or consideration for the harm which will be caused.	Section 3.6.2 of the FEIS notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind.
13219-002	it is well known that energy from ocean wind farms is only effective about 1/3 of the time.	Thank you for your comment.

Index	Comment Text	Response
Number		
13219-003	The wind farm developers claim US jobs will be created, but how can they be when the equipment will be made overseas and the crews and ships will be European.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13220-001	The Department of Interior's decision to delay Vineyard Wind's final permits last year reverberated through the entire industry and had a chilling effect on the industry's investment capabilities. The SEIS does not factor this into its cumulative analysiscompanies need regulatory and market certainty in order to justify investment in new markets and [a delay] would be sending a signal that [the US] is not yet ready to get serious about offshore wind.	Chapter 1 of the FEIS has been updated to specify that approval of the first commercial-scale offshore wind facility in the US could lead to increased developer confidence and a mature supply stream, which would translate to additional economic and employment opportunities in the region.
13220-002	by requiring additional transit lanes through projects and reducing capacity to develop lease areas to their full extent, BOEM is effectively reducing the industry's opportunities for investment, which will translate to lost economic benefits and jobs for the US overall.	Chapter 1 of the FEIS has been updated to specify that approval of the first commercial-scale offshore wind facility in the US could lead to increased developer confidence and a mature supply stream, which would translate to additional economic and employment opportunities in the region. Additionally, Section 2.5 of the FEIS provides a description of BOEM's preferred alternative. The SEIS as well as Section 2.1.5 of the FEIS describes the technical and practical challenges that could result if Alternative F were implemented. Section 3.7 of the SEIS and Section 3.6 of the FEIS discusses potential impacts on economics and employment.
13221-001	It would knowingly hurt the U.S. fishing industry and there has been no consideration or compensation discussed for them.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13221-002	Ocean Wind Energy is known to not be very effective, in fact, it is only effective one third of the time.	Thank you for your comment.

Index Number	Comment Text	Response
13221-003	the wind farm developers claim jobs will be created, but how can they be created here when the turbines, cables and other materials are made in foreign factories and the installation and maintenance crews are from Europe with European ships.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13222-001	What consideration has been made for the fishing industry, who will see significant job loss and lower food supply. How will they be compensated?	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries and Section 3.7 discusses impacts on employment and economic activity in the commercial fishing industry. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13222-002	it is well known that ocean wind energy is only effective about one third of the time.	Thank you for your comment.
13222-003	Consumer's electric bills have gone up in cost, not decreased as the developers claim.	Ratepayer costs depend on numerous variables beyond the scope of the EIS.
13222-004	Another claim is about increased US jobs, yet the wind developers are European, use European and Chinese cables and turbines and European ships and crews. It sounds like the developers get the work and all we are stuck with is the bills.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13224-001	This letter is in response to the US Government's consideration to allow a wind farm like Vineyard Wind to be built, knowing full well the harm it will	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and

Index	Comment Text	Response
Number		
	cause to our country's fishing industry without compensation or consideration for those affected.	Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13224-002	The wind developers talk about job creation, but the job creation will not be for Americans. The wind developers are European companies using their own crews and ships. The turbines and cables are made in factories in Europe and China, not the United States.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13224-003	Since we know that ocean wind energy is only effective 1/3 of the time, all Americans will see is increased costs.	Thank you for your comment.
13225-001	It is surprising to learn that the US Government is considering to allow yet another off shore wind farm like Vineyard Wind to be built, knowing full well the harm it would cause to our fishing industry with no plans for compensation or consideration.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Table 3.10-3 shows a cumulative assessment of projected revenue exposure from all potential offshore wind lease areas if a harvester opts to no longer fish in the area and cannot recapture that income in a different location. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13225-002	It is well known that ocean wind energy is only effective one third of the time and all electric consumers get is an increased bill.	Thank you for your comment.

Index	Comment Text	Response
Number		
13225-003	The developers talk about job creation, but do not mention that they are European companies hiring foreign crews, buying foreign made materials. All we get is the bill.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13225-004	Please do not issue the permits needed to build the wind farms.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action. Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13226-001	I am surprised the US Government is considering to allow a wind farm like Vineyard Wind to be built knowing the negative impact it will have on our country's fishing industry without compensation or consideration for the harm.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13226-002	The wind developers know, and we know that wind farm energy is only effective one third of the time, yet Americans are supposed to pay the bills for foreign companies to build these farms.	Thank you for your comment.
13226-003	All we will see is increased electric costs while European factories make the materials and European crews build the farms. Please, do not issue the permits.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.

Index	Comment Text	Response
Number		
13227-001	I am surprised that the US Government would consider allowing a wind farm like Vineyard Wind to be built, not offering consideration or compensation to the county's fishing industry while knowing the negative impact it will have.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13227-002	It is also well known that the electric consumer will get an increased electric bill as ocean wind energy is only effective one third of the time.	Thank you for your comment.
13227-003	The wind developers forget to tell Americans that even though they talk about job creation, the factories are in Europe and China, the crews and ships are all European and all Americans will get out of this is higher bills.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside the geographic analysis area for economics and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13231-001	This letter is in response to my surprise to learn that the US Government is considering to allow an off shore Wind Farm like Vineyard Wind to be built, knowing the negative impact it would have to our country's fishing industry with no compensation or consideration.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses the impacts from offshore wind development on commercial and for-hire fisheries. Section 3.10 and Appendix D of the FEIS also discusses voluntary compensation funds related to the proposed Project and the methods used to set the value of the voluntary compensation funds. Furthermore, the FEIS includes a different methodology submitted by RIDEM (3.10-3a) to provide a greater range in the impact assessment. The data used in the FEIS are the best data available to estimate revenue exposure in wind lease areas. Additionally, the FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments.
13231-002	Ocean wind energy is only effective one third of the time and all consumers get is an increased electric bill.	Thank you for your comment.
13231-003	the developers talk about job creation, but do not mention that they are European companies using foreign factories and European crews and ships. All America gets is the bill.	Section 3.6.2 of the FEIS provides estimated job creation by the Vineyard Wind 1 Project for Massachusetts jobs only. While the Vineyard Wind 1 Project could contribute to jobs in other locations, those locations are outside
Index	Comment Text	Response
-----------	--	--
Number		
		the geographic analysis area for economics, and thus are not considered. For Atlantic coast offshore wind development, Section 3.6.1.1 of the FEIS has been updated with data from several studies that provide projections of U.S. versus foreign economic activity, depending upon the growth of the domestic offshore wind supply chain. The FEIS relies upon the projections of jobs and investment within the United States only to determine likely impacts within the geographic analysis area.
13234-001	This domestic supply chain means good paying jobs, investment in hard hit coastal communities and a brand-new economy that promises long term environmental solutions for future generations to come. In short we feel that time is of the essence and offshore wind has the potential to drive economic recovery, stimulate coastal and inland economies, and position the US as a leader in support of renewable energy while creating energy independence.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13234-002	By the Bureau of Ocean Energy Management (BOEM) adopting Alternative D2 BOEM's will move this industry forward reflecting the care your agency has taken to ensure this industry can be a success for all. Now is the time to send a clear message that the US is committed to the Offshore Wind Renewable Energy market.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13235-001	The SEIS for Vineyard Wind's project (VW) has no tabulation nor recognition of health impacts of the project, which are substantial. Improved air quality is referred to in Table A-7, page A-50 under "power generation emissions reduction" but health is never mentioned and absolutely no use is made of the published, peer-reviewed analysis of these health impacts. Throughout the entire SEIS, the words "death" and "mortality" occur hundreds of times, every one in reference to sea creatures not to humans.	Additional health benefits of the proposed Project have been added to Section A.8.1 of the FEIS.
13235-002	Similarly, the Trump Administration's new NEPA regulations make equally clear that "effects" of actions to be evaluated under NEPA must include beneficial effects.	Thank you for your comment.
13235-003	Two peer-reviewed publications give quantitative measures of the health impacts of building offshore wind and the resulting reduction in fossil criteria pollutants due to the displaced power. This is a complex problem as a full treatment requires understanding the time of wind power production, the criteria for dispatching or turning down existing plants, the air dispersal from those plants, and the health impact of those changes in pollution. Of the two studies cited, Kempton et al 2005 estimates for two power plants in Southern Massachusetts, and Buonocore et al 2016 calculates more precisely for an offshore wind plant in Northern New Jersey. Since the 2016 study is more detailed, mortality is calculated here from that study. Both mortality and health impact in dollars are scaled by project size in MW to develop health	Additional health benefits of the proposed Project have been added to Section A.8.1 of the FEIS.

Index	Comment Text	Response
Number	and momentum deaths systed Health seats and selevilated in \$ hazed on	
	cost and premature deaths averted. Health costs are calculated in § based on	
	standard epidemiology measures (Buonocore et al). (Annough the Buonocore	
	users with power region, these enidemiological studies are gainstifically valid	
	and well documented, so such studies should be sited and used to judge	
	impact for the SEIS)	
13235-004	In sum, the Proposed Project over its 30 year lifetime, compared to No.	Additional health benefits of the proposed Project have been added to Section
15255-004	Action will reduce health impacts of power plant pollution by \$1.8 billion	A 8.1 of the FFIS
	and will prevent 255 premature deaths from pollution. These figures are	
	consistent with other enidemiological studies which have documented the	
	cost of power plant pollution, and the corresponding value of displacing that	
	with low-emission electricity sources. This is not correctly summarized in the	
	SEIS.	
13235-005	In table ES-1, row "Air quality: Direct and Indirect Impacts" Proposed action	Section A.8.1 of the FEIS has been revised to change the impact rating that
	is given as "negligible to minor and minor beneficial". I know of no logic nor	was presented in the SEIS. The FEIS now has a moderate beneficial impact
	moral system that would call saving 255 lives and reducing health impact by	rating based on BOEM's revised assessment and the impact definitions
	\$1.8 billion to be "negligible" nor "minor beneficial". Similarly, the row "Air	outlined in the introduction section of Chapter 3 of the FEIS. BOEM
	quality: Cumulative impacts" gives the impact as "minor", a perplexing way	understands that, individually, impacts could be different for the people who
	to describe a \$51 Billion health benefit, reducing mortality by 7,000 lives.	experience the adverse or beneficial impacts of the proposed Project.
	These descriptions should be replaced with "Major beneficial" in both cases.	
13235-006	The most immediate environmental justice issues flow from the health	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of
	benefits. Based on peer reviewed studies, black and hispanic populations in	fossil fuel consumption and resulting degraded air quality on different racial
	Massachusetts are exposed to significantly more air pollution from power	groups, as well as different income groups, as well as benefits from reduction
	plants (Levy et al). Also, nationally, blacks suffer significantly higher	of fossil fuel power generation displaced by offshore wind energy (including
	mortality from power plant emissions (Madinder et al 2019). Both studies	the proposed Project and other projects).
	show that race is a stronger predictor of exposure and health impact than is	
	income, again confirming that this is an Environmental Justice issue.	
	Therefore, large reductions in power plant emissions, and large reductions in	
	mortality and health impact, as documented in the prior section, have a	
12225 005	corresponding Environmental Justice benefit.	
13235-007	The SEIC, page ES-2, row "Environmental Justice: Direct and Indirect	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of
	impacts" now gives impact as "Negligible to minor, depending on the	Tossil fuel consumption and resulting degraded air quality on different racial
	specific community affected, and beneficial" Based on the employment	groups, as well as different income groups, as well as benefits from reduction
	activity alone, this may be a reasonable impact description. However, the	of fossil fuel power generation displaced by offshore wind energy (including
	existing SEIS does not consider nearin. Per 40 CFR §1508.8, nearin has to be	ine proposed Project and other projects).
	minimized in impacts, as argued above. The Proposed Action Would save 64	
	wold save 1 800 minority lives and reduce health impact on minority	
	communities by \$12 billion. It is difficult to see how this would not be	
	communues by \$12 billion. It is annould to see now this would not be	

Index Number	Comment Text	Response
1 (units et	described as a "Major Beneficial" impact on Environmental Justice, both for	
	the project and the cumulative industry.	
13235-008	The SEIA treats the developer's lease areas (including but not limited to	BOEM's analysis assumes a certain amount of energy production from each
	VW's entire lease area) as "free" space or in other words, as unlimited. Thus	lease area using the assumptions specified in Chapter 1 of the SEIS and FEIS
	the SEIA treats the impact of the first VW project taking more space as	related to the number of turbines that could accommodate each area as well
	having effects on wire etc but not as using up the available space for	as the state demands/goals as described.
	subsequent wind projects. I believe that the amount of space is, in fact,	
	limited. For example, assuming fixed bottom structures, we would run out of	
	ocean space before meeting the applicable load on the Eastern Interconnect.	
	Therefore, the correct analysis is to consider reductions in area to be reducing	
	the amount of wind power eventually developed. Therefore area reductions	
	will have the negative impact of reduced health benefit, proportionately to	
	the amount of power production precluded.	
13235-009	The earlier change from the Proposed Action to alternative D-2 has been	As noted in the SEIS, Alternative F would result in slightly higher emissions
	previously agreed to by the parties. I do not believe this change is consistent	due to increased travel routes and distance for construction and maintenance
	with an objective tabulation of the benefits and costs to all parties, including	vessels. Section A.8.1 of the FEIS has been updated to state that
	the developer, residents on land breathing air, fishermen, and other ocean	implementation of Alternative F would have diminished benefits in
	users. I believe the Proposed Action would have represented a preferable	comparison to other action alternatives. The health and climate benefits
	alternative. However, since that has already been accepted by the parties, I	associated with Alternative F would be less than Alternative A and result in
	here compare the benefits and costs of Alternative F with Alternative D-2,	diminished health and climate benefits and premature deaths avoided
	which now seems to be the question at hand. I only consider Alternative F	commensurate with the reduction in future offshore wind capacity.
	with 2 nm spacing, as the very wide 4 nm spacing seems unlikely to be	
	seriously considered. Because ocean space is not infinitely expandable, and	
	because this is a cumulative environmental impact statement, removal of 16	
	turbines, for Alternative F at 2 nm, would reduce the benefit by 16/106 or	
	15%. Benefit reduction will occur either in this Proposed Project if the	
	necessarily be smaller by 16 turbines. In either case, the reduction in benefit	
	is the same 15% reduction in benefit	
13235-010	The cumulative impact of requiring transit lanes also has a direct impact in	Sections 2.2.2 and the discussion of Alternative F for multiple resource areas
15255 010	reducing the size of the initial project and/or reducing the cumulative size of	in the FEIS have been revised to note that Alternative F may reduce the
	all projects due to limited ocean space. Therefore Alternative E diminishes	capacity of offshore wind power generation in the RI and MA Lease Areas
	the goals of EO 13783 of March 28, 2017 "to promote the clean and safe	eupuerty of offenere while power generation in the fer and hirt Deale frieds.
	development of domestic energy resources, including renewable energy"	
13235-011	Another type of impact of Alternative F is that it imposes a unexpected cost	Section 2.5 of the FEIS has been added which includes the agency-preferred
	of business, reduces revenue, and/or increases uncertainty of disruptive	alternative.
	changes during the EIS process. For this reason, it risks further investment in	
	the industry, with very large costs.	

Index	Comment Text	Response
Number		
13236-001	Dramatically powerful Offshore wind is now being developed beyond the	Section 3.6.2 of the FEIS addresses the existing workforce of marine workers
	horizon line, off the SE MA coast and though Gloucester is 230 miles away	as an experienced resource with relevant skills for offshore wind
10000	from it, we are close enough to once again employ our unique seafaring skills	development. The SEIS also included this information.
13238-001	I have great fears about how this works and what benefit it will actually	Thank you for your comment.
	provide to us. I reviewed the SEIS and was surprised at the lack of	
	involvement by the BOEM in overseeing the wind development, it is	
	apparent with the leases that have been accepted so far.	
13238-002	When the leased areas south of Martha's Vineyard are fully populated with	Thank you for your comment.
	wind turbines at one NM apart it will effectively shut down all vessels from	
	the area. These vessels include federal research vessels, tugs and barges, mid-	
	size and larger ships and most mid-size and larger fishing vessels from	
	fishing. How is the BOEM validating the turbines to be so close together that	
	vessels cannot get through the array and the government ships cannot do their	
	jobs within the arrays?	
13241-001	the text is so small and dense as to be functionally illegiblefor the	A large print version of the SEIS was posted to the BOEM website. BOEM
	public.	has updated the FEIS to use single spacing for document layout to be more in
		line with the DEIS format.
13241-002	key impact analyses are contained in appendices not in body of the SEIS	BOEM has been granted a 300 page limit for the FEIS which assists with the
	itself, which means reader has to rifle through	culmination of multiple analyses into the FEIS. Even so, in order to comply
		with the page limits in the Department of the Interior's Secretarial Order
		3355 and focus on the impacts of most concern, BOEM had to include tables,
		figures, and analysis of resources in appendices. The information located in
		the appendices is readily accessible and conveniently labeled for the review
		of all interested stakeholders.
13241-003	The SEIS also suffers from systemic analytical deficiencies. For example, the	The definitions for the impact ratings were included in the introduction text
	SEIS categorizes	of Section 3.0 and presented in Tables 3-2 and 3-3 of Appendix B of the
	impacts as negligible, minor, moderate, and major, yet does not explain what	SEIS and have been carried forward to the FEIS.
	those terms mean, how they were derived, or the legal authority on which	
	they are based. Worse, the SEIS does not apply the criteria attached to these	
	designations to the impacts of the project. In other words, the SEIS does not	
	test any particular effect against the "major" impact criteria to detel mine if	
	that effect qualifies for that designation. By failing to apply the evaluative	
	criteria to each impact of the project, the SEIS impedes the public's effort to	
	assess the seriousness of that impact.	
13241-004	The document also fails in its stated purpose of analyzing the impacts of the	BOEM does not agree that with this comment as the SEIS included a detailed
	Vineyard Wind Project in conjunction with the impacts of the other off-shore	analysis of potential effects, including quantitative assessments when
	wind projects currently proposed for the coast of New England and elsewhere	possible. Appendix H of the FEIS includes a discussion of incomplete and
	along the Atlantic seaboard. Regardless of the impact under review - be it	unavailable information for each resources.
	damage to benthic fauna or disruption of marine mammal behavior - the	

Index	Comment Text	Response
Number	SEIS does not provide the basic information necessary to qualify as a NEPA-	
	compliant cumulative analysis.	
13241-005	For example, in its discussion of noise impacts on whales, the SEIS fails to describe quantitatively the existing underwater noise environment within the cumulative impact area near the proposed Vineyard Wind leasehold. Consequently, the reader has no idea whether the existing noise conditions are already disrupting whale behaviors and whether the addition of more than	Appendix D of the FEIS provides and updated discussion of mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including the Use PAM buoys or autonomous PAM devices to record ambient noise in the lease area (before, during, and immediately (within 2 year of operation) after
	600 wind turbines to the area might worsen the situation and damage the whales. Without a clear understanding of the ambient conditions, including ambient underwater noise, there is no way to assess the cumulative impacts of the project and the other off-shore windfarms currently being proposed adjacent to or near Vineyard Wind.	construction), record marine mammal vocalizations, and monitor Project noise including vessel noise, pile driving, and WTG operation. Results must be provided within 90 days of construction completion and again within 90 days of the 1-year and 2-year anniversary of commissioning.
13241-006	The SEIS makes virtually no effort to quantify the actual cumulative impacts of the project. At most, the SEIS makes the unremarkable and unhelpful conclusion that the other off-shore wind projects will have similar impacts to those of Vineyard Wind and that, together, these impacts will be greater than what any single project might generate. Such conclusions are obvious and largely beside the point. The issue to be analyzed and disclosed is whether those cumulative impacts, when subjected to a proper quantitative assessment, are intense enough to cause significant harm to the resource in question	BOEM does not agree that with this comment as the SEIS included a detailed analysis of potential effects, including quantitative assessments when possible. Appendix H of the FEIS includes a discussion of incomplete and unavailable information for each resources.
13241-007	Given that the number of wind turbines has more than tripled since the Draft EIS was prepared and released, the SEIS must make every effort to examine and explain the extent to which these wind arrays, when viewed from a cumulative impact perspective, will affect whales, fish, sea turtles, birds, and other resources.	The SEIS and FEIS fully address impacts from reasonably foreseeable offshore wind development to whales, fish, sea turtles, birds, and other resources.
13241-008	Another structural/system defect in the SEIS is that the document's impact determinations are often conclusory and not derived from any real analysis. Further, the SEIS rarely identifies any technical report or study in support of the conclusions drawn, leaving the reader to wonder how BOEM arrived at those conclusions and whether they are based on scientific evidence or mere conjecture.	The FEIS provides rationale and justification for the conclusions presented.
13241-009	The SEIS states that Table 3.3-1 contains a "detailed summary" of baseline benthic resource conditions within the Vineyard Wind cumulative impact area. (3-11.) Table 3.3-1, however, provides nothing of the sort. (Appendix B, p. B-12.) It merely lists the kind of benthic fauna typically found in sea floors along the Atlantic coast. It provides no information as to the numbers of each benthic species or to their relative abundance. Nor does the Table describe population trends among benthic fauna except to say that according	Section 3.2.1 of the FEIS has been revised to include new data sources on existing conditions of the benthic environment. However, a specific assessment of the impact on any particular species or stock is beyond the scope of this EIS and is not essential to a reasoned choice among alternatives.

Index	Comment Text	Response
Number		
	to data collected between 1990 and 2010, benthic fauna along the Atlantic	
	coast appear to be migrating northward in response to rising water	
	temperature. (101d.) I Other than this oriel and insufficient description of	
	existing beninic conditions in the cumulative impact area, the SEIS provides	
	in baseline information from which to determine the extent of the project's	
12241 010	Individual or cumulative impacts on beninic resources.	
13241-010	Next, the SEIS indicates that the wind turbine foundations will result in	Sections 5.2.1 and 5.2.2 of the FEIS have been revised to discuss the timing
	Deninic mortality covering approximately 2,495 acres. According to the	and dynamics of the recolonization of affected areas. Sections 5.5 and 5.4 of
	SEIS, nowever, "[t]ne affected areas would likely be ecolonized in the short	the SEIS discussed impacts on food webs and local ecosystems.
	term." No evidence is cited in support of this conclusion. Further, the SEIS	
	does not examine the extent to which impacts on benthic resources will affect	
12241-011	marine animals further up the trophic ladder.	
13241-011	With regard to cumulative impacts on benthic fauna, the SEIS states that	Section 3.3.2 of the SEIS discussed the intensity and extent of impacts when
	[t]he cumulative impacts of the Proposed Action when combined with past,	they differed from those discussed in Section 3.3.1. Therefore, no change to
	present, and reasonably foreseeable activities would be of similar types as	the FEIS is warranted.
	described in Sections 3.3.1.1 and 3.3.1.2, but may differ in intensity and	
	extent." (3-16, emphasis added.) The highlighted text shows that BOEM does	
	not understand what a cumulative analysis is supposed to include. It is not	
	enough to identify the types of impacts that might occur; nor is it enough to	
	say that the project will contribute to the cumulative effects on a given	
	resource. Instead, a proper cumulative analysis must examine the "intensity"	
	and "extent" of those impacts - the very thing the SEIS fails to do.	
13241-012	Finally, Figure A.7-3, entitled "Benthic Geographic Analysis Area", uses a	The geographic analysis area for benthic resources is based on the locations
	purple line to mark the area evaluated for impacts to benthic resources. This	that could be affected by the Proposed Action. Therefore, no change to the
	area, however, fails to include most of the wind-farm leaseholds to the west,	FEIS is warranted.
	south, and east of the Vineyard Wind project. By using such a truncated	
	study area, the SEIS underreports the cumulative impacts on benthic	
10041 010	resources, resulting in a violation of NEPA.	
13241-013	In its discussion of cumulative noise impacts on fin fish, the SEIS indicates	Section 3.4 of the SEIS addressed the intensity and extent of noise impacts
	that "the risk of injury or mortality is expected to occur over approximately	likely to result from noise from the Proposed Action and other planned
	12,102 acres." (3-22.) The SEIS, however, does not state whether this is	actions; these impacts are described in more detail than by distance or area
	considered a minor, moderate, or major impact. The SEIS then indicates that	alone. The SEIS and FEIS use summary terms for impact levels, as defined in
	noise from project-related pile driving could disrupt spawning activity,	Table 3.1-1 of the DEIS, only for impacts of the Proposed Action and other
	resulting in reduced reproductive success among certain fish species. (lbid.)	planned actions, not for the No Action Alternative. Therefore, no change to
	Again, however, these statements are very general and do not disclose	the FEIS is warranted.
	whether the impacts identified are minor, moderate, or major.	
13241-014	the SEIS does not explain what constitutes a negligible, minor, moderate, or	The SEIS defined impact levels in Table 3-1 in Appendix A, which is also
	major noise impact on fin fish, so those words are meaningless. Second, even	included in the FEIS. Therefore, no change to the FEIS is warranted.
	if the SEIS did include some definition of these terms or provided the criteria	

Index	Comment Text	Response
Number		
	that would trigger any of those definitions, there is no evidence that the SEIS	
	applied them in this case. That is, there is no indication that any evaluative	
	criteria were applied with respect to noise impacts on fish; so, there is no way	
	to test whether the EIR's conclusions are valid or arbitrary. Ultimately, the	
	reader is left to wonder whether the project's cumulative noise effects on fin	
	fish are serious enough to warrant mitigation or alternatives to the wind	
	arrays currently being proposed.	
13241-015	The SEIS also acknowledges that the wind turbine structures, including their	The SEIS defined impact levels in Table 3-1 in Appendix A, which is also
	foundations, will alter sea currents and obstruct the movement of some	included in the FEIS. Therefore, no change to the FEIS is warranted.
	migratory species, such as summer flounder, monkfish, and lobster. (3-23-3-	
	24.) Nevertheless, the SEIS concludes that the project's contribution to these	
	impacts are negligible to moderate, and even indicates that the wind turbines	
	could have a "moderate beneficial" effect on fish. Again, however, the SEIS	
	fails to articulate the criteria which establish whether an impact is deemed	
	negligible or moderate or major; nor does the SEIS attempt to apply any such	
	criteria to the impact in question. Instead, the SEIS provides only conclusory	
	statements void of support or analysis.	
13241-016	The SEIS provides little information on the current status of the NARW. It	A detailed discussion of current marine mammal distribution and occurrence
	does not discuss population trends, current whale numbers, or the most recent	in and around the Vineyard Wind 1 WDA was provided in Appendix E of the
	data on threats to the species. Nor does it identify the migration routes that	SEIS. A discussion of current marine mammal distribution as well as
	NARW typically use or investigate whether those routes have changed over	population size and trends are also provided in the Biological Opinion issued
	time. The SEIS should but does not address recent information suggesting	by NMFS on September 11, 2020. A detailed analysis of impacts to ESA
	that NAR W are remaining off the coast of Massachusetts for longer periods	listed species, including the NARW, is provided in the revised BA that was
	than previously assumed. Consequently, the SEIS's analysis of cumulative	submitted to NOAA, which can be found at the following link:
	impacts on the NARW lacks context and hovers untethered to any	https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional
	understanding of existing conditions.	information regarding impacts to ESA listed species is provided in the
		Biological Opinion issued by NMFS on September 11, 2020. As discussed in
		the Biological Opinion issued by NOAA (NMFS 2020), no population level
		effects or reduced whale numbers are expected to occur as a result of the
		proposed Vineyard Wind 1 Project. Further, take of whale species is expected
		to involve harassment and some injury to a limited number of individuals
		during the course of pile driving activities. No other take of marine
		mammals, including NARW, is expected to occur as a result of the project.
		Project-specific ESA consultations will be required for all future offshore
		wind development. Monitoring and mitigation requirements for other future
		offshore wind development may be driven by lessons learned from the
		Vineyard Wind 1 Project, but will be part of a separate decision making
		process.
13241-017	BOEM had failed to evaluate the project's noise impacts on whale	Section 3.3.7.2 of the DEIS and 3.5.1 of the SEIS provide a discussion of
	communication and echolocation, as such impacts could greatly affect the	auditory masking. Further, a detailed analysis of impacts to ESA listed

Index	Comment Text	Response
Number		
	whale's ability to locate prey, avoid vessels, find mates, and navigate hazards along their migration routes. The SEIS, unfortunately, does not cure this deficiency. Nothing in the SEIS examines the cumulative impacts of the various offshore wind projects on whale communication and echolocation. Instead, the SEIS focuses almost exclusive on project-related pile driving noise and its ability to physically damage whales	marine mammal species, including the potential impacts arising from behavior avoidance during construction is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding masking impacts as a result of the Vineyard Wind 1 Project is provided in the Biological Opinion issue by NMFS on September 11, 2020. As described in the Biological Opinion, communication between animals within and located on different sides of the Project area could be intermittently masked as vessels are transiting through the area on a daily basis. This masking is expected to last intermittently while animals remain in the area. Since the greatest amount of vessel traffic will occur concurrently with pile driving activities, whales may choose to leave the area during construction. In either scenario, some short-term harassment is expected to occur due to vessel operations or pile driving during construction. As described in the Biological Opinion, "even if masking were to interfere with mother-calf communication in the action area, we do not anticipate that such effects would result in fitness consequences given their short-term nature"
13241-018	SEIS suggests that the NARW's willingness to use "avoidance behaviors" to steer clear of piling driving activities is one reason why the project's noise impacts on whales would be manageable. (See, SEIS, p. 3-34). This, of course, begs the question - How do these "avoidance behaviors" conflict with or otherwise affect the whale's normal life-cycle activities? The SEIS does little to address this issue.	Section 3.3.7.3 of the DEIS discussed the potential impacts of behavioral avoidance during construction activities. Further, a detailed analysis of impacts to ESA listed marine mammal species, including the potential impacts of auditory masking is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional discussion regarding the consequences of avoidance behaviors is provided in the Biological Opinion issued by NMFS on September 11, 2020. Finally, the Sections 3.5.1 and 3.5.2 of the SEIS discuss the consequences of avoidance behaviors. Therefore, no change to the FEIS is warranted.
13241-019	Yet, the SEIS does not provide any measurement of existing underwater noise, so one is left to wonder what additive effect the proposed wind projects will have. Without an accurate baseline, the impact analysis is largely abstract and meaningless. Put differently, a cumulative analysis, by definition, means assessing a project's impacts in combination with (i) existing impacts and (ii) impacts that are reasonably foreseeable. The SEIS fails this basic requirement.	Appendix D of the FEIS provides and updated discussion of mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including the Use PAM buoys or autonomous PAM devices to record ambient noise in the lease area (before, during, and immediately (within 2 year of operation) after construction), record marine mammal vocalizations, and monitor Project noise including vessel noise, pile driving, and WTG operation. Results must be provided within 90 days of construction completion and again within 90 days of the 1-year and 2-year anniversary of commissioning.
13241-020	Along these same lines, the SEIS does not discuss zooplankton (copepods, including krill) abundance off the New England coast. This information is critical, given that zooplankton is the NARW's primary food source.	Section 3.3.7.1 of the DEIS and Section 3.5.1 of the SEIS discuss zooplankton abundance and distribution in the region and the importance of these species for many fish species and NARW. Further, a detailed analysis

Index	Comment Text	Response
Number		
		of impacts to ESA listed marine mammal species, including a discussion of zooplankton abundance and distribution is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding consequences of zooplankton impacts as a result of the Vineyard Wind 1 Project is provided in the Biological Opinion issued by NFMS on September 11, 2020. Therefore, no change to the FEIS is warranted.
13241-021	It is a virtual certainty that the Vineyard Wind project, in conjunction with the other offshore wind projects being proposed, will reduce forage opportunities for the NARW, further driving the species toward extinction. Yet, the SEIS does not discuss this issue.	Section 3.3.7.1 of the DEIS and Section 3.5.1 of the SEIS discuss zooplankton abundance and distribution in the region and the importance of these species for many fish species and NARW. Further, a detailed analysis of impacts to ESA listed marine mammal species, including a discussion of zooplankton abundance and distribution is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding consequences of zooplankton impacts as a result of the Vineyard Wind 1 Project is provided in the Biological Opinion issued by NFMS on September 11, 2020. As discussed in the Section 3.5.2 of the FEIS and in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, as discussed in the Biological Opinion, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals is expected to occur as a manual of the proposed Vineyard Thoragore are adverse to the FEIS is uparented.
13241-022	noise impacts on whales and it also discusses the impacts of underwater structures (wind turbines) on whales, but these analyses are never combined. In other words, the Vineyard Wind project (and the other offshore wind farms) all generate noise impacts and they all place new, large structures within the existing underwater environment. Both types of impacts have the potential to adversely affect whales in a cumulative/additive way, but the SEIS does not address these impacts from this perspective. Instead, the impact analysis is atomized, with each impact type treated as if it were in a vacuum, cut off completely from other impacts. Such an approach defeats the entire purpose of a cumulative impacts assessment.	As pointed out by the commenter, a variety of anthropogenic noise sources related to the offshore wind development was discussed in Section 3.5.1 and 3.5.2 of the SEIS and Sections 3.4.1 and 3.4.2 of the FEIS. Each of the noise sources was analyzed and an impact rating was assigned. However, at the conclusion of the of the noise section, all noise sources collectively were assigned an overall impact rating. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Also discussed in the Biological Opinion are the potential effects to copepods and other prey items of marine mammals.

Index	Comment Text	Response
Number		
13241-023	the issue is not whether vessel traffic connected to offshore wind projects would be small "relative" to ongoing and future non-offshore activities. The issue is whether the offshore wind farm vessels, when added to the already- heavy boat traffic in the affected area, will increase the risk of collision with whales. The SEIS does not address that question.	As described in BOEM's National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf (BOEM 2019a), more than 12,000 vessel calls were made at ports in the North Atlantic. The expected peak of 125-230 vessels associated with offshore wind development, as described in Section 3.5.1 of the SEIS, would represent an approximate 1.0 to 1.9 percent increase in vessel traffic. In reality the increase would be even smaller as the 12,000 vessel calls represent only commercial vessels and does not include recreational vessel trips. In addition, there is currently a high degree of uncertainty regarding the number of vessels, ports to be used, and primary transit routes that future offshore wind developments use. Section 3.4.1 of the FEIS has been updated to reflect this information. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no take of marine mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS. These measures include, but are not limited to, use of PSOs, PAM, vessel speed restrictions, and other measures
13241-024	Second, the SEIS provides no evidence as to how many vessels cw-rently enter and cross through the cumulative impact area, so there is no suppolt for the claim that the wind project-related vessels would have "no measurable cumulative impact". In short, BOEM has not measured anything, and thus the entire statement is misleading.	As described in BOEM's National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf (BOEM 2019a), more than 12,000 vessel calls were made at ports in the North Atlantic. The expected peak of 125-230 vessels associated with offshore wind development, as described in Section 3.5.1 of the SEIS, would represent an approximate 1.0 to 1.9 percent increase in vessel traffic. In reality the increase would be even smaller as the 12,000 vessel calls represent only commercial vessels and does not include recreational vessel trips. In addition, there is currently a high degree of uncertainty regarding the number of vessels, ports to be used, and primary transit routes that future offshore wind developments use. Section 3.4.1 of the FEIS has been updated to reflect this information. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no take of marine mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS. These measures include, but are not limited to, use of PSOs, PAM, vessel speed restrictions, and other measures
13241-025	Third, the Jones Act restricts the ability of non-U.S. vessels to serve the offshore wind arrays, which means that many of the vessels needed to support construction, operation, and maintenance of the wind turbines must be based in U.S. ports, significantly increasing the number of vessel-miles	As described in BOEM's National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf (BOEM 2019a), more than 12,000 vessel calls were made at ports in the North Atlantic. The

Index	Comment Text	Response
Number		
	traveled. This, in tum, increases the potential for increased vessel strikes against whales and other marine mammals. The SEIS does not discuss this impact.	expected peak of 125-230 vessels associated with offshore wind development, as described in Section 3.5.1 of the SEIS, would represent an approximate 1.0 to 1.9 percent increase in vessel traffic. In reality the increase would be even smaller as the 12,000 vessel calls represent only commercial vessels and does not include recreational vessel trips. In addition, there is currently a high degree of uncertainty regarding the number of vessels, ports to be used, and primary transit routes that future offshore wind developments use. Section 3.4.1 of the FEIS has been updated to reflect this information. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, no take of marine mammals as a result of vessel strikes are expected to occur due to the implementation of mitigation and monitoring measures outlined in Section 3.4.2 and Appendix D of the FEIS. These measures include, but are not limited to, use of PSOs, PAM, vessel speed restrictions, and other measures
13241-026	What is so striking about the SEIS 's discussion of project and cumulative impacts on NARW is that it fails to refer to much of the recent scientific literature about the plight of the whale. The few technical articles cited in the SEIS are seven to ten years old and thus do not provide information on the recent drops in NARW numbers. The SEIS also includes no data as to how many NARW the Vineyard Wind project, both singly and in combination with other wind projects, is likely to "take" over the 30-year operational life of the wind array. Given that even a single NARW death pushes the species ever closer to extinction, it is imperative that the SEIS examine the "take" issue and disclose the number of NARW that will be lost. Again, however, the SEIS provides no data on this critical issue.	A detailed discussion of current marine mammal distribution and occurrence in and around the Vineyard Wind 1 WDA was provided in Appendix E of the SEIS. A discussion of current marine mammal distribution as well as population size and trends are also provided in the Biological Opinion issued by NMFS on September 11, 2020. A detailed analysis of impacts to ESA listed species, including the NARW, is provided in the revised BA that was submitted to NOAA, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. Additional information regarding impacts to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process.
13241-027	The SEIS does not discuss this issue or evaluate the extent to which Vineyard Wind and the other offshore wind projects could contribute to diminished whale numbers, thereby cancelling the very C02 reductions the wind farms are supposed to provide. In short, the entire Atlantic offshore wind program, including Vineyard Wind, would be counter-productive and self-defeating if	As discussed in the Section 3.4.2 of the FEIS and in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, as discussed in the Biological Opinion, take of whale species is expected to involve harassment and some injury to a limited number of

Index	Comment Text	Response
Number		
	they directly or indirectly cause whale numbers to drop. We would be killing	individuals during the course of pile driving activities. No other take of
	nature's "carbon sink" (i.e., whales) to install a poor manmade substitute,	marine mammals is expected to occur as a result of the project.
12241.020	gaining nothing by the effort but profit for the wind-energy companies.	
13241-028	Another important factor is whale monitoling. It is our understanding that	Section 3.3.7.3 of the DEIS and Section 3.5.1 of the SEIS discuss the use of
	vineyard wind (and pernaps the other windfarm operators) will conduct both	2.2.7.2 of the DEIS and Section 2.5.1 of the SEIS provide a discussion of
	mammala. The SEIS however, does not discuss whether and to what extent	s.s./.2 of the DEIS and Section 5.5.1 of the SEIS provide a discussion of auditory marking. Further, a detailed analysis of impacts to ESA listed
	aerial monitoring will affect these animals. The SEIS also does not disclose	marine mammal species including the potential impacts to ESA listed
	whether aerial monitoring can be effectively performed after certain of the	behavior avoidance during construction is provided in the revised BA that
	whether actual monitoring can be encenvery performed after certain of the wind arrays are installed. As to underwater acoustical monitoring, the SEIS	was submitted to $NOA A$, which can be found at the following link:
	should - but does not - evaluate the extent to which the noise and vibrations	https://www.boem.gov/Vinevard-Wind-Consultation-Documents/ Additional
	of the wind turbines would mask the sounds of whales thereby	information regarding masking impacts as a result of the Vinevard Wind 1
	compromising the monitoring effort.	Project is provided in the Biological Opinion issued by NMFS on September
		11, 2020. As described in the BA, communication between animals within
		and located on different sides of the Project area could be intermittently
		masked as vessels are transiting through the area on a daily basis. This
		masking is expected to last intermittently while animals remain in the area.
		Since the greatest amount of vessel traffic will occur concurrently with pile
		driving activities, whales may choose to leave the area during construction.
		In either scenario, some short-term harassment is expected to occur due to
		vessel operations or pile driving during construction. As described in the
		Biological Assessment, "even if masking were to interfere with mother-calf
		communication in the action area, we do not anticipate that such effects
		would result in fitness consequences given their short-term nature" (NOAA
		2020). The FEIS addresses the issue of aerial monitoring surveys throughout
		Section 3.14 (Other Uses, Scientific Research, and Surveys). Therefore, no
		change to the FEIS is warranted.
13241-029	The Audubon Society reports that wind farms in the United States kill	Section A.8.3.1 of the FEIS includes an updated discussion of Loss et al.
	between 140,000 and T_{1} of T_{1} of T_{2} of T_{1} of T_{2} of	(2013) and the applicability of mortality estimates derived from terrestrial
	s28,000 birds each year. The SEIS puis the number at 234,000 The SEIS	w IGS to olishore w IGS. Several factors as to why potential collision
	that Vineward Wind and the other planned wind arrays will kill 6.0 hirds nor	aut by the commenter and discussed in Sections A 8.2.1 and A 8.2.2 DOEM
	turbine for a total annual loss of 13.045 birds (Λ 60). But then the SEIS	events some level of reef affect to attract fish to the WTGS foundations
	hacks away from this number and claims without study or proof that the	which would increase collision risk to those individuals utilizing the
	2 021 wind turbines currently planned for the Atlantic seaboard would kill	foundations for foraging However, based on the biology of these species
	only 75 marine birds per year. Not only is this number low and unsupported.	most would be flying and foraging well below the Rotor Swept Zone and
	it is hard to square with the SEIS's claim that the wind turbine structures will	collision with operating WTG blades would not be expected.
	attract fish and thereby invite more birds to forage within the wind aiTavs. If	1
	we accept this claim, it is likely that bird mortality will increase well beyond	
	the numbers reported in the SEIS.	

Index	Comment Text	Response
Number		
13241-030	The SEIS also fails to provide a true cumulative impacts analysis with regard to birds. As the SEIS points out, marine and shore birds along the Atlantic Coast are on the decline and face a host of stressors. (A-67.) Nevertheless, the SEIS makes no effort to combine these stressors with the wind farm impacts, so the reader has no means to gauge the true cumulative effect of the project on birds.	Section A.8.3.2 provides an updated discussion of bird use of the Atlantic Flyway along the North American Atlantic Coast. Within the Atlantic Flyway, much of the bird activity is concentrated along the coastline concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). Additionally, as depicted in Figures A.8.3-1 and A.8.3-2 in the SEIS, total avian abundance for species with high collision sensitivity and displacement sensitivity are low in the proposed Vineyard Wind 1 Project area, as well as within all of the offshore wind lease areas on the Atlantic OCS. Additionally, the SEIS discussed two studies of offshore wind facilities in Europe (Desholm 2006 and Skov et al. 2018) that used a variety of monitoring methods to monitor operating offshore WTGs for bird collision mortality. In both cases very little bird mortality was documented. The FEIS was updated to explicitly state these conclusions. Further, Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices
13241-031	Neither the Draft EIS nor the SEIS provide an accounting of the fossil-fuel energy required to produce, install, and operate the wind arrays contemplated under BOEM's Atlantic offshore wind program - energy that would not be expended but for the windfarm projectsThe SEIS does not disclose much less analyze the energy demands associated with material inputs for the wind turbines; nor does the SEIS disclose or analyze the fossil fuel emissions that	The SEIS and Section A.8.1 of the FEIS specify that the energy required during construction, operation, and maintenance activities is more than offset by the clean energy generated over the life of the proposed Project.
13241-032	Will result from producing these material inputs. One of the dirty secrets of wind energy - and one the SEIS keeps very close to the vest - is that wind is unpredictable and wind turbines often sit idle, producing no electricity at all. Consequently, to ensure that wind farms maintain their contribution to the energy grid, the operators must use backup generators to produce electricity. These backup generators use fossil fuels and emit GHGs and other air pollutants. The SEIS does not disclose this fact, does not explain the role that such backup generators play, and does not provide a full, accurate, and cumulative accounting of the GHGs and air pollutants emitted by the backup generators.	The FEIS has been updated to specifically call out emergency generators. The emissions of backup generators are part of the total emissions considered (COP Volume III-B, page 14; Epsilon 2020b). The function of the emergency generators is to allow for protection of equipment and communication with WTGs in the event of an emergency. These generators are not commercial scale, and would not be connected to the energy grid.
13241-033	Even when the SEIS does provide emissions data, the data are not especially helpful in determining the magnitude of the impact. For example, the SEIS indicates that Vineyard Wind and the other wind project will generate 2,215,929 tons of construction-related emissions, much of which will be C02	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS. Vineyard Wind is required to have and is applying for an OCS air permit with the USEPA which includes Prevention of Significant Deterioration.

Index	Comment Text	Response
Number		
	or other GHGs that contribute to climate change. (A-44.) And this 2.2 million-ton figure does not even account for the substantial emissions generated as a consequence of the wind turbine inputs identified by Professor Rees (see above). Yet the SEIS does not put this figure in context or compare it to the purported "reductions" in GHG emissions that the wind farms are supposed to produce. Instead, the SEIS just declares these 2.2 million tons of emissions to be "minor". (Ibid.) The SEIS does acknowledge that Vineyard Wind's construction emissions would include 4,961 tons ofNOx and 122 tons of volatile organic compounds (VOCs), which together form ozone, the one regulated pollutant for which coastal Massachusetts is out of attainment. (See, A-42.) The SEIS, however, does not assess whether such ozone emissions would contribute to any exceedances of federal ozone thresholds.	Other future offshore wind projects will require similar permitting and will require compliance with the Clean Air Act.
13241-034	As for operational air quality/GHQ impacts, the SEIS suggests that most emissions will come from vessels, helicopters, and "emergency generators." It is unclear what the SEIS means by "emergency" generators, but it appears that the SEIS has grossly underreported how often generators will be used and the amount of emissions they will produce.	The FEIS has been updated to specifically call out emergency generators. The emissions of backup generators are part of the total emissions considered (COP Volume III-B, page 14; Epsilon 2020b). The function of the emergency generators is to allow for protection of equipment and communication with WTGs in the event of an emergency. These generators are not commercial scale, and would not be connected to the energy grid.
13241-035	the wind turbines will be 15 to 20 percent larger and taller than was previously disclosed and studied. It is unclear, however, whether the SEIS's visual impacts studies - including the visual simulations - took these increases into account.	The DEIS and Sections 3.10.1 and 3.10.2 of the SEIS addressed the visual impacts of Vineyard Wind 1 wind turbines from shorelines with views of the offshore wind development. Sections 3.9.1 and 3.9.2 of the FEIS have been updated to address new visual simulations provided by Vineyard Wind that provide views of the 14 MW wind turbines as well as simulations of Vineyard Wind 1 combined with other offshore wind development. The simulations can be viewed at https://www.boem.gov/vineyard-wind-cumulative-visual-assessment.
13241-036	In addition, the SEIS provides no photo-simulations as to the nighttime visual impacts of the red strobe lights that will be fixed atop each wind turbine. Given that such lights must be incredibly bright to serve as safety beacons for aircraft, they will certainly be visible from Nantucket and Martha's Vineyard. In fact, the SEIS should (but does not) include visual simulations - day-time and nighttime - from each tourist location on both islands. The need for such visual simulations is especially acute now that the project applicant has decided to increase the height of the wind turbines by more than 100 feet.	Section 3.9.2 of the FEIS has been updated to discuss new visual simulations provided by Vineyard Wind. The simulations show the proposed taller, 14 MW Vineyard Wind turbines and also show combined simulations for Vineyard Wind with other future offshore wind development within the same viewshed. COP Appendix III-H.a (Epsilon 2020d) describes how simulation viewpoints were selected, and discusses how those viewpoints are broadly representative of publicly accessible locations where the Project may be visible. Section 3.10.2.1 of the SEIS stated that Vineyard Wind had committed to use ADLS, which would greatly reduce the time when nighttime aviation lighting is activated. The nighttime simulations for the Vineyard Wind turbines were completed based on the COP submitted in 2017, and do not include the mid-tower lighting that will be required for the taller, 14 MW turbines that are evaluated in the FEIS. The nighttime simulations can be viewed at https://www.boem.gov/vineyard-wind.

Index	Comment Text	Response
Number		Although updated simulations for the taller turbines with mid-tower lighting are not available, Section 3.9.1.1 of the FEIS has been updated to address nighttime views and night sky concerns in greater detail than in the DEIS or SEIS.
13241-037	It will take hundreds of vessels to build, install, operate, and maintain the 2,006 wind turbines discussed in the SEIS. Most of these vessels will be carrying ballast water pulled from locations other than the Atlantic seaboard and thus will be carrying aquatic species that are not native to the local environment surrounding the wind farms. These vessels may, and likely will, discharge some of their ballast water into ocean near the wind a1rnys, potentially introducing invasive, non-native species. The SEIS does not provide an adequate assessment of this impact.	Section A.8.2.2 of the SEIS addressed control measures for non-indigenous species. The SEIS stated, "All vessels would need to comply with the USCG ballast water management requirements outlined in 33 CFR Part 151 and 46 CFR Part 162." The FEIS has been updated to reference Subpart D of 33 CFR Part 151, which specifically addresses Ballast Water Management for Control of Nonindigenous Species in Waters of the United States.
13241-038	The waters off Nantucket are clear and pristine, and the southern shoreline is especially fragile and prone to erosion. The Vineyard Wind project, by itself, will alter current and potentially effect beach sand replenishment, wave size, and sand erosion along Nantucket's coastline. The SEIS does not address this issue on a project-specific or cumulative basis.	BOEM has considered the potential for erosion of shorelines and has determined that there is no evidence that the proposed Project would have any influence on this issue. Appendix E of the FEIS has been updated to include additional information regarding the oceanographic environment, including the potential impacts to mean flows near offshore wind foundations. Information related to potential changes in mean flows provides implications for shoreline erosion. Section 3.3.2 of the FEIS explains that background hydrodynamic conditions would exist approximately 328 feet (100 meters) from each monopile foundation. Appendix E Section E.4.4 of the FEIS discusses cable installation and concludes that no increased potential for shoreline erosion is expected. Appendix E Section E.4.4 of the FEIS also discusses the potential for shoreline erosion from vessel wakes.
13241-039	A cumulative impacts analysis is only as good as the list of projects that it relies on. If the list omits key projects, whether existing or planned, the cumulative analysis suffers and ceases to be legally adequate. In this case, it appears that the SEIS 's cumulative analysis failed to include key wind energy-related projects, such as the Offshore Export Cable Corridor and Anabaric's Southern New England OceanGrid project. To comply with NEPA, the SEIS 's cumulative impact assessment must take these projects into account.	The mentioned projects are discussed in Appendix A of the SEIS and considered in the impact analyses in Chapter 3 of the SEIS, which were carried over to the FEIS.
13241-040	For the reasons provided herein, the SEIS fails to provide a legally sufficient cumulative impacts analysis. It should be withdrawn and its deficiencies corrected. Failing to do so deprives the public and decision-makers of the information they need to properly evaluate the project's environmental effects and determine whether the damage will be worth the project's purported benefits.	The expanded analysis for reasonable foreseeable planned actions complies with CEQ and DOI NEPA regulations, and the approach was detailed in Chapter 1 and Appendix A of the SEIS, as well as in the FEIS.

Index	Comment Text	Response
13244-002	When the leased areas south of Martha's Vineyard is fully populated with wind turbines so close together it will effectively shut down federal research vessels, tugs and barges, mid-size and larger ships and most mid-size and	Thank you for your comment.
13248-001	 1) The economic impact these turbines will have on fishing industry will be severe at least and probably destroy fishing in this area permanently. The lack of baseline data for fisheries surveys shows this project is rushing to start without necessary information. 	Section 3.6.2 of the FEIS notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind.
13248-002	2) Marine Safety is another area lacking so much it should sideline this project until Developer can prove that windmills will not cause one incident period.	The FEIS discusses navigational safety in Sections 3.11.1, 3.11.2, 3.11.4, and 3.11.5.
13248-003	3) Cost of project- both environmental and financial will be high- underwater cables that cannot be ignored what the impact is on marine life. The lack of proper engineering with cable burial, matting and landing sights is a failure waiting to happen. The financial cost to the rate payer world-wide shows cost of generated electricity from windmills to be unbearable.	Ratepayer costs depend on numerous variables beyond the scope of the EIS. The impacts of buried cables on marine life are addressed in Section 3.3.1 of the FEIS and were also addressed in the SEIS.
13248-004	4) For anyone to say that these turbines are "green" has their head in the sand. Just look at what they are made from- almost all material is oil based synthetics.	Thank you for your comment.
13248-005	5) Shoaling around the bases of turbines is another area of concern unless you don't care about the natural contour of ocean floor.	Appendix E, Section E.4.4 of the FEIS, has been updated to discuss seabed impacts at the bases of turbines.
13248-006	6) Marine life below and above ocean-whales are known to be in these areas and it is interesting how a donation can make this concern go silent. Sea birds will be decimated by the blades of turbines in thousands- again silence is deafening.	A detailed discussion of current marine mammal distribution and occurrence in and around the Vineyard Wind 1 WDA was provided in Appendix E of the SEIS. A discussion of current marine mammal distribution as well as population size and trends are also provided in the Biological Opinion issued by NMES on September 11, 2020.
13248-007	This project should not see daylight until ALL concerns are addressed and scientifically proven to show no damage to any of the above.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action. Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13250-001	I'm worried about the Vineyard Wind Project. I'm worried about how it's promising the moon in the the way of cheap power, jobs, massive CO2 reductions and all this at virtually no cost to usWhat has been pushed aside here is the fact that Vineyard Wind is a for profit developer with a built-in incentive to minimize its costs at the expense of future problems for local residents. We shouldn't allow a situation in which some Americans line their pockets at the expense of other Americans, while foreign investors sell their stake and laugh all the way to the bank.	Thank you for your comment.

Index	Comment Text	Response
Number		
13253-001	I am very surprised that our Government is considering to allow a wind farm like Vineyard Wind to be built knowing full well the harm it will cause to our US Fishing Industry without consideration or compensation and yet we will willingly bring foreign crews and companies into the US to build these farms. Not only are these foreign crews and ships, but they are using materials and equipment made in Europe and China. This negative impact will cause nothing except higher bills for American electric consumers.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered (including voluntary compensation agreements that Vineyard Wind has agreed to), has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information. Economic and employment information are included in Section 3.6 of the FEIS.
13254-001	The Department of Interior's decision to delay Vineyard Wind's final permits last year reverberated through the entire industry and related industries who were eager to further the build-out of United States based offshore wind. We urge against adopting Alternative For Alternative G, the No Action Alternative.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13254-002	We also recognize the need to develop new jobs in the wake of the pandemic's economic toll. According to the American Wind Energy Association ("AWEA"), states have set offshore wind procurement goals that will invest roughly \$57 billion in the United States economy by 2030. For the East Coast alone, 30,000 MW of offshore wind energy has the potential to support over 80,000 jobs. If the Department of Interior supports the industry now without undue delay, the potential for economic investment and additional jobs would multiply exponentially throughout the nation.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13260-001	The Department of Interior's decision to delay Vineyard Wind's final permits last year reverberated through the entire industry and had a chilling effect on the industry's investment capabilities. The SEIS does not factor this into its cumulative analysis. The analysis assumes that even without a green light for Vineyard, Wind, industry investment will move forward as planned. This assumption is greatly flawed as companies need regulatory and market certainty in order to justify investment in new markets and the US would be sending a signal that it is not yet ready to get serious about offshore wind.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13260-002	In addition, by requiring additional transit lanes through projects and reducing capacity to develop lease areas to their full extent, BOEM is effectively reducing the industry's opportunities for investment, which' will translate to lost economic benefits and jobs for the US overall. As a company with an interest in investing in the US market, we strongly urge BOEM to reject this Alternative F.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number 13260-003	As we understand according to the American Wind Energy Association	Section 3.6.1.1 of the FEIS has been undeted to provide estimates from
15200-005	states have set offshore wind procurement goals that will invest roughly \$57 billion in the US economy by 2030. If the Department of Interior gets behind this industry now, the potential for additional jobs and economic investment	several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the
	multiplies exponentially, with the potential for tens of thousands of jobs	east coast states that would host offshore wind.
	throughout the nation from shipbuilders to turbine and cable manufacturing to companies like ours.	
13262-001	we recommend that offshore wind facilities should be required to "use the best available technology to monitor bird collisions, identifying birds struck to species to every feasible extent. This must include a means to identify all strikes in all light levels and weather conditions to the fullest extent possible as a way to ensure that the full impact is understood. Collision monitoring should be adaptively managed, adding and/or replacing technology as better systems become available. Collision monitoring should be conducted for a minimum of five years. Associated data must be made publicly available." To date, no single system has yet been verified to meet this need. As such, this will currently require multiple technologies and a combination of collision monitoring and risk assessment to gather data that provide reasonable assurance that impacts are understood. Such assurance minimizes uncertainty and thus will reduce unnecessary and avoidable conflict. The following is a scenario that could provide such reasonable assurance using currently available technology: • Video monitoring to identify individual birds to species that are exposed to the turbines or struck in collisions, as well as to document avoidance rates and flight heights, and • Radar or thermal imaging to quantify the number of birds entering a wind facility and (to a lesser extent) struck in collisions in all conditions (this must have capability to measure altitude to evaluate risk), and • Nanotags and receivers or GPS tags to evaluate risks for ESA-listed species and nocturnal migrants (must have capability to measure altitude to evaluate risk), and	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. At this time, the full suite of mitigation and monitoring measures that will be required as part of the proposed Project are not finalized. Additional mitigation and monitoring measures, including the use of video monitoring, thermal imaging, radar, and/or the deployment of nanotags or gps tags may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. As additional monitoring methods and technologies become available, BOEM could require their use in subsequent approval processes for future offshore development.
	and the seasonal timing of their presence.	
13262-002	We are aware that at both the Block Island and Dominion Energy (Virginia) offshore facilities, multiple wildlife monitoring technologies are deployed. We would expect a greater effort to be expended at Vineyard Wind and other commercial-scale facilities, where bird impacts are likely to be	The Block Island and Dominion Energy CVOW demonstration projects are the testing grounds monitoring and new technologies. Vineyard Wind is preparing a framework for the avian and bat monitoring plan that will build on the lessons learned from these earlier projects. Vineyard Wind has drafted
	proportionately greater.	a framework for their Bird Monitoring Plan which is included in Appendix F of the FEIS. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid.

Index	Comment Text	Response
Number		
		minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post- construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. At this time, the full suite of mitigation and monitoring measures that will be required as part of the proposed Project are not finalized, nor is the scope of these measures. Additional mitigation and monitoring measures and the logistics regarding their deployment may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures, including the use of thermal imaging, radar, or ship based monitoring similar to measures used at Block Island could be considered by decision makers and incorporated into the Record of Decision. As additional monitoring methods and technologies become available, BOEM could require their use in
13262-003	The lack of studies assessing the vulnerability of nocturnal migrant birds to	subsequent approval processes for future offshore development. Section A 8 3 1 of the FFIS includes an updated discussion of collision risk
	collisions with offshore wind turbines is a concerning gap in planning for this new industry. This should be rectified by initiating radar studies at each lease area in spring 2021 (similar to the Avian Radar Project conducted by the U.S. Fish and Wildlife Service in the Great Lakes). These studies should be conducted for a minimum of two years. Data must accurately measure flight height to assess vulnerability to collisionsA study should be completed in the relatively near future using such data in combination with NEXRAD data, and existing data such as that available from Cornell Lab of Ornithology's eBird, ancillary data from offshore locales, and other sources.	to nocturnal passerine migrants. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Willmott and Force 2014).Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures that can refine our understanding of nocturnal migrant use of the Atlantic OCS during migration. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring measures that will be required as part of the proposed Project are not finalized, nor is the scope of these measures. Additional mitigation and monitoring measures, including long-term radar studies and the logistics

Index	Comment Text	Response
Number		
		with Federal and State resource agencies. These additional mitigation
		measures could be considered by decision makers and incorporated into the
122(2.004		Record of Decision.
13262-004	Displacement effects will be longer-term and become more important as	The Massachusetts Wind Energy Area was heavily surveyed with more than
	more facilities are constructed. As such, a plan should be developed to	3 years of surveys (totaling 10 surveys preseason; please see Figure 5 in the
	evaluate these impacts over the next 10-20 years. Baseline data should be	USFWS Biological Assessment). These surveys were used to model the
	collected for a minimum of two years prior to construction of any offshore	displacement (Figure A 8.2.2 in FEIS) clearly showing that relative to
	as possible, and continued until such surveys are precluded by construction	these birds are likely to be present in the WDA, these regults are consistent
	as possible, and continued until such surveys are precluded by construction	these found in a separate analysis for wintering long tailed ducks and white
		winged scoters by White & Veit (2020) Vinevard Wind conducted surveys
		of its lease in 2018 (COP Annendix III-O Ensilon 2020a) and in 2018-2019
		(Vinevard Wind 2019) Vinevard Wind plans to conduct one year of monthly
		pre-construction surveys. Vineyard Wind has drafted a framework for their
		Bird Monitoring Plan which is included in Appendix F of the FEIS. These
		efforts by the developer would add to the strong existing baseline.
13187-01-	First, let's remember the critical nature of this project and of offshore wind in	Thank you for your comment.
001	general, Vineyard Wind 1 is the single most significant step that we in	
	Massachusetts can take to advance the cause of reducing greenhouse gases	
	and to mitigate climate change. Vineyard Wind 1 alone will generate clean,	
	renewable and cost competitive energy for over 400,000 homes and	
	businesses. It will reduce carbon dioxide emissions by more than 1.6 million	
	tons per year. Putting that in more practical terms, that's I the equivalent of	
	eliminating the emissions for 2 325,000 cars. We cannot make significant	
	progress toward eliminating CO-2 emissions without a massive increase in	
	States Offshare wind has the highest notartial to fill that need	
13187-01-	global offshore wind has the highest potential to fin that need.	Thank you for your comment
002	should see the supplemental FIS as a strong positive signal for future	Thank you for your comment.
002	opportunities here.	
13187-01-	The build out of Vinevard Wind 1 alone will create 3,600 jobs in	Section 3.6.2.1 of the FEIS provides estimated economic and employment
003	southeastern Massachusetts. Locally here on Martha's Vineyard, Vineyard	contributions of Vineyard Wind These were also included in the DEIS.
	Wind operations and maintenance center will create 40 to 50 new long-term	Estimated job creation by Vineyard Wind would be approximately 3,100 to
	stable, professional jobs which are intended for Vineyard residents through a	3,600 FTE job years, including 1,100 to 1,550 job years during construction
	local professional development program funded by Vineyard Wind.	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
		during operations. Section 3.6.2 notes that many of the long-term, year-round
		operational jobs would be located on Martha's Vineyard.
13187-01-	There's been a long and important debate around the most practical and safest	The FEIS addresses this comment in Section 3.11.5. The USCG is a
004	way to manage maritime traffic in the area. Many proposals have been	cooperating agency for the FEIS that is the leading agency on navigational

Index	Comment Text	Response
Number	considered, as we just heard in the Q & A period a moment ago, the US Coast Guard has endorsed the one by one nautical mile layout, finding that it will create multiple safe navigation corridors without funneling vessels into congested corridors and without interfering in the Coast Guard's maritime safety and rescue activities. This was an important debate. But now the experts have spoken, we should rely on the Coast Guard's professional judgment and move forward.	matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13187-02- 001	The U.S. is very late to the game and we need to avail ourselves of this very valuable resource. Wind projects off the east coast will be a big asset in helping us reduce the pace of climate change. On the Vineyard, we are looking at ways to use electricity for all our energy needs and to be 100% renewable by 2040. Vineyard Wind and other offshore projects make goals such as ours possible.	Thank you for your comment.
13187-02- 002	I like that Vineyard Wind has responded to the fishing industry and provides the layout to be one by one nautical mile grid, and that the Coast Guard has endorsed this layout. I think option D-2 is adequate as stated by the Coast Guard.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13187-02- 003	I like that Vineyard Wind has incorporated aircraft detection lighting system into their projects, which will make nighttime lighting impacts greatly reduced.	Section 3.10.2.1 of the SEIS stated that Vineyard Wind had committed to use ADLS to reduce the time when nighttime aviation lighting is activated. Therefore, no change to the FEIS is warranted.
13187-02- 004	Vineyard Wind will create 3,600 jobs for local residents over the life of the project. We need jobs on the Vineyard that are sustainable and not reliant on the seasonal and tourist industry.	Section 3.6.2.1 of the FEIS provides estimated economic and employment contributions of Vineyard Wind These were also included in the DEIS. Estimated job creation by Vineyard Wind would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operations. Section 3.6.2 notes that many of the long-term, year-round operational jobs would be located on Martha's Vineyard.
13187-02- 005	And, finally, I heard you say that you've weighed the effects of climate change on the fishing industry and environmental justice communities in terms of what fish will be available or no longer available as climate change continues and ocean waters warm. I think that is correct as I believe what fishermen are able to catch is going to change radically because of climate change, and that's something that seriously needs to be considered.	Thank you for your comment.
13187-03- 001	Without harnessing wind, the most abundant energy resource we've got, we would have to rely on fossil fuel sources and infrastructure that pollute our air and water, exacerbate climate change and disproportionately affect the health and wellbeing a poor and black and brown communities.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).

Index	Comment Text	Response
Number		
13187-03-	This site demonstrates that offshore wind energy can be developed	Thank you for your comment.
002	responsibly while addressing the concerns of wildlife, fishing, and navels.	
	We need Vineyard Wind offshore wind project to move forward. I urge you	
	to approve it.	
13187-04-	So responsibly developed wind power is a key source of clean energy that	Thank you for your comment.
001	will reduce pollution driving climate change. In addition, the offshore wind	
	turbine structures are likely to become fishing hotspots due to the artificial	
	reef effect, just as they have at Big Block Island.	
13187-04-	So responsibly developed wind power is a key source of clean energy that	Section 3.4 of the SEIS discussed the reef effect on finfish, and Section 3.10
002	will reduce pollution driving climate change. In addition, the offshore wind	discussed the potential for recreational fishing opportunities. Therefore, no
	turbine structures are likely to become fishing hotspots due to the artificial	change to the FEIS is warranted.
	reef effect, just as they have at Big Block Island.	
13187-04-	The SEIS has identified certain impact, and we have some concerns that we	Section 3.4 of the SEIS discussed the impacts of noise, EMF, and other
003	heard from recreational anglers about the impacts that include noise from	disturbances to finfish. Therefore, no change to the FEIS is warranted.
	surveys, pile driving during turbine construction, operation and especially	
10105.04	EMFs or electromagnetic fields. Disturbance specifically to fish species.	
13187-04-	And then we've also heard about some disruption of larval transport for	The data used are the best available and reflect the state of the science at the
004	important species like flounder and overall changes in fish species abundance	time of publication of the EIS. Therefore, no change to the FEIS is warranted.
	and distribution. So our best effort to review the existing science agrees with	BOEM continues to fund studies to address concerns raised in public
	the conclusions in the SEIS that most impacts are likely to be temporary and	comments, including larval transport modelling at a regional scale
	highly localizedLarval transport, as I mentioned, we feel that's more likely	(https://www.boem.gov/environment/environmental-studies/renewable-
	to be impacted by changing water temperature and salinity rather than the	energy-research). This is a Project-specific EIS, not a Programmatic EIS or
	presence of the structures. But we should continue to monitor this as more	assessment.
12107.04	projects are developed.	
13187-04-	Particular attention needs to be paid to [lobsters, sharks and rays] species	The SEIS discussed benthic monitoring plans and fisheries monitoring plans.
005	moving forward but concerns raised about the EMF impacts the other	I herefore, no change to the FEIS is warranted.
	species, especially at the population level, don't seem to be supported by the	
	literature. In addition to numerous scientific studies, EMF impacts defy	
	commonsense. And there are numerous sea floor cables across the	
	Northeast, which have not had an identified impact on any of the species	
	distribution or abundance. Larval transport, as I mentioned, we feel that's	
	more likely to be impacted by changing water temperature and salinity rather	
	than the presence of the structures. But we should continue to monitor this as	
12107.04	more projects are developed.	A to
1318/-04-	And also it's important to note that the majority of the wind turbines out there	As was done in the DEIS and the FEIS, commercial fisheries and for-nire
000	will be developed in areas where fishing for highly migratory species is	Tourism also addresses recreational fishing emerturities and retential
	present. So in general, we believe that the recreational lishing impacts should the solit out from commercial in the SEIS and while there are success.	offects. Highly migratery massing are tengeted by both migratery and potential
	lowerlanning issues the impacts are not likely to be at the same lovel. So if	energy and the for him regreational fishery and are therefore governed in the
	overlapping issues the impacts are not likely to be at the same level. So if	anglers and the for-hire recreational fishery and are therefore covered in the

Index	Comment Text	Response
Number		
	you're entanglement, loss and damage is negatively impactful to a for hire recreational vessel, but seem conflated at multiple points in the SEIS. Given overall minimal temporary impact and likely benefits from the reef effect, recreational vessels will see little or no detrimental effects and some positive. The major cumulative effects concern for recreational fisherman is changes in species distribution and abundance by changing habitat types like with the change what fish are found in the wind energy areas and at what time.	respective sections. Within Section 3.10, the impacts on for-hire recreational fishing are distinguished from impacts on commercial fisheries when there are expected differences, such as maneuverability within the WDA or increased opportunities from a greater abundance of structure-oriented species being present near the structures. Additionally, some of the impact ratings for the IPFs and sub-IPFs differ between commercial fisheries and for-hire recreational fishing (e.g. space use conflicts). As stated in Section 3.10 of the SEIS and FEIS, adverse impacts to for-hire recreational fishing would occur during construction, as well as operations (impacts on vessel navigation, gear loss, space use conflicts). Table 3.10-1 of the FEIS has been updated to reflect a minor impact on the for-hire fisheries from gear loss.
13187-04- 007	the SEIS should clarify that any impacts to HMS or higher vessels is likely to be constrained to construction. Because of the reef effects referred to in the SEIS, it is highly likely that the migrating HMS will be attracted to the turbine foundations. And this was clearly witnessed firsthand when Mahi- Mahi at Block Island Wind Farm and when the turbines were placed into service.	Section 3.10.1.1 and 3.10.2 of the FEIS were updated to state that HMS may be attracted to the turbine foundations. As stated in Section 3.11 of the SEIS and FEIS, impacts to for-hire recreational fishing would occur during construction, as well as operations (impacts on vessel navigation, gear loss, space use conflicts).
13187-04- 008	BOEM should consider guaranteed recreational fishing access outside of construction and maintenance as a permit condition. Many developers have assured anglers that this in fact will be the case. But a permit condition will ensure it's guaranteed. This guarantee is essential to ensuring recreational anglers and benefit from the reef effect of the turbine structures.	The impacts to commercial and recreational fisheries are discussed in the Section 3.10 and 3.11of the SEIS. Section 3.10.2 of the FEIS has been updated to state that while temporary restricted access areas (safety zones) may be set up around active construction areas where applicable, BOEM does not have the authority to restrict vessel access to the WDA during operations. In addition, the USCG has stated that they do not intend to restrict access to the WDA during operations. Further, the USCG's authority to establish safety zones only extends to the boundary of the territorial waters of the United States, which is 12 nautical miles from shore and outside the WDA. Offshore wind lease holders are not conferred any rights to restrict access to anything other than their property (infrastructure).
13187-05- 001	Regarding energy benefits, climate change is coming so fast that every country, state, city and town and their inhabitants will take every step available, and as soon as possible to reduce greenhouse gas emissions. This means obtaining our electricity from renewable sources, not fossil fuels. Vineyard Wind 1 will be the first of many offshore wind projects that provide renewable energy through wind power. This project alone will make a substantial contribution to the renewable energy supplied to Martha's Vineyard Island. Under the leadership of Martha's Vineyard Commission, the island is moving on a track to 50% renewable energy consumption by 2030 and 100% by 2040 We can't make our goal without the help of Vineyard Wind. The Commonwealth also has a goal of becoming net zero, carbon neutral, by 2050. This goal can't be achieved either without offshore wind	Thank you for your comment.

Index	Comment Text	Response
Number	energy When energy is also cheen. Vineward Wind will save retenavers more	
	than 1.4 hillion during the first 20 years of the project. We need renewable	
	energy and we need it as fast as we can get it	
13187-05-	Vinevard Wind will provide continuous long term benefit to local	Section 3.6.2 of the FEIS lists the grants and community programs that the
002	employment and local economies and to its partner. Vinevard Power	Vinevard Wind 1 Project is committed to including job training for offshore
002	Vinevard Wind is working with the adults and community and continuing	wind This information was also provided in the DEIS. The FEIS was
	education on Martha's Vinevard, our local Regional High School and Bristol	undated to include the cooperative agreement between Vinevard Wind and
	Community College to train the workforce needed to meet the demands of	Vinevard Power, and the offshore wind training program at Bristol
	this new industry	Community College
13187-06-	The Vineward is amongst the most vulnerable communities in the U.S. to the	Thank you for your comment
001	effects of climate change sea level rise the increase in frequency and	Thank you for your comment.
001	intensity of major storms with the attendant loss of both life and property	
	Vinevard Wind will help us avoid almost 1.7 million tons of CO-2 emissions	
	every year, which is our part in mitigating climate change. It's not any good	
	to talk about doing something without making your own commitment. This is	
	ours The Vinevard Wind Project aligns with our goals of becoming 50%	
	renewably powered by 2030 and 100% renewably powered by 2040, and	
	with similar bipartisan Commonwealth of Massachusetts targets.	
13187-06-	Demand for electricity on Martha's Vinevard, if we achieve our goal, will at	The SEIS and Sections 3.6.1 and 3.6.2 of the FEIS include the establishment
002	least double. And we already have some of the highest electricity costs in the	of a resilient and secure electric supply as a benefit of the Vinevard Wind 1
	U.S. The cost of energy from Vinevard Wind will be fixed and stable and not	Project and other offshore wind projects.
	subject to international strife or politics or fuel shortages or price volatility.	J
	So a stable cost of energy is a significant economic benefit to Martha's	
	Vineyard. I couldn't be more in support of this project.	
13187-07-	We cannot more strongly voice our enthusiastic support for the Vineyard	The FEIS text in Section 3.6.2 provides estimated direct job creation in
001	Wind Project. New industries don't come along very often. The approval of	Massachusetts alone resulting from the Vineyard Wind 1 Project construction
	the Vineyard Wind project will have significant positive, immediate and	and operations. Additional economic impact is demonstrated by Table 3.6-3,
	long-term benefits to local companies such as ours [Survival Systems	which includes indirect and induced jobs and would include the benefits to
	USA]Downstream effects from providing training to local companies such	other jobs such as those at training centers. This information was also
	as ours will bring revenue into the local areas as the trainees, not just from	discussed in the DEIS.
	the local area, from other areas around the U.S. and around the world attend	
	training at local training centers in order to work on the wind farm.	
13187-08-	the approval of Vineyard Wind 1 can provide us with a reliable source of	Jobs created as a result of the Vineyard Wind 1 Project are addressed in
001	clean, renewable energy that because the reputable bid for this project will	Section 3.6.2 and Tables 3.6-3 and 3.6-5. This information was also provided
	save Massachusetts ratepayers more than a billion dollars over the project's	in the DEIS. Sections 3.7.1 and 3.7.2 of the SEIS and Sections 3.6.1 and
	lifetimeThe approval of this project will directly lead to the creation of	3.6.2 of the FEIS note the benefit of offshore wind in providing a secure and
	thousands of jobs in trades that come with good pay and benefits.	resilient source of energy.
13187-08-	In order for a domestic offshore wind industry to exist, our established	Section 2.5 of the FEIS has been added which includes the agency-preferred
002	marine industries will have to learn to adapt and share the vast potential that	alternative.

Index	Comment Text	Response
Number	dage and will continue to exist on the Atlantic Outer Continental Shalf	
	Windows and Windo have deviated great recoverage and time to engage	
	vineyard winds have devoted great resources and time to engage	
	stakenoiders throughout this process. Since the release of the draft	
	environmental impact statement in 2018, they have incorporated stakeholder	
	concerns by agreeing to the one by one nautical mile grid placed in a turbine	
	shown an alternative D-2 and taken steps to use Cocoa Beach for the cable	
	landfall. Mitigation should be undertaken when it can benefit affected parties	
	but not to undermine the economic feasibility of this project or future	
	projects. For this reason I urge BOEM not to select alternative F using either	
12107.00	the two nautical mile or four nautical mile transit lane.	
13187-09-	We strongly recommend that BOEM promptly approve the Vineyard Wind I	Thank you for your comment.
001	Project. Offshore wind is our region's best opportunity for new sources of	
	energy. This clean energy resource is the single biggest lever we can pull to	
	reduce emissions, address the climate crisis and grow the economy at the	
	same time. Massachusetts and many New England states have mandated	
	emissions limits and offshore wind energy is critical to meeting those	
	mandates. Per ISO New England's analyses around 1/6th to 1/3rd of New	
	England's old fossil fuel plants will likely retire over the next decade, and it is	
	imperative that we fill this gap with clean energy. Closing these plants and	
	replacing them with offshore wind will also reduce pollution and lead to	
	improved air quality, which as COVID-19 has clearly demonstrated is an	
	extremely important public health issue.	
13187-09-	The SEIS reinforces our belief that offshore wind energy can be developed in	Thank you for your comment.
002	a manner that protects wildlife and habitat and should advance as quickly as	
	responsible development allows.	
13187-09-	We support the uniform one by one nautical mile grid layout and commend	Section 2.5 of the FEIS has been added which includes the agency-preferred
003	the offshore wind industry for finding this compromise with the fishing	alternative.
	industry, which the U.S. Coast Guard found allows for safe navigation	
	through the wind energy areas. We oppose the additional transit lanes	
	through the wind energy areas, which would severely reduce the amount of	
	energy that could be produced, render this offshore wind project not viable	
	and severely curtail our responsibility to mitigate the serious severe impacts	
	of climate change.	
13187-10-	As acidity increases, shells [for shellfish] become thinner, growth becomes	Appendix A, Section A.8.1 of the FEIS has been updated to address air
001	slower and death rates rise. Impacts from ocean acidification will be	quality benefits of the displacement of fossil fuel electricity generation by
	mitigated by renewable offshore wind. Because the future of offshore wind	offshore wind. Sections 3.7.1 and 3.7.2 of the SEIS and Sections 3.6.1 and
	facilities would produce three fewer greenhouse gas emissions and fossil fuel	3.6.2 of the FEIS note the socioeconomic implications of climate change for
	power generating facilities with similar capacities, the reduction in	coastal communities.
	greenhouse gas emissions due to future offshore wind projects or avoidance	

Index	Comment Text	Response
Number		
	of increased greenhouse gas emissions from equivalent fossil fuel powered	
	demographics, employment and economics	
12107 10	We analyze any fiture developers also to work with DOEM to incompose	Section 2.10.2.1 of the SDEIS stated that within the viewshed of the
1318/-10-	we encourage any future developers also to work with BOEM to incorporate	section 5.10.2.1 of the SDEIS stated that within the viewshed of the
002	aircrait detection lighting systems on their turbines as vineyard wind I has	geographic analysis area, the use of ADLS for offshore wind projects would
	that lighting will be visible from charge on Marthele Vineward. We applyed	Therefore, no shares to the EEIS is warranted
	Vineward Wind for taking this feedback from our community and	Therefore, no change to the FEIS is warranted.
	incorporating ADI S in their project, which makes nighting lighting impacts	
	in our local community reduce to negligible	
13187-11-	This is the only solution to our — to our climate change problem. If we don't	Thank you for your comment
1318/-11-	a to clean renewable energy as soon as possible and ston burging fossil	Thank you for your comment.
001	go to crean, renewable energy as soon as possible and stop burning rossn fuels, we're going to be in hig trouble, and has already been mentioned, this is	
	Martha's Vineward, an island five miles off the coast. And we are facing dire	
	consequences, probably even if we change completely at this point because	
	so much has been done. So I just want to say please, please, as soon as	
	possible approve this project and let them get underway	
13187-12-	The public benefits of the Vinevard Wind offshore wind development extend	Thank you for your comment
001	well beyond the geographic boundaries of the offlaker seeds. As other people	Thank you for your comment.
001	have commented today, the American Wind Energy Association estimates	
	that offshore wind will create 83,000 new U.S. jobs and \$25 billion in annual	
	economic output through 2030. And Vineyard Wind as the first utility scale	
	project is the tipping point for this pent-up commercial energy. The market	
	signal that will come from Vineyard is clearly seen in the range of offshore	
	stakeholders that have come here today to offer their support and hope for	
	future investment opportunities.	
13187-12-	The success of Vineyard Wind is crucial to the success of the U.S. future	Chapter 2 of the SEIS and FEIS address the practical and technical
002	offshore wind industry. As an equipment manufacturer, we cannot provide	challenges associated with implementing Alternative F.
	detailed comments on the majority of BOEM's findings in their draft SEIS	
	that pertain to areas outside our expertise. However, we would like to express	
	concern about alternative F and its potential impact on the capacity of the	
	lease areas currently available to the offshore wind industryThis proposal	
	to create additional transit lanes beyond the one by one nautical mile grid	
	lanes that have already been established, would substantially reduce the areas	
	available for development without significantly improving national	
	navigational safety for vessels. Such a reduction in potential capacity for	
	these lease areas may pose a threat to the ability for adjacent states to meet	
	their clean energy goals.	

Index	Comment Text	Response
Number		
1318/-13-	what are the impacts of delaying or reducing the growth of offshore wind?	I nank you for your comment.
001	Delaying of reducing renewable energy growth means more climate change,	
	more pollution, more extreme weather, and more money leaving our region	
	to pay for fossil fuels that are brought in from elsewhere. I believe that once	
	these offshore wind farms are operating, we will all be much more secure. By	
	more secure I mean better energy security, better economic security, better	
12107 12	Everther fishing communities recently who are familier with shing and	Section 2.6.2 of the SEIS includes here fit of diversifying marine industries
1318/-13-	ruther, fishing communities, people who are familiar with ships and	section 5.0.2 of the SEIS includes benefit of diversitying marine industries
002	akilla will be among the first to benefit from well paid technical jobs in	will provide a notantial workforce for offshore wind Section 3.6.2 of the
	skins will be allong the first to benefit from well paid technical jobs in	EEIS has been undeted to evaluin that the New Padford Port Authority
	maintenance requirements are substantial and will be operation and	Massachusetts Clean Energy Commission and Vineward Wind are
	maintenance requirements are substantial and will be oligoling for decades.	massachuseus Clean Energy Commission, and vineyard wind are
		on fishing businesses
13187-14-	As SEIS says Vineyard Wind and other proposed offshore wind projects will	Thank you for your comment
001	help Massachusetts and other East Coast states to reduce their reliance on	Thank you for your comment.
001	nolluting fossil fuels. Once completed the Vinevard Wind project will	
	produce approximately 6% of the electricity consumed from Massachusetts	
	while avoiding 1.6 million tons of carbon dioxide annually the equivalent of	
	taking 325 000 cars off the road. The project will also result in a significant	
	reduction in other pollutants like nitrogen oxides and sulfur dioxide that harm	
	our health.	
13187-15-		Thank you for your comment.
001	of legislation that is now statute that requires a greenhouse gas reduction in	
	the Commonwealth, and in the process of making sure that we also have this	
	binding legal authority to get to net zero by 2050. The administration is also	
	on board with that. And in order for us to do that, we need this offshore wind	
	initiative to go through off the coast of Massachusetts. The Vineyard Wind 1	
	project is something that deserves to be approved. It will significantly impact	
	our public health in our air quality in a positive way. It will reduce	
	significantly greenhouse gas emissions, it will create literally thousands and	
	thousands of jobs, will be the leader in terms of this industry in America.	
13187-15-	The fishing industry when we look at that industry in Massachusetts, it's	Thank you for your comment.
002	always been a big part of our culture, and a big part of our economy, and a	
	big part of the food product here in in Massachusetts, and I see very little	
	impact at all on the fishing industry, especially when you balance that against	
	what will take place with the cumulative impact of ocean acidification and	
	locean warming on the fishing industry, which will have a serious detrimental	
	impact on the fishing industry.	

Index	Comment Text	Response
13187-15-	And finally. Liust want to say that the cost of inaction here will be in the	Thank you for your comment
003	trillions of dollars. If we do not act quickly on this and send the message to the industry as a whole, that both the state and federal government and all of	
	the state governments in the northeast that are onboard here that this does	
	not move forward, it will send a negative message both I think up to the	
	federal government level and to the industry as a whole because if you look	
	at this anywhere else in the world, it has been a success.	
13187-16-	First, the visual impacts from aircraft warning lights is a concern that needs	Section 3.10.2.1 of the SEIS stated that Vinevard Wind had committed to use
001	to be addressed, and its opposed use of lights activated only when aircraft	ADLS to reduce the time when nighttime aviation lighting is activated, and
	approach addresses our community concerns. This has been described	that within the viewshed of the geographic analysis area, the use of ADLS for
	properly as negligible and the SEIS.	offshore wind projects would reduce the impact of nighttime aviation safety
		lighting to negligible. Vineyard Wind would also use white or light grey
		color as described in Appendix D to reduce visibility against the horizon.
		Therefore, no change to the FEIS is warranted.
13187-16-	Second, importance of impacts on water users, which includes but is much	Thank you for your comment.
002	larger than the group that are fishermen. So significant issue for all island	
	residents and, in fact, all coastal dwellers in the northeast. So regarding	
	navigation, the wind developers have agreed to a one mile by one mile and	
	uniform layout, which the coast guard has endorsed. If this is good enough	
	for the U.S. Coast Guard, it's good enough for the rest of us.	
13187-16-	The proposed action building this wind farm and the cumulative effects of	Thank you for your comment.
003	building the 20 plus wind farms will reduce carbon emissions and methane	
	emissions and help protect our harbors and our access to the waters. In	
	closing, I want to say this is a complete and adequate environmental impact	
12187 17	Statement.	Thank you for your comment
1316/-1/-	suffering [that results from the impacts of fossil fuel use / climate change] on	
001	a global scale. And this process here offshore in offshore wind represents an	
	infinitely important shift away from fossil fuel and a new deviation of that	
	burden. And I would just like to echo an individual before me talked about	
	how the cost of inaction is just so much greater than the cost of action.	
13187-17-	But I would like to celebrate the consideration of marine ecosystems in this	Thank you for your comment.
002	process, while urging you all to take a step back and consider how the net	5 5
	impact of this project is measurable gains for all ecosystems, one we've	
	waited for for far too long, and are all deserving of.	
13187-18-	Economic benefits of this industry promise to be tremendous at a time when	Section 3.6.1 of the FEIS has been updated to identify ongoing and planned
001	some other U.S. industries struggle or decline, offshore wind is set to take off	port infrastructure projects within the geographic analysis area. Section
	and provide thousands of good paying jobs not only in the construction and	3.6.1.1 of the FEIS has been updated to provide estimates from several
		sources of projected employment and investment resulting from growth of a

Index	Comment Text	Response
Number	operation of the wind turbines themselves, but also indirectly through the development and expansion of ports, shipping and related industries.	wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13187-18- 002	As others have noticed, the offshore wind industry is expected to create more than 80,000 jobs in the next 10 years, with private investment reaching upwards of \$25 billion per year by 2030. And Vineyard Wind alone creates 3,600 jobs for local residents over the life of the project. And because wind can now produce energy so cheaply, Vineyard Wind will save ratepayers more than \$1.4 billion in energy costs during the first 20 years of the project.	Economic and employment contributions of Vineyard Wind are covered in Section 3.6.2.1 of the FEIS. These were also included in the DEIS. Estimated job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operations. Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of a wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13187-18- 003	Vineyard Wind alone will remove almost 1.7 million tons of CO-2 from the atmosphere annually. Thus, it will help to achieve Martha's Vineyard's goal of being 100% renewable for electricity by 2040 and the Massachusetts target of being carbon neutral by 2050. And because offshore wind generates power at long term fixed prices, it provides a hedge against fossil fuel volatility, protecting consumers and providing greater energy security.	Thank you for your comment.
13187-19- 001	We support very much the that the option D in the SEIS is sufficient and certainly allows for and that's the 1.1 nautical miles between towers allows for safe transit of the area, the Coast Guard has sent us plenty of room.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13187-19- 002	This is the nuts and bolts of how the first stage of this project will happen is with skilled trades workers and men and women who make up our Local and we have worked quite well with Vineyard Wind, they have been big supporters of skilled workersWe strongly support the permitting of the Vineyard Wind 1 Project and we hope to see the permits issued soon so we can begin this work that all of us, so many people tonight have stated so many good reasons to get it going. We believe that like many of you do, it's a win. It's a win for energy independence for Massachusetts. It's a win for clean, renewable power, and it's a win for jobs for the residents of southeastern Massachusetts.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13187-19- 003	We support that option, we fully respect the needs of commercial fishermen to access and transit the area. We also want to say the ocean is a shared resource and other people have to make their livings on the ocean, such as marine construction workers as well.	Section 3.6.2 of the FEIS has been updated to conclude that a moderate beneficial impact on employment and economic activity would result from offshore wind development in the RI and MA Lease Areas. It also notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vinevard Wind.

Index	Comment Text	Response
Number		
1318/-20-	I would also like to say that this offshore project will also help Martha's	Thank you for your comment.
001	Vineyard to reach its goal of hopefully having green energy and	
	transportation by the year 2040 at a 100% level. I don't have anything else to	
	add except that hopefully we can get this project going quickly. And that I	
	think that there is no need to fear this technology is so good now that it's got	
	30 years experience, as someone has pointed out earlier, and I just hope that	
	we can get started sooner than later.	
13187-21-	We know that strong action must be taken to make a rapid transition to a	Thank you for your comment.
001	responsible clean energy economy. We believe that the Vineyard Wind 1	
	Project will be a positive contribution to this transition and that it move	
	forward. Responsible development of offshore wind avoids, minimizes and	
	mitigates impact to wildlife every step of the way. Vineyard Wind has	
	supported our high standards for wildlife protection. And last winter, they	
	signed a historic agreement with the National Wildlife Federation and our	
	partners at the Natural Resource Defense Council and Conservation Law	
	Foundation to protect the critically endangered North Atlantic Right Whale.	
13187-21-	We must stand these projects up as soon as the responsible development will	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
002	allow. Over 10,000 megawatts of coal, nuclear and oil-fired power plants	several sources of projected employment and investment resulting from the
	providing energy to New England are likely to retire in the next few years.	growth of the wind energy industry along the Atlantic coast. While the
	We have no time to lose. The technology is ready. The cost is competitive.	estimates are national, jobs are anticipated to be concentrated in and near the
	And the time is right for launching this global industry in the United States	east coast states that would host offshore wind. Sections 3.6.1 and 3.6.2 of
	that could create over 83,000 jobs by 2030 and invest tens of billions of	the FEIS include the benefit of offshore wind in contributing to energy
	dollars into our economy.	security and resiliency.
13187-22-	For decades too long our inability to align the political will needed to harness	Thank you for your comment.
001	this opportunity has wedded us to the volatile fossil fuel market, and all the	
	environmental public health and social justice impacts that come with it.	
	We've heard about the economic urgency of this moment, and the desperate	
	need for long term high quality jobs, like the thousands this project will	
	deliver, and the tens of thousands more the industry as a whole has to offer	
	the region.	
13187-23-	I think that we are ready for the offshore wind industry overdue actually	Thank you for your comment.
001	for the offshore wind industry to be involved in the United States. I think that	
	it's well overdue. Vineyard Wind is committed to making sure that the jobs	
	are United States jobs. With a foreign training on the onset, but very soon to	
	be all United States jobs.	
13187-23-	They have contributed a lot to training not only at the trade level, but also in	Section 3.6.2 of the FEIS lists the grants and community programs that the
002	the colleges and in the high schools and in the areas of Southeastern Mass. I	Vineyard Wind 1 Project would provide, including job training for offshore
		wind. This information was also provided in the DEIS.

Index	Comment Text	Response
Number		
003	I think that the federal waters that this project will be involved with is an area where everyone can benefit, not only the fishing industry, but the construction industry And we look forward to working with Vineyard Wind and all of the other developers that will be involved in offshore wind, and I'd like to see the agency approve this permit as soon as possible. So that we can get started as soon as possible. I mean, we're looking at probably 20 to 30 years of work between construction and maintenance when the construction is over.	Section 3.6.2 of the FEIS has been updated to conclude that a moderate beneficial impact on employment and economic activity would result from offshore wind development in the RI and MA Lease Areas. It also notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind.
13188-01- 001	Vineyard Wind has spent a decade researching, studying and planning how to build their offshore wind development in a way that is as safe as possible for marine life and our fishing fleet. We have friends and relatives who are commercial fishermen on the island and it was a comfort to me to learn that the Coast Guard reviewed Vineyard Wind's plans and deem them safe for	Thank you for your comment.
	commercial fishing. The changes Vineyard Wind has made in response to concerns from the commercial fishing industry are critical.	
13188-01- 002	But nothing threatens the future of fishing and farming here more than climate change. And the only way we can tackle the issue of climate is to stop burning fossil fuels as soon as possible and replace them with renewable energy sources. The greatest contribution our region can make to this transition is to move forward with offshore wind safely but also quickly And these wind developments are crucial to changing the way we get our electricity so that we can give the next generation and the life in the oceans a chance at a livable future.	Thank you for your comment.
13188-01- 003	Another challenge that young people face who want to stay living on the Vineyard is the ability to find good year-round jobs. Vineyard Wind has committed to base their operations and maintenance facility into Berry Harbor, and to offer offshore wind technician training to Island students at the Martha's Vineyard Regional High School. Diversifying our local economy is key to helping young people stay on the island, and these jobs will help us in that effort.	Section 3.6.2 of the FEIS addresses the location of the Vineyard Wind 1 Project operations and maintenance center on Martha's Vineyard as a source of long-term jobs for the island. The FEIS also lists the grants and community programs that Vineyard Wind 1 Project would provide, including job training for offshore wind, and has been updated to include the cooperative agreement between Vineyard Wind and Vineyard Power.
13188-02- 001	And I'm speaking today in support of the development of Vineyard Wind 1 and all future offshore wind projects in the United States. Offshore wind is essential for the achievement of Massachusetts and by extension all of New England safe, clean energy goals.	Thank you for your comment.
13188-02- 002	They have along with other major developers agreed to the proposed action D-2 which is the east-west one nautical mile wind turbine layout that will create hundreds of dozens of lanes for the commercial fishing industry. And we believe this is the best course of action as it allows the project to be viable	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index Number	Comment Text	Response
Tumber	in order to bring much needed clean power to the region at low cost to	
13188-02- 003	Having hundreds or thousands of megawatts of offshore wind online will decrease the likelihood of encountering high winter prices in the future.	Section 3.6.1 and 3.6.2 of the SEIS and FEIS address, as a beneficial impact of offshore wind, the long-term contribution of offshore wind to energy security and resiliency.
13188-02- 004	I'd like to point out that offshore wind and other renewables have the benefit of producing zero emission electricity. It will help us decarbonize our grid as we continue to electrify operations such as heating and transportation. We hope that BOEM and the federal government look at the benefits of Vineyard Wind 1 from the development of clean energy, savings to ratepayers and also to the economic boom it is sure to bring to the region, as hundreds of new jobs will be created, and allow the project to move forward.	Thank you for your comment.
13188-03- 001	Thank you for the opportunity to speak in support of building Vineyard Wind without further delay and with the existing 1.1 mile turbine layout plan. I oppose the addition of two to four mile transit lanes within wind farms, which the U.S. Coast Guard has determined is unnecessary, and which would needlessly reduce the amount of electricity Vinyard Wind can produce.	BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action. Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13188-03- 002	Massachusetts needs clean energy and offshore wind is New England's biggest untapped clean energy source.	Thank you for your comment.
13188-03- 003	Our economy needs the hundreds of local jobs Vineyard Wind will create. And our ratepayers need the energy cost savings Vineyard Wind will bring. In 2018 Massachusetts sent \$18 billion out of state to buy fossil fuels. Vineyard Wind will keep more of this money in Massachusetts, where it will be channeled into jobs and the consumer economy.	Economic and employment contributions of Vineyard Wind are covered in Section 3.6.2.1 of the FEIS. Estimated direct job creation by Vineyard Wind would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operations. Sections 3.7.1 and 3.7.2 of the SEIS and Sections 3.6.1 and 3.6.2 of the FEIS address the benefit of offshore wind in providing a secure and resilient source of energy.
13188-03- 004	Cleaner air will reduce the adverse health impacts from air pollution caused by fossil fuel plants. It will help protect our fisheries and reduce ocean acidification that is hurting our shellfish industry.	New information quantifying averted emissions using AVERT relative to existing power generation has been added to Section A.8.2.1 of the FEIS.
13188-03- 005	And who knows, some European offshore wind farms have become tourist destinations. Maybe Vineyard Wind will become a tourist attraction in the future.	The SEIS noted in Section 3.10.1 and 3.10.2 that offshore wind could be a destination for tour boats or recreational boaters. Therefore, no change to the FEIS is warranted.
13188-04- 001	We have listened to them and that was one of the reasons that the one by one transit lanes were suggested and were adopted by Vineyard Wind. As somebody else said, the Coast Guard has said that lanes much more than that really don't add to anything. So I would also agree that just doing the one by one transit lanes would accomplish the goal.	The FEIS addresses this comment in Section 3.11.5. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13188-04- 002	So during [offshore wind] development there's the concern about noise BOEM had some wonderful posters showing different animals, mammals,	Thank you for your comment.

Index Number	Comment Text	Response
Number	seals fish at catera, and how noise at what distance from the construction	
	site the noise would have an effect on them. That same sort of information is	
	also available in a report done by Bergstrom et al. which was done in 2014	
	which does talk about the noise level. And also about cables and	
	electromagnetic current, et cetera talks about benefits some of the	
	detriments And then the second stage is once the turbines are in	
	production how does that affect the life in the ocean around it. So there was	
	another report on that that was done by Bailey in 2014 assessing	
	environmental impacts of offshore wind farm lessons learned and	
	recommendations for the future. That's by Helen Bailey. Kate L. Brooks and	
	Paul M Thompson that's in 2014 Anytime you do anything there's always	
	going to be benefits and detriments.	
13188-04-	We are not going to be able to eliminate all detriments, but what Vinevard	Thank you for your comment.
003	Wind has tried to do and will do is to take the best information on at the	
	time of construction on how to minimize sounds if at all possible. There are	
	air curtains that can be put in place as one way to decrease the sound levels.	
	And there are several other newer techniques that have come into play since	
	2014.	
13188-04-	There are always going to be detriments when you build something. What	Thank you for your comment.
004	BOEM is trying to do as well as Vineyard Wind is to try and mitigate those	
	as much as possible while providing what is a fossil fuel resource that will go	
	many years into the future the amount of turbines to generate the same	
	amount of power is being reduced over time with a reduced the number of	
	platforms, then obviously you reduce the impact on the life in the ocean and	
	also the benthic impact on the soil and subsurface.	
13188-05-	I see what we've done to our planet through years of reliance on fossil fuels,	Thank you for your comment.
001	and, yes, no solution is perfect. But here we have the opportunity to lead the	
	way to build turbines in a way that takes into account wildlife, fishermen and	
	local residents. There's no perfect solution to supply the energy demands of	
	the growing world, but these turbines along with other clean energy solutions	
10100.05	are the future.	
13188-05-	Overfishing, habitat destruction and an industry that has become one	Thank you for your comment.
002	dominated by large conglomerates cannot possibly sit here and say that they	
	are doing right by our planet. Yes, the project could affect people's	
	livelihoods. But it could also put us one step closer to having cleaner energy	
	while also showing the rest of the United States that we are serious about the	
12100.07	Indure we want to secure for future generations.	0 = 4 is 0.5 is Associated on $0 = 64$ and $0 = 10$ and $0 = 10$
13188-06-	And my main concern to communicate here is that the environmental impact	Section U.5 in Appendix U of the FEIS, as well as the DEIS and the SEIS,
1001	statement is significantly defective in its consideration of reasonable	include text related to alternative wind turbine foundation types. BOEM

Index	Comment Text	Response
Number		
	alternatives regarding the type of technology to be installed. NEPA requires	considered such alternatives but did not analyze them in detail in the NEPA
	that all reasonable alternatives to a project be considered. The project as	document.
	proposed specifies that the turbines will be installed either on monopile or	
	jacket foundations. No consideration is given to another technology which	
	eliminates the impacts that those technologies havecalled mobile jack up	
	platform[s][which] eliminates completely the need for pile driving. Almost	
	all of the environmental impacts in the EIS are related to pile driving, and	
	there is no mention at all that there is another technology that is proven, has	
12100.06	The test and decades and eliminates that impact completely.	Section C.5 in American C. effective EER according the DER and the SER
13188-06-	I ne technology currently proposed, which is monopiles and jackets, requires	Section C.5 in Appendix C of the FEIS, as well as the DEIS and the SEIS,
002	the use of an offshore construction ship to fift the turbines and install them on	include text related to alternative wind turbine foundation types. BOEM
	top of the structure whereas, the mobile jack up platform requires no snips	considered such alternatives but did not analyze them in detail in the NEPA
	at all. The entire system is assembled on shore and a tugboat simply lows the	aocument.
12100 06	These shine fused for the mononile isely up pletform do not avist in the	Detensive costs depend on numerous verification between the second of the EIS
13188-00-	United States, they will have to some from Europe where they are already.	A in amigricing from Vineyand Wind 1 construction were addressed in
003	built. They add hundreds of millions of dollars to a project, thus religing the	Air emissions from vineyard wind i construction were addressed in Annendix A. Sostion A.S. of the SEIS. New information quantifying everted
	built. They add hundreds of minions of donars to a project, thus raising the	Appendix A, Section A.8 of the SEIS. New information quantifying averted
	And the shine themselves have significant impacts. They have to have a port	added to Section A 8.2.1 of the EEIS Section 2.11.2 discusses port utilization
	And the ships themselves have significant impacts. They have to have a point,	added to Section A.o.2.1 of the FEIS. Section 5.11.2 discusses port utilization
12100.06	Similarly, when it is time to decommission the wind form, and this has not	Sections 2.1.1.2 and 2.2.2 of the EEIS have been undeted to discuss the
15188-00-	Similarly, when it is time to decommission the wind farm, and this has not been addressed in the EIS to my consideration, when the foundation includes	sections 2.1.1.5 and 5.2.2 of the FEIS have been updated to discuss the
004	are removed if they are driven into the seehed they have to be out out or	potential impacts of decommissioning.
	blown up and that creates impact. Whereas, a mobile jack up platform simply	
	lifts its less up and floats back to it. So the EIS, which apparently is entire	
	FIS is focused on the disruption impact from the use of turbines and there is	
	no mention of this other technology	
13188-06-	[Mobile jack up platforms] eliminates most of the risks that are already	Section C 5 in Annendix C of the FEIS as well as the DEIS and the SEIS
005	addressed the FIS and BOFM's director Walter Cruickshank and the	include text related to alternative wind turbine foundation types. BOFM
005	National Renewable Energy I aboratory all know this and has been informed	considered such alternatives but did not analyze them in detail in the NEPA
	of it for over five years. We are haffled why this has not been addressed as a	document
	reasonable alternative in the EIS	
13188-06-	We are very concerned that the public is not being given adequate	Section C.5 in Appendix C of the FEIS, as well as the DEIS and the SEIS
006	information about reasonable alternatives that the proposed technology for	include text related to alternative wind turbine foundation types BOEM
	selling the turbines obviously has significantly more environmental and	considered such alternatives but did not analyze them in detail in the NFPA
	construction and demolition with it than the alternative technology we think	document.
	is better. The fishermen are more at risk with the proposed technology	
	because if something happens in the area the wind farm those devices will	

Index Number	Comment Text	Response
	not be moved. Whereas, if they are floating with the mobile jack up platforms literally it takes two days to move it to somewhere else that has large impact.	
13188-06- 007	The [monopile or jacket foundations] technologies proposed are unproven. No one says in that EIS that monopiles or jackets will be used. No monopile has ever been installed in the ocean with a 14 megawatt turbine in moderate or deeper water, it is absolutely not known if that will work. Whereas, the jack up will hold up to 10,000 tons So considering that we have unproven technology proposed, there is no reasonable alternative for those screening the EIS.	Section C.5 in Appendix C of the FEIS, as well as the DEIS and the SEIS, include text related to alternative wind turbine foundation types. BOEM considered such alternatives but did not analyze them in detail in the NEPA document.
13188-07- 001	We are aware that there's a significant amount of opposition that has come from the commercial fishing community. We understand that they are, you know, an essential part of the Southeastern Mass economy However, the ocean is a shared resource. All of us have an opportunity to make a living there, marine construction workers as well.	Section 3.6.2 of the FEIS has been updated to conclude that a moderate beneficial impact on employment and economic activity would result from offshore wind development in the RI and MA Lease Areas. It also notes a potential moderate adverse impact on the commercial fishing industry. Section 3.10 provides more information on impacts on commercial fishing and mitigations to be provided by Vineyard Wind.
13188-07- 002	There was a delay [for the permit], in August of 2019, I believe, based on the spacing of the monopiles and Vineyard Wind has redesigned its entire grid to allow for one nautical mile between each turbine monopile and the Coast Guard chimed in and said this is acceptable, this is more than enough space for people to transit the turbine site, the designated lease area, whether they're fishermen or pleasure boaters. The U.S. Coast Guard strongly believes this is a good, good layout. So we think this is the one to go with.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13188-07- 003	We have heard that there's opposition [to the one nautical mile spacing and] that there is a request for a four nautical miles corridor and we're opposed to that. There would add extensive costs to the project. Already Vineyard Wind has agreed to do new borings at the one nautical mile mark, and that's expensive to begin with, but then to add the additional costs for all the cabling and the additional engineering needed to do this, this is going to needlessly delay the project but may imperil its financial viability.	Section 3.6.4 of the FEIS has been updated to note that the transit corridor (Alternative F) could result in lower economic investment and employment due to the lower capacity for offshore wind development in the RI and MA Lease Areas that could result from this alternative.
13188-07- 004	And at this point, we don't need [project delays and imperiled financial viability due to studies for a four nautical mile corridor], we need to get out there and put some turbines up. The Coast Guard approves this is good plan, we'd like to see this project go forward.	Section 3.6.4 of the FEIS has been updated to note that the transit corridor (Alternative F) could result in lower economic investment and employment due to the lower capacity for offshore wind development in the RI and MA Lease Areas that could result from this alternative.
13188-08- 001	I'm generally in favor of renewable energy as an important solution to climate change. And there's no question that climate change is one of the greatest threats to the coastal regions of New England, the United States and, in fact, the world. The rate of climate change continues to increase exponentially. But, unfortunately, the rate at which renewable offshore projects are being approved has stalled over the last two decades.	Thank you for your comment.

Index	Comment Text	Response
Number		
13188-08-	I he research that's been done to date is exhaustive. I believe that this project	Thank you for your comment.
002	has been looked at up, down, sideways and every way it could possibly be. I	
	think that everyone's done a great job. I think that the developer, Vineyard	
	Power, power has done a really good job in making concessions and trying to	
	do this in a responsible manner.	
13188-08-	I'm happy that fishermen [had] a voice and the project developers made	Thank you for your comment.
003	massive changes that they reflected initially, changes in layout, changes in	
	spacing. And I firmly believe that this successful implementation of this	
	project will improve our climate and improve our fisheries.	
13188-08-	The one mile turbine spacing in the revised layout is generous and is	Section 3.11.5 of the FEIS has been revised and contains additional
004	adequate, and I see no reason to reduce the project size for additional transit	information to address this comment. The USCG is a cooperating agency for
	lanes and in no case should a four mile corridor be required. I mean, let's face	the FEIS that is the leading agency on navigational matters; therefore, BOEM
	it, Vineyard Sound itself is only three miles and navigable in only two miles.	relies on, and does not question, the USCG's expertise and analyses for
	Cape Cod Canal is only 480 feet wide at its narrowest, roughly one 10th of a	purposes of informing the navigational impacts in the EIS.
	mile. And in 2015, the world's largest cruise ship, which at the time was 644	
	feet long sailed through the canal without issue, and massive freighters pass	
	through that canal regularly, 480 feet wide.	
13188-08-	I just heard Mr. Hamner speak of the jack up foundations. Clearly, the	Section C.5 in Appendix C of the FEIS, as well as the DEIS and the SEIS,
005	developers are aware of all available technologies, they do use jack up	include text related to alternative wind turbine foundation types. BOEM
	platforms to work on the turbines, they use them to go out and do the testing	considered such alternatives but did not analyze them in detail in the NEPA
	of the sea bottom. And I'm also sure everybody trying to sell a foundation	document.
	will say that theirs is the best. But, I mean, if you do look up jacked up wind	
	arms, you'll find out that it is not really proven technology for large wind	
	farms. Neither are floating platforms or even cold fusion for that matter.	
13188-09-	The obvious reason to support these projects, including our local Vineyard	Thank you for your comment.
001	Wind project, is for long-term environmental benefits, to help slow the	
	devastating impacts of climate change, to move away from our dependence	
	on fossil fuels.	
13188-09-	We have an opportunity to be on the forefront of a new industry harvesting	The estimated direct job creation by Vinevard Wind is summarized in
002	clean, renewable sources of energy. This is not only a win on the	Section 3.6.2.1 of the FEIS (and was also in the DEIS). The FEIS addresses
	environmental front, but a huge win on the economic front. The global	that establishment of the operations and maintenance center on Martha's
	pandemic has had a unique ability to find weak spots in almost every aspect	Vinevard as a source of year-round, long-term jobs, and that the use of
	of life. Here on Martha's Vinevard, and I think in most coastal communities.	Vinevard Haven for operations would provide beneficial economic activity.
	we are heavily dependent on service sector jobs, restaurants and bars.	
	catering, hotels, taxi drivers, retail stores, the list goes on and on. And there	
	was 13 percent unemployment in our country. 20 percent, probably more	
	than 20 percent here in Martha's Vinevard. This is an unbelievable	
	opportunity to create good paying year-round jobs that do not rely	
	specifically on tourism.	
Index	Comment Text	Response
------------------	---	--
13188-09- 003	I believe that the Vineyard Wind estimate is 3,600 jobs over the life of the project. That has enormous economic benefits to local communities, well- paid year round stable jobs. I think the industry as a whole is estimating 80,000 jobs, which again, it's just an enormous benefit to these local communities.	Section 3.6.2.1 of the FEIS discusses the economic and employment contributions of Vineyard Wind. This information was also provided in the DEIS. Estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operations. Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13188-10- 001	If the state of Massachusetts is to meet the emissions reductions in the Global Warming Solutions Act, offshore wind must move forward in a timely and responsible manner. As the administrator of the Cape Light Compact, I support the findings of the SEIS and believe the SEIS demonstrates that offshore wind projects can move forward in a responsible and environmentally sound manner in the waters of the eastern United States.	Thank you for your comment.
13188-11- 001	The cumulative effects succession is based upon a northeast continental shelf ecosystem conceptual model, which assumes the system is in a steady state net equilibrium, ignoring climate change and ocean noise effects. I have been involved in a dialogue on North Atlantic Right Whale deaths from entanglement to the American lobster gear in New England and Canadian waters. Both the whales and the lobsters have migrated further offshore or northeastwards as coastal waters become warmer and noisier.	Sections 3.5.1 and 3.5.2 of the SEIS and Sections 3.4.1 and 3.4.2 of the FEIS consider climate change IPFs and discuss the potential consequences to marine mammals. As discussed in the Biological Opinion issued by NMFS on September 11, 2020, the current understanding of NARW movement patters is incomplete at this time. PAM data suggests that some individuals may be present within the WDA year-round (NMFS 2020). As such, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required.
13188-11- 002	I have two potential concerns about the BOEM SEIS on wind farms along the Atlantic seaboard conflicting with the NOAA Fisheries EIS on northern right whale mortality from lobster gear entanglements under the Marine Mammal Protection Act and the Endangered Species Act. The BOEM cumulative effect analysis of 20 wind farm for fin fish and shellfish, marine mammals, benthic organisms and bottom sediments, fishery regulations, seabirds, et cetera, acknowledges the impacts can range from minimal to maximum	Section 3.5.2.1 of the SEIS discussed the potential impacts of the proposed Project on marine mammals. Additionally, Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, including NARW. These measures include, but are not limited to, avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed

Index	Comment Text	Response
Number	depending on other human uses of the same accor ranges. The North Atlantic	restrictions, injumy and mortality reporting, and other measures. Additional
	Right Whale death limits per year from entanglements and ship strikes is less than one animal per year, given the recent deaths exceeding births, and the poor condition and many, many breeding age females from entanglements.	information regarding impacts and the potential consequences to ESA listed species is provided in the Biological Opinion issued by NMFS on September 11, 2020. As discussed in the Biological Opinion issued by NOAA (NMFS 2020), no population level effects or reduced whale numbers are expected to occur as a result of the proposed Vineyard Wind 1 Project. Further, take of whale species is expected to involve harassment and some injury to a limited
		number of individuals during the course of pile driving activities. No other take of marine mammals, including NARW, is expected to occur as a result of the project
13188-11-	The Martha's Vinevard Wind SEIS contains alternatives F-1 and F-2 based	BOEM will incorporate the identified information into future assessments as
003	on comments submitted by RODA to reduce the number of wind turbines and	it becomes available.
000	allow navigation channels through the wind farm footprint. The proposed	
	marine mammal NGO proposals to NOAA fisheries for ropeless lobster gear	
	enclosed areas when the North Atlantic Right Whales are present, which	
	have a much greater impact on the lobster fishing industry. Scientific studies	
	are underway to provide better understanding of these challenges.	
13188-11-	Recently NOAA Fisheries released the 2020 status of ecosystem reports for	Thank you for your comment.
004	the Mid-Atlantic and New England regions, which made BOEM in	
	developing the SEIS, I made some suggestions in my written comments on	
	the use of vulnerability analysis and scenario analysis as interim tools to	
	evaluate the effect of wind farms on marine biota and their habitat as we	
	await the completion of scientific studies and their publication and	
	development of appropriate policies and regulations, which can be a time-	
	consuming process.	
13188-12-	So I'm very much interested in any kind of way to move quickly to	Thank you for your comment.
001	decarbonize our energy sources and slow climate change. We support the	
	work documented in the SEIS and appreciate the careful work of BOEM.	
	And now it's time for offshore wind energy, and it's time to move ahead with	
12100 12		
13188-13-	I do want to state that there I think as the studies have shown, there will be	Thank you for your comment.
001	no adverse impact on aviation in the area.	
13188-13-	But what I do want to say is what has happened in the last two years is we're	Thank you for your comment.
002	a lot closer to the electrification of air transportation. And one of the things	
	that Cape Air has been acutely aware of is that as we get closer to actually	
	being able to move people through the air in a carbon free way, aircraft and	
	aviation account for about two and a nall percent of global climate change	
	we really need sources of renewable energy to provide the electricity to move	

Index	Comment Text	Response
Number	our aircraft. And we have talked repeatedly to Vineyard Wind about procuring in the future electricity from them to power our aircraft. It is essential that we have that opportunity. Otherwise, what an irony it would be if we're moving aircraft around with electricity, but doing it from coal, that's just not acceptable. So we really need industrial scale, large source of of electricity in order to power our aircraft and to power all of transportation and air transportation. So specifically, today, again, in addition to the written testimony, I just want to weigh in that from an environmental standpoint, from a business standpoint, you've heard so many good people advocate relative to the beneficial impacts on an economy that is really, really hurting a lot of people right now, there are so many reasons why this is an important	
13188-14- 001	project and why now is the time to get it done. We have worked to develop and shared with all an action plan and a set of specific pathways that we believe will lead to the goal of net zero emissions on Cape Cod by 2050So the absolute key, however, to achieving that net zero goal has got to be the substantial offshore wind production starting immediately with the Vineyard Wind.	Thank you for your comment.
13188-14- 002	We do support the east-west one nautical mile wind turbine spacing alternative without transit lanes, additional transit lanes, that's alternative D- 2. We believe this will reduce conflicts within the existing ocean users, such as commercial fishing and marine navigation. And I would note that the Coast Guard has agreed with that and stated that additional transit lanes are unnecessary.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment.
13188-14- 003	We also support alternative B for the cable landing, that's at Colwells Beach landfall.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Vineyard Wind has indicated that New Hampshire Avenue landfall location is no longer a consideration as they have received all the necessary state and local permits for the Covell's Beach landfall site.
13188-14- 004	Vineyard Wind has been extremely responsive and inclusive in all events with all interested parties in developing its plans for this project. And this really in many ways set the standard for corporate responsibility in this kind of development. I only would point you to the one prime example that we've been very interested in, which is an extensive work done with conservation groups to develop innovative and wide- ranging protections for the North Atlantic White Whale.	Thank you for your comment.
13188-14- 005	We believe the SEIS provides a well-documented set of facts and analyses, they address all relevant issues and we urge that it be approved without further delay.	Thank you for your comment.
13188-14- 006	I keep thinking, we've heard some comments from various sectors about the potential negative impacts on whales and fisheries from this project, but I	Thank you for your comment.

Index	Comment Text	Response
Number		
	think we all know the most devastating threat to whales and fisheries and	
	ourselves is the rapidly warming climate and ocean waters. So the	
	development of this offshore renewable wind energy projects and projects up	
	and down this coast is the key part of an urgently needed response to this	
	threat, and I thank BOEM for it's continued leadership in moving us forward.	
13188-15-	And as we can see, with my own comments here, I really do want to speak	Thank you for your comment.
001	from personal experience and say it's a Herculean high and achieved effort to	
	execute virtual events like this. So we recognize your effort and coordination	
	here.	
13188-15-	Vineyard Wind and other offshore wind projects like it that are currently	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
002	under review at BOEM serve as unparalleled engines of economic	several sources of projected employment and investment resulting from
	development and, more importantly, economic recovery. And this is at a time	growth of the wind energy industry along the Atlantic coast. While the
	when Americans need this most, particularly in light of the ongoing COVID-	estimates are national, jobs are anticipated to be concentrated in and near the
	19 crisis and record unemployment. There are 40 million Americans that are	east coast states that would host offshore wind.
	out of work right now. The Department of the Interior approval of Vineyard	
	Wind's construction and operations plan will unleash a wave of investment.	
13188-15-	More importantly, disapproval [of the Vineyard Wind Project] will begin a	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
003	domino effect that will ultimately put tens of thousands of hardworking	several sources of projected employment and investment resulting from
	Americans from across the economic spectrum and from literally all walks of	growth of the wind energy industry along the Atlantic coast. While the
	life just for example, some of whom we've heard from today, the building	estimates are national, jobs are anticipated to be concentrated in and near the
	trades, vessel captains and deckhands, accountants, dock workers,	east coast states that would host offshore wind.
	economists, welders, divers, aircraft pilots, atmospheric and marine	
	scientists, truck drivers, attorneys, crane operators, project managers,	
	mechanics and every imaginable engineering discipline, among many other	
	occupations, will go back to work as a result of Vinevard Wind and other	
	offshore wind projects.	
13188-15-	Vinevard Wind will also significantly contribute to energy security and	Thank you for your comment.
004	improve local air quality in New England.	
13188-16-	I'm concerned with the impact on the endangered marine life, the seabed and	Thank you for your comment.
001	erosion. Those impacts appear clearly assessed.	
13188-16-	I do not see any assessment of cultural impact of the Vineyard Wind, for	BOEM utilized all information provided in the course of the NEPA review
002	instance, the windmills will dominate views from wave screen and the north	and National Historic Preservation Act Section 106 consultations to analyze
	neck high ground. These grounds are where we hold ceremonies from our	the impacts on the environment, natural and cultural resources, and
	lost ancestors and rising sun For 10,000 years with experience, this view	environmental justice communities in order that the decision maker is fully
	has been unaffected by man-made structures. I'm compelled to speak in the	informed. The description of impacts is located in Sections 3.8.2-3.8.5, and
	interest of preserving our traditions for my children. My questions are, which	when considered against the criteria determining the intensity of impacts (i.e.,
	category assesses cultural impacts? And how do you plan to mitigate these	whether they are minor, moderate, etc.), located in Section 3.8.6, the impacts
	impacts?	are of a moderate nature.

Index	Comment Text	Response
Number		
13189-01- 001	First, we strongly support the adoption of Alternative D-2 as the preferred alternative for project layout in the Rhode Island/Massachusetts contiguous lease area. As one of the participating developers to the consensus proposal for a uniform one-nautical-mile-by-one-nautical-mile east-west grid configuration for these specific lease areas, we were heartened to see the solid evidence presented in the SEIS demonstrating the superiority of this approach from a navigational safety perspective while still respecting the ability of commercial fishermen and other navigators to transit in and through our lease area.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment.
13189-01-	We encourage BOEM to defer to judgment of the U.S. Coast Guard, which in the context of the recently released final Massachusetts Phode Island Port	The FEIS addresses this comment in Section 3.11.5. The USCG is a
002	Access Route Study, the MARIPARS, determined that the grid layout pattern, and I quote, will result in the functional equivalent of numerous navigational corridors that can safely accommodate both transits through and fishing within the wind the WEAs, and declined to recommend further formal or informal vessel routing measures.	matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13189-01- 003	Diversely, we take issue with the SEIS finding that Alternative F contemplating a dedicated four-mile-wide transit corridor could, quote, technically and economically meet the purpose and need. As an example, the Responsible Offshore Development Alliance wrote a proposal for a four-nautical-mile-wide transit lane, the basis for Alternative F, if if adopted and extended to other projects would result in the loss of over 50 50 wind turbine locations from our current three projects, South Fork, Revolution and Sunrise Wind, that have current existing PPA obligations. This equates to nearly 25% loss in the total wind turbine locations needed to support our state power purchase agreements. In light of this significant constraint on our development developable footprint and attendance production loss, we believe the SEIS conclusion of technical and economic feasibility with respect to Alternative F is misplaced.	Thank you for your comment.
13189-01- 004	Second, it's hard to reconcile the SEIS qualitative assessment that future offshore wind development will result in only minor net economic benefits to the region with the study's recognition of significant new investment in ports and harbors, manufacturing and other supply chain activities and workforce development. Our company alone is on its way to investing 15 billion over the next decade in the U.S. The SEIS should reflect a more favorable rating of offshore wind as a domestic economic development engine consistent with ongoing and planned investments.	Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be moderate beneficial. Section 3.6 of the FEIS has been updated to have a moderate beneficial rating and is a change from the minor beneficial impact given in the SEIS.

Index Number	Comment Text	Response
13189-01-	Third, for many of the cumulative impact parameters considered in the SEIS,	Thank you for your comment.
005	BOEM chose not to incorporate widely accepted or legally mandated	
	mitigation strategies. Thus, the bottom-line impact of the 22 gigawatt build-	
	out must be considered a worst case scenario and notrepresentative of as-	
	constructed project impacts. The SEIS should place the impact assessment in	
	proper context.	
13189-01-	Fourth, since the SEIS acknowledges that ongoing climate change, which	Air quality and climate change impacts are addressed in Section A.8.1 of the
006	contributes to cumulative impact, it's important to reemphasize the positive	SEIS and FEIS.
	climate impact that renewable energy projects will provide to terrestrial and	
	marine fauna and local communities.	
13189-02-	First, the supplemental EIS is, by design, focused on the cumulative impacts	Thank you for your comment.
001	of the Vineyard Wind Project and other offshore wind projects that are	
	reasonably foreseeable. But a plain reading of the SEIS could lead to the	
	conclusion that if the Vineyard Wind 1 Project is not advanced, other projects	
	in various stages in the pipeline inevitably will. I don't think this will be the	
	case, and I'm going to explain why further in my testimony.	
13189-02-	The Vineyard Wind team of Copenhagen Investment Partners and Avangrid	Thank you for your comment.
002	Renewables, as developers of the first commercial scale offshore wind	
	proposal to advance since Cape Wind, have gone above and beyond the	
	extensive federal, state and local requirements for offshore wind. They've	
	done extensive due diligence, worked closely with BOEM and state and local	
	regulators, and reached out to a wide variety of stakeholders, including	
	commercial fishermen and environmental NGOs. They've modified the	
	project in response to concerns and objections, and they've collaborated with	
	other Massachusetts leaseholders. Collectively, they have voluntarily agreed	
	to a one-by-one nautical mile spacing to address concerns raised by both	
	commercial fishermen and the Coast Guard.	
13189-02-	The project has significant environmental and public health benefits. It would	New information quantifying averted emissions using AVERT relative to
003	reduce carbon emissions by almost 1.7 million tons per year would cut NOx	existing power generation has been added to Section A.8.2.1 of the FEIS.
	emissions by over 1000 tons per year and SO2 emissions by 860 tons per	
	year.	
13189-02-	It has significant economic benefits. The project would generate 2.8 billion in	Economic and employment contributions of Vineyard Wind are covered in
004	direct private investment and provide some 3,600 family-sustaining jobs, and	Section 3.6.2.1 of the FEIS. (These were also included in the DEIS.)
	it would have a significant ratepayer benefit generating 1.4 billion in savings	Estimated job creation by Vineyard Wind would be approximately in
	over the life of the project.	Massachusetts alone 3,100 to 3,600 FTE job years, including 1,100 to 1,550
		job years during construction and about 80 jobs lasting at least 25 years
		(resulting in 2,000 FTE job years) during operations. Section 3.6.2.1 and
		Tables 3.6-3, 3.6-4 and 3.6-5 also list the grants that would be provided by

Index Number	Comment Text	Response
		Vineyard Wind and show economic value and first year tax revenues that would result from Vineyard Wind.
13189-02- 005	As this project is the first anticipated large scale wind project in the United States, it is, in many respects, a litmus test for offshore wind development in this country. Where BOEM comes out on this project will send a message to the entire offshore wind industry and will likely determine its fate in the U.S It's clear that BOEM's decision here will have ramifications well beyond the Massachusetts border. New York, for example, has three offshore wind projects in the pipeline totaling more than 1800 megawatts and has a state mandate to achieve 9000 megawatts of offshore wind energy generation by 2035. If those projects do not advance or are subject to onerous conditions, such as a four-mile-wide transit lane, New York will not achieve its statutory clean energy standards. It's that simple. So I urge BOEM to reject the Alternative F.	Thank you for your comment.
13189-02- 006	Alternative F is completely unnecessary and would severely constrain clean energy production in the Massachusetts wind energy areas and not meaningfully improve navigation or safety.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment.
13189-02- 007	[Alternative F] it threatens the viability of all offshore wind projects in the region and the state's ability to meet their renewable energy goals, and in some cases, like New York's, its mandates. If it is imposed, we would lose lose the substantial benefits of these offshore wind projects, including emission reductions, improved human health, billions in economic investment, and thousands of family-sustaining jobs.	Section 2.1.5 of the SEIS addressed the technical and practical challenges that could occur in Alternative F were implemented. Section 3.6.4 of the FEIS has been updated to note that the transit corridor (Alternative F) could result in lower economic investment and employment due to the lower capacity for offshore wind development in the RI and MA Lease Areas that could result from this alternative.
13189-02- 008	So I urge BOEM to stick to its public schedule, issue a final EIS in November, and a record or position approving the project as proposed and modified by the applicant in December.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
13189-03- 001	Our over 10,000 members, well over 10,000 members, across Rhode Island and Massachusetts, who are involved in our energy program, demonstrate that New Englanders want clean energy, and they want clean energy that is affordable and reliable in building a local green energy economy in our states We are working together to urgently develop an energy system that is affordable, reliable, and most importantly, free of fossil fuels which create local and global air pollution problem. As such, Green Energy Consumers supports the Vineyard Wind Project.	Thank you for your comment.
13189-03- 002	We believe this SEIS demonstrates that offshore wind can be constructed at minimal environmental impact and that this project will lead to affordable and reliable clean energy for New England ratepayers.	Thank you for your comment.
13189-03- 003	Moreover, this project is an essential step in the larger grid decarbonization that needs to happen in New England over the coming decades. The	Thank you for your comment.

ponse
S has been updated to address air
f fossil fuel electricity generation by
d on numerous variables beyond the
pdated to provide estimates from
ent and investment resulting from
ong the Atlantic coast. While the
ated to be concentrated in and near the
ore wind.

Index	Comment Text	Response
12180.04	The third issue is that with aliments show as bearing down as we will be and	Creambaura and animate shares were avaluated in Section
003	New England expected to see higher and more rapid temperature rises And	A.8.1 of the SEIS and the FEIS has been updated to include additional
	then we have more extreme precipitation events predicted for New England;	information.
	stronger hurricanes, of course, coming at the coast, and we get those	
	intermittently; certainly more extreme wind events; many thunderstorms now	
	result in power outages than they did, and that didn't used to happen, but the	
	winds will be clocked at, you know, 80 or 100 miles an hour. So obtaining	
	electricity from a carbon-free source such as wind power, which reduces	
	carbon emissions, and, therefore, hopefully will help us get a feeling of	
	emissions and then begin to reduce how much is in the atmosphere, is terribly	
	important.	
13189-04-	So in Marblehead, our Municipal Light Departmentis eager to be able to	Thank you for your comment.
004	purchase reasonably priced electricity from renewable sourcesHowever,	
	local resources are very constrained so that right now we only have 12%	
	renewable energy in our portfolio and then 26% nuclear. We purchase our	
	power through PSA and PPAs through MMWEC, which is the Mass	
	Municipal Wholesale Electric Corporation. MMWEC needs wind options to	
	provide its 22 Municipal light plant members? And currently it has none.	
	You know, we have Berkshire Wind. We jointly, with some other munis,	
	own eight turbines in Western Mass. But clearly, there's no future wind on	
	the horizon unless Vineyard Wind gets approved.	
13189-05-	Committing to a clean energy future is now viable and essential The Scots	Thank you for your comment.
001	found a way to supply all their power without exploiting or destroying the	
	surrounding natural world, and much like the Vineyard Wind Project where	
	the utmost care is being provided with consideration for fishing industry,	
	marine life and birds. Mass Audubon will be monitoring bird migration	
	behavior. National Wildlife Federation stands as the champions for marine	
	life and wholeheartedly supports this project.	
13189-05-	The Coast Guard has approved adequate spacing of turbines and conclude	Section 3.11.5 of the FEIS has been revised and contains additional
002	that corridors provided will will create proper navigational opportunity.	information to address this comment. The USCG is a cooperating agency for
	Please reject Option 4 and adopt Option D in that regard.	the FEIS that is the leading agency on navigational matters; therefore, BOEM
		relies on, and does not question, the USCG's expertise and analyses for
		purposes of informing the navigational impacts in the EIS.
13189-05-	So if we are responsible as a society, we're going to alleviate the devastating	Thank you for your comment.
003	long-term effects of climate crisis, offshore wind is the easiest and lowest	
	energy delivered cost.	
13189-05-	Let's not forget the tens of thousands of jobs that the wind power industry	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
004	could generate long term.	several sources of projected employment and investment resulting from
		growth of the wind energy industry along the Atlantic coast. While the

Index	Comment Text	Response
Number		estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13189-05- 005	I'd also like to suggest that we are creating a geopolitical stability as we develop local clean energy.	Thank you for your comment.
13189-06- 001	I'd like to first go on record in supporting the one-mile distancing between towers. And there was one statement in the Coast Guard report that stood out to me: Anything that can be done to reduce traffic scenarios is a prudent decision. So I'm very supportive of that.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13189-06- 002	As we enter a new century, the power generation industry must now take into consideration of impact items such as climate change, carbon dioxide emissions, capacity of fossil fuels while experiencing an increase in demand for electricity. The direction taken on power generation supports concepts which was adopted with wind power. It's quite evident, based on the number of companies which have won leases for the Atlantic Coast sites, that offshore wind is where power generation wants to be.	Thank you for your comment.
13189-06- 003	As I reviewed the BOEM report, I took notice of the study on avian fatality. And the model that was created indicated one fatality every 6.25 years. So it's kind of nice to know that a turbine is not a bird Cuisinart.	Section A.8.3.1 of the FEIS includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling.
13189-06- 004	In reading the BOEM white paper, there was one statement which was continually used, and that statement is, to the degree wind energy development offsets the use of fossil fuel used to generate power, it will reduce carbon emissions and further effects to reduce global warming. Calculated risks are necessary when adopting a new concept for the first time.	Thank you for your comment.
13189-07- 001	This comprehensive and detailed analysis that you all have conducted shows that responsibly developing the offshore wind industry will create tens of thousands of quality jobs, pump billions and economic growth into coastal communities, protect wildlife, lower pollution, and safeguard navigation.	Thank you for your comment.
13189-07- 002	The Coast Guard has recommended that [1x1 NM] layout as the best way to ensure everyone can use the oceans safely and prosperously. And this draft Environmental Impact Analysis verifies that such a layout is the most fair, responsible and protective of all impacted constituencies.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.

Index	Comment Text	Response
13189-07-	The Bureau and the Coast Guard have appropriately taken significant efforts	Thank you for your comment.
003	to consider the perspectives of all stakeholders, especially the parts of the	
	fishing industry that have been most vocal about their concerns. We thank	
12100.07	you for your due diligence and your efforts.	
13189-07-	Both the robust Coast Guard study and this incredibly detailed analysis show	Section 3.6.4 of the FEIS was updated to note that Alternative F could result
004	difficult for most occor users limit the full potential of the offshore wind	offshore wind development in the PL and MA Lease Areas that could result
	lease area, and reduce tremendous economic and environmental benefits	from the transit lange. Section 3.11.5 discusses the notential impacts of wider
	brought by this new offshore wind industry for families, workers and	transit lanes. Alternative E on pavigation and vassal traffic
	businesses along the coast. We urge you to finalize this environmental impact	traiisit failes, Atternative F, on navigation and vessel traffic.
	analysis Approve the Vineward Wind Project as agreed to by the developers	
	by the end of this year.	
13189-08-	As I'm sure is clear, offshore wind offers exciting prospects. It can offer large	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of
001	amounts of pollution-free generation, which many states, including along the	fossil fuel consumption and resulting degraded air quality on different racial
	Eastern Seaboard, are demanding. That matters for reducing air pollution	groups, as well as different income groups, as well as benefits from reduction
	from colossal fuel power plants; that affects, in particular, the often	of fossil fuel power generation displaced by offshore wind energy (including
	marginalized communities that abut those plants; and it matters for reducing	the proposed Project and other projects).
	climate changes, harmful impacts, including on the marine environment and	
	all that depends on it.	
13189-08-	Offshore wind can offer savings to electricity customers thanks to the strong	Section 3.6.1.1 of the FEIS has been updated to provide estimates from
002	cost reductions that the industry has achieved which are themselves thanks in	several sources of projected employment and investment resulting from
	part to the strong state policies that have prompted larger projects and offered	growth of the wind energy industry along the Atlantic coast. While the
	economies of scale. And offshore wind can offer economic development and	estimates are national, jobs are anticipated to be concentrated in and near the
	jobs with the creation of an entirely new industry with all the projects, study,	east coast states that would host offshore wind.
	development, installation, maintenance, manufacturing, finance and more	
	that the industry entails. That job creation potential seems particularly	
	important with the high unemployment and an economy in need of	
	rebuilding.	
13189-08-	When the five other when the five New England leaseholders proposed to	Section 3.11.5 of the FEIS has been revised and contains additional
003	adopt a uniform one-by-one turbine layout and the same east-west-north-	information to address this comment. The USCG is a cooperating agency for
	south orientation, that was a solid response to many of the concerns	the FEIS that is the leading agency on navigational matters; therefore, BOEM
	expressed about the prior plans and navigation to the projects. And as you've	relies on, and does not question, the USCG's expertise and analyses for
	heard in this recent MARIPARS study, the U.S. Coast Guard confirmed the	purposes of informing the navigational impacts in the EIS.
10100.00	appropriateness of that spacing.	
13189-08-	So we add our voice to the strong opposition to the SEIS Alternative F,	Section 3.11.5 of the FEIS has been revised and contains additional
004	which would require additional transit lanes beyond the hundreds provided	information to address this comment.
12100.00	by the one-by-one fixed orientation layout.	
13189-08-	Alternative F would lead to a lot more loss potential, fewer megawatts. And	Section 3.6.4 of the FEIS has been updated to note that the transit corridor
005	less generation would mean more air pollution impacts on the fossil fuel	(Alternative F) could result in lower economic investment and employment

Index	Comment Text	Response
Number		
	electricity hills: for apportunities for aconomic development and ishes and	Lease Areas that could result from this alternative
	a heightened impact on marine wildlife, given the worsening impacts of	Lease Areas that could result from this alternative.
	a heightened impact on marine whenle, given the worsening impacts of	
	vou to reject. Alternative E in particular	
12180.00	The draft Supplemental Environmental Impact Statement recently published	Thank you for your comment
13189-09-	by the Federal Durant of Ocean Energy Management reinforces our	Thank you for your comment.
001	by the Federal Bureau of Ocean Energy Management remotes our	
	conviction that the vineyard wind Floject will be a huge her positive not	
	United States, Electrification must be a primary strategy for mitigating the	
	release of early a disuids into the atmosphere, and the Vineward Wind	
	Project will be in a mostion to movide the clean energy the clean electricity.	
	project will be in a position to provide the clean energy, the clean electricity	
12100.00	needed to revamp our heating, cooling and transportation systems.	
13189-09-	It's important to note that the untapped offshore wind resource along the U.S.	Section 5.0.1.1 of the FEIS has been updated to provide estimates from
002	Eastern Seaboard is one of the most powerful in the world. It is within reach	several sources of projected employment and investment resulting from
	or dense in densely populated areas along the East Coast where energy	growth of the wind energy industry along the Atlantic coast. While the
	demands are high and new resource options are few. Estimates indicate that	estimates are national, jobs are anticipated to be concentrated in and near the
	the offshore wind industry could provide as many as 83,000 jobs and deliver	east coast states that would host offshore wind.
12100.00	\$25 billion in annual economic input in this region by 2030.	TT1 1 0
13189-09-	I commend BOEM and the other federal and state agencies and entities that	I hank you for your comment.
003	have worked hard to bring together a full range of stakeholders.	
13189-09-	I support the east-west one-nautical-mile-wind-turbine spacing without	Section 3.11.5 of the FEIS has been revised and contains additional
004	transit lanes that's Alternative D-2 which will give fishermen and other	information to address this comment.
	ocean vessel captains plenty of room to maneuver as they pass through the	
	windfarm I his alternative would require that the wind turbine	
	generators be oriented in the east-west direction and have a minimum spacing	
	of one nautical mile between them. That's allowing for continued coexistence	
	between a new industry and existing marine users.	
13189-09-	I also support the Covell Beach landfall alternative, Alternative B, which will	Section 2.5 of the FEIS has been added which includes the agency-preferred
005	limit the cable landfall to only that location. This location would reduce	alternative.
	impacts on environmental and socioeconomic resources, and especially on	
	Lewis Bay.	
13189-09-	I'm delighted to see the SEIS provides the information needed to proceed	Thank you for your comment.
006	with the development of the offshore wind industry more broadly along the	
	East Coast of the United States, and more specifically, the Vineyard Wind	
	Project. This much needed clean renewable energy resource must be must	
	proceed with all deliberate speed and no delays. The very future of the planet	
	depends on the responsible development of offshore wind power in the	
	United States and abroad.	

Index Number	Comment Text	Response
13189-10- 001	I feel that the BOEM, along with other governmental agencies, have worked to mediate dangers to our ocean while fostering support to the important fisheries in the area. The one-by-one NM separation distance between the wind turbings in the north pauth part work directions are parts wide arough for	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment.
	transit and is actually a width larger than wind turbines, and that is standard in the North Sea.	
13189-10- 002	Although offshore wind turbines are more expensive to build and install, their payback time is less than a year and to provide critical green energy for consumers. In addition, by contrast, wind turbines on land are getting substantial pushback. And in one court, a wind turbine has to be dismantled while they're being shut down in other towns. Thus, our need for electricity will be much easier to satisfy with offshore wind turbines like Vineyard Wind. Thus, I feel that the climate emergency is real and a dire threat to our wellbeing and Vineyard Wind desperately needed	Thank you for your comment.
13189-11- 001	Vineyard Wind has been a collaborative, communicative and engaged partner with many stakeholder groups, and has shown genuine interest in the region's environmental and economic health. While it's clear that there will be impacts to existing uses, and that the emergence of this new industry will require changes in both practice and habit, we feel that the adjustments made to this permitting process and the mitigations put in place will minimize those impacts.	Thank you for your comment.
13189-11- 002	Developers have made a commitment to coordinate a predictable layout that answers marine concerns and comes at the cost of substantial reductions in clean energy potential among the lease areas. We support the proposal, and further dilution beyond this proposal could jeopardize the project's viability, increase the cost to ratepayers, as well as increased environmental impact, rendering the existing lease areas insufficient to meet the region's clean energy mandates.	Thank you for your comment.
13189-11- 003	And if additional transit lanes are added to the plan, which the U.S. Coast Guard has asserted will not provide meaningful increases in ease of transits and actually could create increased conflict.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13189-11- 004	In terms of economic development, Vineyard Wind represents a major opportunity to bring \$1.8 billion in direct economic benefits to Massachusetts, including 3,600 new jobs. The project has created a \$15 million fund to help build a sustainable offshore wind industry in Massachusetts that would bolster development of the supply chain, businesses and infrastructure. This type of economic development will play	Economic and employment contributions of Vineyard Wind are covered in Section 3.6.2.1 of the FEIS. (These were also included in the DEIS.) Estimated job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operations. Section 3.6.2.1 and Tables 3.6-3.

Index	Comment Text	Response
Number	out up and down the East Coast of the United States if the nation ushers in this new renewable energy industry.	3.6-4 and 3.6-5 also list the grants that would be provided by Vineyard Wind and show economic value and first year tax revenues that would result from Vineyard Wind.
13189-11- 005	We urge BOEM to arrive at a final decision on the federal permits this year. This is critical not only for the viability of Vineyard Wind but for the entire future of the U.S. offshore wind industry, including shipbuilders, suppliers and other maritime interests. Considering the nation's abrupt economic downturn this year due to COVID-19 impacts, this will help spur immediate economic growth in our nation's economy.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13189-12- 001	I'd like to voice my full support for the Vineyard Wind 1 offshore wind project. The project will be crucial for fulfilling Massachusetts climate goals and will provide thousands of good paying jobs.	Thank you for your comment.
13189-12- 002	I'm especially interested in voicing my support because Vineyard Wind has made outreach to organized labor a priority, pledging time on project labor agreements ensuring both fair compensation and adherence to the highest construction standards. Consciously, Vineyard Wind will help launch a dynamic industry with positive effects extending across the region. As a college student, I'm particularly excited for the long term benefits regarding both climate and employment that this project and similar ones will provide.	Although the Project Labor Agreement is not addressed in the FEIS, Section 3.6.2 provides projections of estimated direct job creation by the Vineyard Wind 1 Project in Massachusetts, and primarily in southeastern Massachusetts.
13189-13- 001	I was very encouraged that the Coast Guard saw that the distance that they had between the wind turbines now is fine.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13189-14- 001	Regarding the current BOEM report, Vineyard Wind responded to the fisheries' main ask for changing the spacing between lanes as to the other companies. This was and is a dramatic concession that gives up to a third of development, which, frankly, I believe is too much to concede reallyFurther [concessions] are unnecessary and would call damage moving forward. I ask you to reject Proposal F, as it further stalls the progress of renewable offshore wind energy.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13189-14- 002	The proposal, as Vineyard Wind presents it, has the best chance of addressing many of the needs of our most marginalized citizens in the northeast. They need affordable renewable energy; they need job creation in a new industry with good paying jobs; and they need us to address climate change before its crisis affects all of us further.	Section 3.8.1 and 3.8.2 of the SEIS noted that offshore wind development could result in job creation for low and minority residents. This potential beneficial impact is carried over into the FEIS. Additionally, Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).

Index	Comment Text	Response
Number		
13189-14- 003	We need to do what Vineyard Wind has done, which is to ensure that they will do proper mitigation to impacts of marine life and to commit to ongoing monitoring and research that will help perfect the industry here in the U.S. We need every company that proposes offshore wind projects in these protected waters to be similarly diligent and collaborative.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information. Future offshore wind projects will undergo separate NEPA reviews, and similar or different measures could be required for those projects to avoid or reduce the potential effects anticipated.
13189-15-	We believe that offshore wind generally, and the Vinevard Wind Project in	Thank you for your comment.
001	particular, is a critically important part of the solution to the climate crisis. We believe that the town of Chatham stands to benefit in many ways from this projectmoving forward quickly by reducing our continued reliance on fossil fuels, to provide electricity to heat our homes, by creating many new jobs and creating other economic development opportunities for our town. So here we are today here to speak in support of the Vineyard Wind Project.	
13189-15-	We specifically want to support Alternative D-2, the east-west one-nautical-	Section 3.11.5 of the FEIS has been revised and contains additional
002	mile turbine spacing without transit lane. This alternative will reduce conflict with commercial fishing and marine navigation. It recognizes and protects existing ocean uses, such as the commercial fishing industry, while protecting the marine environment and setting the path forward in a fair and responsible way to protect all stakeholders, particularly the commercialfishing industry.	information to address this comment. Section 3.11.2.4 of the SEIS discusses the impacts of Alternative D2 on commercial fisheries, including improved maritime navigation; therefore, no change to the FEIS is warranted.
13189-15-	Requiring additional transit lanes has been deemed unnecessary by the U.S.	Section 3.11.5 of the FEIS has been revised and contains additional
003	Coast Guard, and we agree. This would result in more complex more delay and damage to our industry and potentially making ocean transit even more complex and dangerous to the fisherman. So we are therefore opposed to alternative asks requiring additional transit lanes and support Alternative D- 2.	information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13189-15- 004	We believe that this SEIS provides more than sufficient information and support of the development of the offshore wind industry and the much needed clean, renewable energy resource it will provide including the Vineyard Wind Project. So we urge BOEM to complete this review in a timely fashion in accordance with the with the timeline that was laid out and referred to earlier and provide a pathway for this project to move forward recognizing all the compromise that has been made and avoid any serious	Thank you for your comment.

Index Number	Comment Text	Response
	consequences that could only further delay and jeopardize our ability to at last move forward beyond reliance on fossil fuel.	
13190-01- 001	The climate emergency is chipping away at our identity. It's impacting it's adversely impacting our biodiversity, our fisheries and our coastline. Homes across Cape Cod, Nantucket and Martha's Vineyard are literally falling into the sea. Warming waters are disrupting our coastal habitats, adversely affecting our fisheries and aquaculture, and even raising our insurance rates. In the Northeast, offshore wind is our renewable source with the potential to supply a third of our energy needs in the coming decades. The policies alone don't cut it. We need to permit and build offshore wind now.	Thank you for your comment.
13190-01- 002	Vineyard Wind 1 alone is estimated to save ratepayers well over a billion dollars, and we expect comparable benefits for all future projects, all of which rely on local well-paid workers to construct these projects.	Ratepayer costs depend on numerous variables beyond the scope of the EIS. Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13190-01- 003	It was distressing last summer to find the Federal Government would delay approval of Vineyard Wind setting offshore wind in this country back by more than a year. But I was pleased with the reasoned findings of the report which clearly show that the impacts are moderate and manageable. Importantly, the report acknowledged that whether it's marine mammals, birds, fish, or even cultural resources, the climate of urgency is a real threat and offshore wind can provide solutions. I urge BOEM to continue the course to properly approve Vineyard Wind and to efficiently permit the projects that will come after it.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13190-01- 004	I also ask that you accept the uniform layout as agreed to by developers and reject the proposal for additional transit lanes. The Coast Guard has said they are unnecessary, and your report has asserted that they may cause delays, threaten projects, and create more environmental impact. But most importantly, expanded transit lanes will leave Massachusetts and other states unable to meet our clean energy mandates.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13190-01- 005	Many of our region's old, dirty and dangerous power plants are coming offline. Vineyard Wind and related projects offer a welcomed opportunity but also a challenge to redefine our energy grids in an affordable, equitable and environmentally responsible way.	Thank you for your comment.
13190-02- 001	As a 25-year-old acutely aware of the impacts climate change has and continues to have globally and on the island, I enthusiastically support Vineyard Wind 1, which clearly demonstrates responsible offshore wind development.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
13190-02-	Public health, the economy, environmental justice, and climate change are	Thank you for your comment.
002	interwoven with offshore wind development We have a once-in-a-	
	generation opportunity to put ourselves in the path to a low carbon future,	
	while creating new quality careers that provide family sustaining wages and	
	benefits for communities across the nation Vineyard Wind will propel the	
	United States offshore wind industry and deliver clean, renewable and cost effective power to Massachusetts	
13190-02-	In addition, this project will provide thousands of good union jobs and attract	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
003	global supply chain manufacturers to the northeast. Vineyard Wind 1 is	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
	expected to create 3,600 local jobs that provide good wages and benefits.	3,600 FTE job years, including 1,100 to 1,550 job years during construction
		and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
		during operation. These data were also provided in the DEIS.
13190-02-	We support the one-by-one nautical mile layout compromise that responds to	Section 2.5 of the FEIS has been added which includes the agency-preferred
004	commercial fisheries' concerns. Not only does the Coast Guard approve of	alternative.
	this mitigation effort, but adding additional mileage to the layout would only	
	take away from the efficiency and carbon reduction potential the project is	
	meant to address.	
13190-02-	To maximize the economic development and job opportunities in offshore	Thank you for your comment.
005	wind, the industry and its potential workforce needs confidence that demand	
	in the US offshore wind market is real. This means we need to move forward	
	promptly in the permitting process, set the stage for this nascent industry.	
12100.02	This starts with Vineyard Wind I.	
13190-02-	I urge BOEM to follow the current permitting schedule for this project and to	Thank you for your comment.
006	move forward expeditiously on this and other offshore wind projects the	
	only way to achieve 9 gigawatts of offshore wind energy by 2035, the state's	
	goal, ensurined last year in legislation, is to advance permitting in a timely	
	manner and develop safe and fair conditions with community stakeholders, as	
12100.02	was done in vineyard wind 1.	These trees for your comment
13190-03-	structure, which the pylons actually create for recreational fishing. But this	
001	support comes as long as wind forms are developed responsibly with research	
	before during and after construction to measure any negative or positive	
	impacts on fishing habitat. And yes I say positive impacts because I as	
	other anglers, believe that offshore wind farms will have a major positive	
	impact on habitat and fish just as the Block Island Wind Farm research has	
	shown in angler experiences there, as well as a recent peer reviewed study	
	that indicated that fish abundance inside European offshore wind farms is	
	much greater than the abundance of fish outside of the wind farm and control	
	areas. The study was published in the March issue of Fishery Science and	

Index Number	Comment Text	Response
Number	Agriculture Magazine, and it was titled "Mega analysis of Fish Abundance of Offshore Wind Farms."	
13190-03- 002	[Block Island wind farm] is now a destination, just as all wind farms will be a destination for recreational anglers in the future. At the Block Island Wind Farm, there are gillnets, commercial gillnets set right up to the turbines and close by. There are commercial fishermen culling alongside the wind farm. And in the wind farm, and recreational anglers fish right up to the pylon. So all this activity occurs just how fishing should be in wind farm areas. The cumulative impact and benefit to recreational fishing of offshore wind farms will be a major not a minor benefit as outlined in the FDIC	Section 3.4 of the SEIS discussed the reef effect on finfish, and Sections 3.10 and 3.11 discussed that recreational fishing may improve near structures offshore. Therefore, no change to the FEIS is warranted.
13190-03- 003	It is clear offshore wind will have a positive cumulative impact on recreational fishing, as there will be more fish, which will impact commercial fishing in a positive way as well. To this end, as some of my colleagues have suggested, additional scow protection and structure should be placed at the base of pylons to create habitat and fish for recreational anglers.	Thank you for your comment.
13190-04- 001	Secondly, I want to address the economic advantages that the Vineyard Wind Project offers us Economic growth depends on three inputs: Investment, an increased demand in labor and an increase in productivity. Clearly, the Vineyard Wind is a major investment. It will increase the demand for labor, as other speakers have already mentioned, and it will result in increased productivity. And it will be an important step in helping to offset the unfortunate economic damage that the continuing COVID pandemic is likely to have.	Section 3.6.2 of the FEIS and Tables 3.6-3, 3.6-4 and 3.6-5 provide estimated job growth, tax revenues, and economic input from the Vineyard Wind 1 Project within Massachusetts and specifically within southeastern Massachusetts. Additionally, Section 3.6.1.1 of the FEIS has been updated with estimates from several sources of projected employment and investment in offshore wind resulting from growth of a wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13190-04- 002	So I had had the opportunity to talk to the Minister for Environment, Lisa Vermillion, to really interrogate her as to what did Denmark learn from the adverse impact of offshore wind? There was absolutely no adverse development of offshore wind, nothing the cables were causing. And she repeated many of the points that Captain Monti had made [about recreational fishing increasing around the pylons], which I already tended to believe, but I wanted to hear from an authority in a country which had been engaged in offshore wind since the early 1990s, which I think is a good it's comforting, and I think we can rely on that as a basis for making this decision.	Thank you for your comment.
13190-04- 003	But I would hope that we would advance and start constructing this project as soon as as soon as possible, because anything we can do to increase our use of renewable energy to address climate change is the only way that our grandchildren who are under 10 will live to see the same things that we see.	Table 1.3-1 in Appendix B of the FEIS has been updated to reflect the most recent status of the required environmental permits and consultations for the proposed Project.
13190-05- 001	While CVEC [Cape and Vineyard Electric Cooperative] accomplishments on behalf of the municipalities, counties and schools we serve are significant	Thank you for your comment.

Index	Comment Text	Response
Number		
	and unparalleled in Massachusetts, we recognize the need to do more to meet	
	the larger national demand for renewable energy amidst climate change. As	
	the first mover in renewable energy development in our region for the past 13	
	years, the Cape and Vineyard Electric Cooperative is here today to support	
	the Commonwealth and Federal Government's efforts to responsibly site and	
	develop the proposed Vineyard Wind 1 Offshore Wind renewable energy	
	project.	
13190-05-	We recognize that offshore wind is a sustainable and clean source of energy	Thank you for your comment.
002	in one of several several renewable energy options that has significant	
	potential to advance the diversification of energy sources and meet Governor	
	Baker's goals for greenhouse gas reductions here in the Commonwealth. We	
	know that it is the policy of the United States to promote the clean and safe	
	development of domestic energy resources to ensure the nation's geopolitical	
	security, and provide electricity that is affordable, reliable, safe and secure	
	and clean.	
13190-05-	For our region, we believe that offshore wind will have a positive impact on	Thank you for your comment.
003	meeting the seasonal changes. We are hopeful and do believe that Vineyard	
	Wind, along with the offshore wind industry, will take sufficient action to	
	mitigate the impacts on the environment, marine life, the fishing industry,	
	and navigation and vessel traffic. Thank you, and we hope that BOEM will	
	approve the Vineyard Wind 1 Project within the lease areas to meet the New	
	England's demand for renewable energy as soon as possible.	
13190-06-	We have the chance to build an entirely new domestic industry in the form of	Thank you for your comment.
001	offshore wind. Doing so will contribute to tens of thousands of new jobs,	
	revitalized ports, and expanded manufacturing, among other benefits.	
13190-06-	First, BOEM appropriately acknowledges the many beneficial aspects of	Thank you for your comment.
002	offshore wind, including economic and environmental benefits.	
13190-06-	Second, AWEA concurs with BOEM finding little cause for concern for most	Thank you for your comment.
003	of the areas it analyzed. BOEM comprehensively reviewed nearly two dozen	
	potential areas of impact, including various species, tourism, sediment,	
	lighting and air traffic. For all but a few, BOEM found the impacts, both	
	from Vineyard Wind and the cumulative offshore wind built, to be negligible,	
	minor, or in a few cases, moderate. BOEM's analysis in these areas was well	
	reasoned and cited key scientific literature and other evidence.	
13190-06-	Contrary to some of the messaging around the DSEIS, it is important to	Thank you for your comment.
004	recognize that BOEM only found major impacts on commercial fishing in the	
	cumulative analysis, not with respect to Vineyard Wind. I would add that	
	major does not mean unmanageable. Further, two of the most significant	
	drivers for the major finding are actually beyond the control of offshore wind	

Index	Comment Text	Response
Number		
	projects. One, changes in distribution and availability of fish due to climate	
	change; and two, reduce stock levels due to fishing related mortality. As a	
	carbon-free energy source, offshore wind is, in fact, part of the solution to the	
	first of these drivers.	
13190-06-	With respect to safe navigation, for example, AWEA agrees with a BOEM	Section 2.5 of the FEIS has been added which includes the agency-preferred
005	finding when analyzing alternative D-2, which heavily rely on evidence and	alternative.
	analysis from the U.S. Coast Guard that one-by-one nautical spacing with a	
	uniform east-west grid layout for turbines in the adjacent Massachusetts	
	Rhode Island lease area reduces the potential impacts to commercial fishing,	
	provides sufficient transit pathways through the wind farm, protects search-	
	and-rescue capabilities and protects safe vessel navigation Because	
	Alternative F is worse for vessel navigation, and because it would	
	significantly harm the economic prospects of the projects in this area, AWEA	
	urges BOEM to reject Alternative F and adopt Alternative D-2.	
13190-07-	Alternative D-2 is the only alternative in the SEIS that meets all three of the	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	Coast Guard's criteria for navigation safety. Notably, the Coast Guard has	alternative.
	clearly stated that not only would transit lanes as proposed in Alternative F	
	fail to preserve navigation safety, such lanes would actually increase risk and	
	make navigation more dangerous. Notably, the Coast Guard has clearly	
	stated that not only would transit lanes as proposed in Alternative F fail to	
	preserve navigation safety, such lanes would actually increase risk and make	
	navigation more dangerousThe Coast Guard further concluded that the	
	spacing and layout, as recommended in the MARIPARS report, and as	
	proposed in Alternative D-2, would provide sufficient space for certain	
	vessels that fish in the wind energy area to continue fishing after the wind	
	farms are constructed. Moreover, the Coast Guard found that wider transit	
	lands, as proposed in Alternative F, would largely preclude fishing in the	
	wind energy areaFor these reasons, among many others, Orsted strongly	
	endorses and supports Alternative D-2 over all others.	
13190-07-	And though I speak only for Orsted this evening or this afternoon, excuse	Section 2.5 of the FEIS has been added which includes the agency-preferred
002	me, I would respectfully remind BOEM that Orsted, Vineyard Wind, and all	alternative.
	other lease holders in the Mass Rhode Island wind energy area have	
	unanimously committed to a uniform grid layout in a north-south orientation	
	with a minimum one-nautical-mile spacing between towers per our joint	
	letter to the U.S. Coast Guard of November 1st, 2019, provided there is no	
	additional requirement to accommodate transit lands as proposed an	
	Alternative F.	
13190-08-	And we know that offshore wind provides an enormous opportunity to	Economics and employment were addressed in Section 3.7 of the SEIS and in
001	provide that growth along the East Coast, and it is an enormous opportunity.	Section 3.6 of the FEIS.

Index	Comment Text	Response
Number		
	According to 2019 estimates, we have a roughly \$/0 billion market for	
	America's coasts for offshore wind in the next 10 years. That's clean, reliable	
	energy in places like New England and New York, where building	
	infrastructure onshore is difficult. Building offshore wind will also hopefully	
	offset some of the [unintelligible] gas that is occasionally shifting to Boston	
	Harbor for wind energy. Offshore wind is an incredible opportunity not just	
	for the people in communities like where I grew up in Bristol County,	
	Massachusetts, but also for national security, and a national supply chain	
	hungry for the business. All these opportunities will only come to pass,	
	however, if we get the regulatory process right when we complete this	
12100.00	Supplemental EIS.	
13190-08-	In almost every area, the expected impacts are negligible to moderate; and in	I hank you for your comment.
002	many areas, moderate benefits can be expected. For a new and significant	
	infrastructure project that will bring electricity to communities across the	
12100.00	region, we think this is an incredibly light touch in terms of local impacts.	
13190-08-	As you know, this Alternative F would establish up to four-nautical-mile-	Section 2.5 of the FEIS has been added which includes the agency-preferred
003	wide transit lanes to the closed wind energy areas. BOEM's analysis clearly	alternative.
	says that this change would increase the impact producing factors, or IPFs, of	
	offshore wind and expand the area we're looking at to produce energy	
	significantly. NOIA firmly agrees with the concept of a uniform layout. We	
	defer to the experts of the Coast Guard, and we've reviewed the uniform well	
	placement layout for offshore wind projectsWe also know that several of	
	our member companies work WF Baird & Associates, who reviewed the	
	matter, and found that a one-by-one nautical mile approach would be best to	
12100.00	accommodate the existing efficient operations in the region.	
13190-08-	we encourage BOEM to recognize this, recognize the manageable impacts of	I nank you for your comment.
004	offshore wind, the net benefits offshore wind will bring, and help these	
12100.00	I request your immediate entroyal of Vineword Winds 1. Your entroyal	Thealt you for your comment
13190-09-	annot some a moment too soon. The EDA website sous that worldwide, the	Thank you for your comment.
001	burning of cool, natural gas and oil for electricity and heat is the largest	
	cingle source of global greenhouse gas emissions. Vineward Wind and	
	subsequent Atlantic corridor offebore wind projects will allow for the closure	
	of many face i fuel plants surrently used on the Fact Coast	
13100.00	We cannot afford to delay any longer. Vineyard Winds is ready to see The	Thank you for your comment
13190-09-	technology is well known and reliable. The time to approve the project is	
002	neumology is well known and remaine. The time to approve the project is	
	now.	

Index	Comment Text	Response
Number		
13190-09-	These polluting plants are often located in poor communities and communities of color. Your approval upholds way overdue environmental justice for these community.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
13190-09- 004	Your approval will allow for the creation of over 3,600 local full-time jobs over the life of that project starting with instant construction in 2021. These jobs will be of a great variety from manufacturing and construction to design and engineering and more. Your approval is an easier financial decision than ever.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Examples of job types and anticipated salary ranges are also identified.
13190-09- 005	However, like some of them, also, I understand that the Bureau is considering requiring additional transit lanes. These additional lanes will decrease the amount of renewable energy even more than the 30% decrease already created by the current one-by-one grid design. We cannot afford to lose any more renewable energy from this project.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13190-10-001	Primarily, I want to say we are asking you to outwardly reject Alternatives E, F, and G. E is obviously the alternative that would limit the amount of turbines, which we believe is a nonsensical alternative. Why would we limit the solutions to the problem we're working to solve, which is climate change? And transitioning from fossil fuels to renewable energy? One of the things that seems to perhaps be missing in the draft EIS is that we have to have a long-term view. And with Alternative E, it only addresses a short-term impact without overlaying the long-term benefits. So all large scale energy infrastructure has some impact on our environment. All of them do. But the question is, which one has the least impact and cause us to be sustainable over the long haul? And the answer to that is renewables and offshore wind.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13190-10- 002	The other alternative, which is F, require or asked for a four-by four- nautical-miles-by-four-nautical-miles spacing, which also causes projects to really be not ones that can come to fruition because of economics.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
1 <u>3</u> 190-10- 003	The greatest challenge to this viability and the sustainability and the longevity to our fishing industry is climate change. You may be aware of a recent study that just came out saying 60% of all fish species could be unable to survive in their current areas in the next 80 years. That's not a very long time So we don't want to, on the short term, think we're helping commercial and recreational fishing industries, when in the long term, we're actually hindering them by not transitioning full speed ahead from fossil fuels to renewable energy. So we feel very strongly that when we change our energy sources, and we transition away from fossil fuels towards renewables we	Thank you for your comment.

Index	Comment Text	Response
INUIIDEI	literally change the future of our planet and of our nation, and we change it	
	for the better. So I'm asking you to please stick to the schedule of the	
	December of this year.	
13190-11-	Additionally, we believe that the Supplemental Environmental Impact	Thank you for your comment.
001	Statement submitted in December 2019 fully addresses the concerns which	
	were raised by other stakeholders when reviewing the first environmental	
	impact statement. We strongly urge BOEM to approve this Supplemental	
	Impact Statement, and allow this project which is critical to the entire U.S.	
	offshore wind industry to move forward.	
13190-11-	Specifically, we want to point out that Vineyard Wind has revised the overall	Section 2.5 of the FEIS has been added which includes the agency-preferred
002	grid layout for the placement of turbine towers go out for one nautical mile	alternative.
	between each tower in response to commercial fishing industry concerns for	
	vessels transiting the lease site. We recognize they're legitimate worries for	
	how the project will impact fishermen. It is clear that Vineyard Wind has	
	taken their issues seriously, redesigned the layout, which has the support of	
	the United States Coast Guard, will come at considerable expense to the	
12100 11	developer.	
13190-11-	However, we believe the current demand by by commercial fishing	Section 2.5 of the FEIS has been added which includes the agency-preferred
003	interests for a four-nautical-mile-wide transit corridor is unnecessary and will	alternative.
	make the project financially unfeasible. More to the point, it will jeopardize	
	the a future of offshore wind industry in New England with major impacts	
	immediately for both jobs and the regional economy. Like to point that our	
	position that the coastal waters of New England are a shared resource, and	
	these waters as well	
12100 11	Vineword Wind will halp Massachusette produce its own aloon renewable	Theals you for your comment
13190-11-	wheyaid while will help wassachusetts produce its own clean renewable	Thank you for your comment.
004	imported fossil fuels to power our homes and economy and elyeves conding a	
	sizable portion of our earnings to out of state power generators. Wind energy	
	will reverse that outward cash flow and reduce carbon emissions as well	
13100-11-	Number two, careers in a changing economy. Then Vineward Wind Project	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
005	offers lifelong careers with excellent wages and benefits as our national job	Vineward Wind in Massachusetts alone would be approximately 3 100 to
005	market is undergoing fundamental changes	3 600 FTF job years including 1 100 to 1 550 job years during construction
	indiket is undergonig fundamental endiges.	and about 80 jobs lasting at least 25 years (resulting in 2 000 FTF job years)
		during operation. These data were also provided in the DEIS
13190-11-	Wind Energy substantially reduces the amount of heat-tranning gases we put	Thank you for your comment
006	into the atmosphere. The project allows us the opportunity to make a	rhunk jou for jour comment.
	difference in our own lives, but more importantly in the lives of our children	
	and grandchildren.	

Index	Comment Text	Response
13190_12_	Our family believes that when the windmills are built, the turbine basins are	Thank you for your comment
001	going to provide fabulous habitat for fishing and we think that the fishing is	Thank you for your comment.
001	going to be unbelievable. It's gonna be beyond anything we've ever seen	
	before. So my entire family is 100% behind offshore wind	
13190-12-	Long story short, my family is 100% behind offshore wind, we think it's a	Section 3.6.2 of the FEIS has been updated to conclude that a moderate
002	magnificent opportunity for the struggling fishing communities such as	beneficial impact on employment and economic activity would result from
	Montauk, where I come from, to be able to capitalize on the offshore wind	offshore wind development in the RI and MA Lease Areas. It also notes a
	business and provide jobs for our folks I have 50 fisherman that want to go	potential moderate adverse impact on the commercial fishing industry.
	to work offshore wind. None of the boat owners, the commercial boat	Section 3.10 provides more information on impacts on commercial fishing
	owners, but the captains and crew members as commercial fishermen,	and mitigations to be provided by Vineyard Wind. Section 3.6.2 of the FEIS
	you're only as good as your last trip anyway. But the rest of the guys that are	is also updated to explain that the New Bedford Port Authority,
	working on deck and on the boats all want to get involved in offshore wind,	Massachusetts Clean Energy Commission, and Vineyard Wind are
	and this is a magnificent opportunity to provide a really nice lifestyle for men	cooperating to develop supply chain and support opportunities, with a focus
	on the water in the northeast.	on fishing businesses. The supply of marine workers provides an experienced
		workforce with relevant skills.
13190-13-	The reason Vineyard Wind' Supplemental Draft Environmental Impact	Thank you for your comment.
001	Statement, which expands the prior cumulative activity scenarios for offshore	
	wind development, reveals that offshore wind can be done in an	
	environmentally responsible way and provide the clean energy that the East	
	Coast states are demanding. The study should help Vineyard Wind and other	
12100 12	offshore wind projects advanced quickly now.	
13190-13-	While we fight climate change, we can and must also avoid, minimize and	I hank you for your comment.
002	mitigate potential threats to ocean life by taking precautions while citing,	
	constructing, and operating turbines, and committing research and project	
12100 12	The expended analysis modicts that offeners wind forms will concrete	Theat you for your comment
13190-13-	The expanded analysis predicts that offshore wind farms will generate	i nank you for your comment.
003	approximately 22 gigawaits and enough to power hearly 8 minion nomes	
	along the U.S. Atlantic Coast within the fiext decade. Looking at the full	
	ever to ensure that when projects adequately protect the ocean resources we	
	rely on for food jobs and recreation	
13190-14-	Development of offshore wind cannot wait. Offshore wind energy is critical	Thank you for your comment.
001	for meeting clean energy goals in New England and the emission reductions	
	necessary to stop the most catastrophic effects of climate change.	
13190-14-	Vineyard Winds project is precedent setting for responsible development.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and
002	Vineyard Wind signed a landmark agreement with the National Wildlife	monitoring measures that would be implemented to avoid, minimize, and
	Federation, National Resources Defense Council, and Conservation Law	mitigate adverse impacts to marine mammals, specifically the NARW, and
	Foundation to protect the highly endangered North Atlantic Right Whale	include measures outlined in the referenced agreement. These measures
		include, but are not limited to avoidance of peak NARW presence, use of

Index Number	Comment Text	Response
	during project construction and operation. This agreement should be a model for future developments.	sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, and other measures.
13190-14- 003	Vineyard Wind's contributions have helped to jump-start workforce training for offshore wind jobs on Martha's Vineyard and its six educational and workforce training institutions in the Commonwealth.	As noted in Section 3.6.2 of the FEIS, the Vineyard Wind 1 Project would create both short-term construction jobs within the geographic analysis area and long-term jobs. Many of the estimated 80 operational jobs would be located on Martha's Vineyard, due to the location of the operations and maintenance facility and use of Vineyard Haven harbor. Section 3.6.2 also lists grants that would be provided by Vineyard Wind, including job training funds. This information was also provided in the DEIS.
13190-14- 004	Cumulative impact is also the smart perspective for assessing the effects of offshore wind development and operations on marine and avian populations. Going forward, monitoring and managing wildlife populations can only be done well from this macro view.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13190-14- 005	The Supplemental EIS states that in the absence of offshore wind development, additional more polluting fossil fuel energy facilities would come or be kept online to meet future power demand fired by natural gas, oil or coal. So time is of the essenceSo disapproval of the Vineyard Wind project at this point would create doubt and uncertainty about the regulatory and political environment for the development of offshore wind power in New England. Let us lay out a clear path for further development of offshore wind power by approving this project. The climate crisis and ensuing health crisis, demand that we stand up these projects as fast as the responsible development will allow.	Thank you for your comment.
13190-15- 001	I'm here today to speak in support of the Vineyard Wind project Because we believe that clean renewable energy is essential to preserving public health and protecting both our facilities and the communities we carve from the	Thank you for your comment.
13190-15- 002	By the end of the year, Boston Medical Center will be running on 100% renewable energy on the electricity side, and they're working on cleaning up their thermal load next. The Mass General Brigham system will be carbon positive by 2025, but we still have much to do and offshore wind is absolutely central to that work.	Thank you for your comment.
003	communities our hospitals serve, we must not only transition to renewable	i nank you ior your comment.

Index Number	Comment Text	Response
	energy but do so in a way that brings new renewable energy sources here to our region to replace the power plants that are burning fossil fuels and harming our health.	
13190-15- 004	Power from offshore wind is not just cleaner, It would also reduce the cost of energy, which would help energy-intensive businesses, like healthcare, recover more quickly from the financial impacts of COVID.	Thank you for your comment.
13190-15- 005	The addition of the proposed transit lanes on top of those accommodations would mean 4,000 fewer megawatts of wind power coming online, which according to the Healthcare Without Harms energy climate calculator would translate to an estimated additional 52 and a half premature deaths from air pollution and an additional 25.3 ER visits for asthma attacks every year. Over the course of that life of the project, that would be 1,325 premature deaths from air pollution, and 625 ER visits over that 25-year-life of the project. As we know the health impacts of our existing fossil fuel powered electric generation falls disproportionately on low income communities and communities of color. By failing to consider these impacts, impacts that could be mitigated by generating more clean renewable offshore power, I'm concerned that this analysis of the transit line fails to account for the negative impacts on environmental justice communities that Alternative F would have.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13190-16- 001	This project is a really vital step forward on the path to protecting our environment and public health by transitioning to clean energy, while also creating really important year-round jobs that help boost our economy on the Cape and islands and across Massachusetts.	Thank you for your comment.
13190-16- 002	Vineyard Wind will sustain year-round economy for the Cape and islands, as well as work to safeguard our communities against the increasingly severe impacts that we are facing of climate change. And so locally, it's estimated that this project will create around 3600 new jobs, both locally and in Massachusetts.	Thank you for your comment.
13190-16- 003	And I'm encouraged by Vineyard Wind's commitment to organized labor, which will ensure both quality construction and fair compensation.	Thank you for your comment.
13190-16- 004	And most importantly, Vineyard Winds and offshore wind projects are essential to Massachusetts and the United States reaching our climate goals. We need to transition to clean energy for to a clean energy future if we want to have a future.	Thank you for your comment.
13190-16- 005	Vineyard Wind has been thoughtful and diligent in their planning. They have carefully weighed the potential environmental impact. And they've done a really strong job at listening to the community for feedback. I strongly support the Vineyard Wind proposal, and I hope BOEM will look favorably on the project and issue the necessary permits.	Thank you for your comment.

Index Number	Comment Text	Response
13190-17-	Bristal continues to make these investments to support the Vineward Wind 1	Thank you for your comment
001	Project with an expected 3600 jobs that will be created over the payt few	Thank you for your comment.
001	vers while making a significant contribution to the efforts to tackle climate	
	change by avoiding the emission of almost 1.7 million tons of carbon dioxide	
	per year, the equivalent of removing 325 000 cars off the road	
13100-17-	It is imperative through organizations like Bristol Community College to	Thank you for your comment
13190-17-	have a clear planned out timeline to support these and additional investments	Thank you for your comment.
002	in the offshore wind workforce infrastructure. Importantly, to maximize	
	aconomic development opportunities, the business sector needs confidence	
	that demand in the U.S. offshore wind market is real with consistent and	
	reliable projects. This means that projects in the permitting and	
	development timeline must be normitted in a timely timely reasonable	
	development unterine must be permitted in a timely timely, reasonable	
	manner. Bristol and its National Offshore wind institute will provide the	
	needed training and educational pathways that asks for a clear and	
	ransparent timeline, starting with vineyard wind I with no further delays.	
	Bristol Community College strongly supports vineyard wind I and the	
12100.10	issuance of the Supplemental Environmental Impact Statement.	
13190-18-	State-of-the-art wind turbines along the Atlantic Coast will be among the	Thank you for your comment.
001	most if not the most efficient means of generating electricity available to this	
	country. That means we can have the direct benefits of low-cost power, more	
	jobs, more revenue for governments and adequate profits for the investors.	
	But of much greater significance will be the indirect benefits or externalities	
	of less harm to public health and less poverty property damage from forest	
	fires, floods and strong winds. The current COVID crisis provides a painful	
	example of the kinds of threats that will be faced in the future if we fail to cut	
	carbon emissions.	
13190-18-	A number of highly qualified companies are ready to begin construction on	Thank you for your comment.
002	these projects and are just awaiting your approval. I urge you to complete this	
	already too-lengthy review process as quickly as possible and let this most	
	hopeful activity begin. Please	
13190-19-	Unfortunately, we find ourselves disappointed in the analysis of cumulative	While the overall response of marine birds to offshore wind development on
001	impacts to birds. At points in this section, the authors draw debatable	the Atlantic OCS is unclear at this time, the analyses contained in the DEIS
	conclusions without providing substantive supporting information or	and SEIS utilized the best available science to determine potential impacts.
	methodology. Some critically important issues are neglected altogether. This	Where appropriate, the FEIS has been updated in response to new
	consistently minimizes the impacts of offshore wind on birds, and we are	information and comments received during public engagement. Additionally,
	concerned that this has resulted in a substantial underestimate of the likely	Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and
	adverse effects.	monitoring measures that would be implemented to avoid, minimize, and
		mitigate adverse impacts on birds. These measures include, but are not
		limited to, installation of bird deterrent devices, use of ADLS, installation of

Index	Comment Text	Response
Number		
		digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders and will be used to further clarify bird use of the OCS and inform future developments on the OCS. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. If compensatory mitigation measures are proposed by Federal and State resource agencies with expertise on the topic, these will be considered by decision makers and may be incorporated into the Record of Decision
13190-19- 002	Among our key concerns, Table A-9 is intended to predict the number of birds that will be killed by currently anticipated offshore wind facilities on the Atlantic each year. The report acknowledges that the list of species is incomplete. Species that we know traverse wind energy areas are not considered, including species of conservation concern. The data is heavily skewed. For example, it is estimated that between zero and 1,346 Red- throated Loons will be killed each year, but the media is six birds.Perhaps this is based on sound data and analysis, but it is difficult to assess as the description of the methods is limited to a couple of sentences in footnotes. This does not provide the clear, transparent, robust analysis that we need to adequately assess the risk of bird collisions with offshore wind turbines	Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling. The estimates of potential collision mortality provided in the FEIS are not relied upon to reach an impact level determination, but were provided to explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling. The commenter's point about the distribution of fatality estimates being skewed is correct and obvious from the table in the desist. The commenter's accusation of "minimizing" risk is misleading. To advert misinterpretation of the results, BOEM has expanded this section in the FEIS to include a full description of methods and include the data that was used in the collision modeling.
13190-19-	The SEIS does not evaluate the impacts of offshore wind energy	Section A.8.3.1 of the FEIS includes an updated discussion of collision risk
003	development on land birds.	to nocturnal passerine migrants. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants only cross the Atlantic OCS briefly during migration, typically flying well above the Rotor Swept Zone. Further, many of the nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Willmott and Force 2014).
13190-19-	Most surprisingly, the SEIS does not substantively address likely impacts to	A detailed analysis of impacts to ESA-listed species (including roseate tern,
004	the species listed under the Endangered Species Act. This includes the	piping plover, and Rufa red knot) is provided in the revised BA that was
	endangered Roseate I ern and threatened Piping Plover, both of which are	submitted to the USFWS, which can be found at the following link: $1 + \frac{1}{2} + 1$
	known to traverse wind energy areas.	nttps://www.boem.gov/vineyard-wind-Consultation-Documents/. In all
		cases BOEM determined that the Vineyard Wind I Project "may affect, but is
		the Project Area. Additionally, Section A.8.3.2 and Appendix D of the FEIS

Index	Comment Text	Response
Number		-
		include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds, including ESA-listed species. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post- construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by decision makers and incorporated into the Record of Decision. Project-specific ESA consultations will be required for all future offshore wind development
13190-19- 005	How is it that when the full complement of projects off the Atlantic Coast is considered, that it doesn't warrant discussion let alone a conclusion that significant impacts may occur? Given these concerns and others, we urge substantial revision and improvement to this portion of the analysis. First, we recommend a full review and revision of the section focused on birds, with more robust analysis and subsequently reassessed impact statements. Second, we recommend evaluation of impacts to nocturnal migrant land birds and ESA-listed species. Third, we recommend a revised estimation of the average number of birds that will be killed each year by offshore wind turbines. This estimate must provide clearly articulated methods and reference to supporting data and include all species potentially at risk. Lastly, we recommend that a blueprint be developed for compensating impacts to birds by initiating conservation work that will benefit or replace lost birds.	A detailed analysis of impacts to ESA-listed species (including roseate tern, piping plover, and Rufa red knot) is provided in the revised BA that was submitted to the USFWS, which can be found at the following link: https://www.boem.gov/Vineyard-Wind-Consultation-Documents/. In all cases BOEM determined that the Vineyard Wind 1 Project "may affect, but is not likely to adversely affect" any of the ESA-listed species that may occur in the Project Area. While there is some underlying uncertainty around the around the response of bird species to the introduction of operating offshore WTGs on the Atlantic OCS, BOEM believes that the impact rating determinations, as defined in Table 3-1 of the SEIS, are appropriate given the low expected use of the WDA, as discussed in the updated Section A.8.3.1 of the FEIS Section A.8.3.1 of the FEIS includes an updated discussion of collision risk to nocturnal passerine migrants. As shown in Robinson Willmott et al. (2013), many species of nocturnal passerine migrants, while detected on the Atlantic OCS, were detected in low numbers and typically fly when wind speed is below the WTG cut-in speeds (Willmott and Force 2014). Section A.8.3.1 includes and updated discussion regarding the species that have some potential to encounter operating WTGs associated with the anticipated development of offshore wind facilities on the Atlantic OCS generally, and the Vineyard Wind 1 WDA specifically. Section A.8.3.1 of the FEIS also includes an updated discussion of collision risk modeling.

Index	Comment Text	Response
Number		-
		explore the potential for collision mortality associated with the anticipated development on the Atlantic OCS generally, and the proposed Vineyard Wind 1 Project, specifically. The FEIS has been updated to include additional context on the use of collision risk modeling. Section A.8.3.2 and Appendix D of the FEIS include updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts on birds. These measures include, but are not limited to, installation of bird deterrent devices, use of ADLS, installation of digital VHF receivers and acoustic monitoring devices to estimate the exposure of ESA-listed species and other migratory birds, preparation of a post-construction monitoring plan, and other measures. Post-construction monitoring will be developed in coordination with applicable stakeholders. Additionally, annual monitoring reports will be used to assess the need for reasonable revisions to the monitoring plan. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures could be considered by
		decision makers and incorporated into the Record of Decision.
13190-20- 001	We enrolled 18 Martha's Vineyard residents to study in a two-to-three year program that will directly prepare them as technicians working on offshore wind turbines. We expect to welcome our second cohort of students next January. And to continue this educational program into the future will meet the needs of renewable energy in Southeast Massachusetts. The response to this program has been very positive and will provide our local year-round residents with stable jobs, rewarding education, and promising opportunities.	Thank you for your comment.
13190-20- 002	There's no comparison between offshore wind and mountaintop removal [for coal mining]. The erection of turbines in the ocean and the maintenance of them will have a significantly lower environmental impact and is a much more welcomed process than pursuing coal or other fuels. This may be one of the first large-scale projects in which strong employment and environmental protection coincide, and I urge BOEM to fully support this project.	Thank you for your comment.
13190-21-	We believe the report provides sufficient information in support of the	Thank you for your comment.
001	development of the offshore wind industry, including the Vineyard Wind Project, and the much needed clean, renewable energy it will provide.	
13190-21-	We also believe the report findings support implementation of the east-west	Thank you for your comment.
002	one-by-one-nautical-mile layout without the transit lines as the alternative for the Vineyard Wind Project having the least impact and the most benefit. And this, of course, is Alternative D-2.	
13190-22-	as part of our U.S. build-out, Orsted has already pledged nearly \$500 million	Although specific investments outside the geographic analysis area for the
001	for port port facilities up and down the Eastern Seaboard. These ports will	Vineyard Wind 1 Project are not listed in the SEIS or FEIS, the FEIS was

Index	Comment Text	Response
Number		
	and O & M. Becent commitments by the State of New Jersey for the	the Atlantic coast offshore wind industry. These projections would include
	establishment of a dedicated offshore wind port adjacent to the Hope Creek	investments such as those listed in this comment
	nuclear facility in New York's imminent \$200 million RFP for ports and	mvestments such as those fisted in this comment.
	harbors infrastructure emonstrates the scale and seriousness of this	
	investment Investments like this will create thousands of jobs stimulate	
	coastal economies, and revitalize U.S. port infrastructure.	
13190-22-	offshore wind procurements, including local content requirements, are	Section 3.6.2 of the FEIS has been updated to note the importance of the
002	spurring significant investments in a domestic U.S. supply chain. A	Vineyard Wind 1 Project as the east coast's first large-scale offshore wind
	prominent example of this is Orsted's recently announced partnership with	energy project. Approval could encourage and support continued investment
	EEW, one of the world's least leading producers of steel monopiles, to	in other offshore wind projects and the creation of a domestic supply chain
	establish the first U.S. based offshore wind related manufacturing facility. As	for the offshore wind industry in the eastern United States.
	U.S. based and foreign suppliers become convinced the durability and	
	scalability of the U.S. offshore wind market, they will make the necessary	
	investment in local factories, people, and inventory to support a robust	
	homegrown supply chain rather than incur the high shipping costs, logistical	
	issues and trade risks associated with sourcing goods overseas	
13190-22-	the efficient build-out of offshore wind farms will require fit-for-purpose	Section 3.6.1 of the FEIS has been updated to provide projections of regional
003	installation vessels that are U.S. constructed, flagged and crewed. Dominion	and national job creation and investment from studies used in the analysis for
	Energy has recently confirmed that it's leading a consortium of investors who	the SEIS as well as additional studies. Although projections specific to the
	will commission the first U.S. dedicated installation vessel at a cost of	geographic analysis area are not available, the FEIS uses the larger scale
	approximately half a billion dollars. Other specialized vessels will be	projections to support a reasonable conclusion that impacts on employment
	required such as the purpose-built crew transfer vessels commissioned by	and economic activity within the geographic analysis area would be moderate
	Orsted in 2019 to ferry workers from shore to the wind energy area for	beneficial. Section 3.6 of the FEIS has been updated to have a moderate
	construction and long term operation and maintenance. In short, the building	beneficial rating and is a change from the minor beneficial impact given in
	of a homegrown U.S. offshore wind industry will require capital and human	the SEIS.
	investment of tremendous breadth and depth. These investments are already	
	underway. While the SEIS recognizes this trend, it nonetheless concludes	
	that the overall economic impact will be marked minor. It's hard to	
	reconcile this qualitative assessment with the body of the report and, indeed,	
	with the public record. We respectfully request that BOEM reconsider this	
	finding and assign an impact rating commensurate with the major domestic	
	investments made and contemplated by the industry, including but not	
10100.00	limited to those identified in the body of the SEIS.	
13190-23-	One of the pivotal outstanding issues being reviewed by BOEM is that of	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	navigational channels. RENEW supports the Alternative D-2 with its uniform	alternative.
	one-by-one-nautical-mile layout, which the Coast Guard determined, after a	
	robust public input process, would, quote, unquote, maximize safe	
	navigation. The one-by-one layout, which was agreed to by all the New	
1	England offshore wind leaseholders, will provide ample and uniform	

Index	Comment Text	Response
Number		
	navigation channels and is significantly larger than the routes provided in the	
	more mature European offshore wind industry. The Coast Guard's	
	MARIPARS report concluded that the one-by-one nautical mile pattern,	
	orientation and spacing will safely accommodate vessel transits, traditional	
	fishing operations, and search and search-and-rescue operations as well.	
	The recommendations on navigational safety the Coast Guard's report	
	provide examples of how offshore wind development is totally compatible	
	with existing commercial and recreational activity in the wind wind energy	
	area. For these reasons, RENEW opposes the new Alternative F proposal that	
	would include the insertion of unnecessary wider transit lanes. RENEW	
	respectfully requests BOEM expeditiously approve the project consistent	
	with the Alternative D-2 one-by-one-nautical-mile turbine layout to enable	
	this region to meet their schedules for renewable energy deployment and	
	carbon reduction.	
13190-24-	our most bountiful and best options for no or low carbon energy is for	Thank you for your comment.
001	Massachusetts to transition to offshore wind, and specifically, to Vineyard	
	Wind with no further delay	
13190-25-	Specifically, in regards to birds, we offer the following comments: The	Climate change was addressed in the SEIS as an Impact Producing Factor
001	greatest threat to birds today is climate change. Of Massachusetts' 143	and potential impacts to bird species was discussed in Sections A.8.3.1 and
	breeding bird species, 43% are highly vulnerable to the effects of climate	A.8.3.2. As such no change to the FEIS is warranted.
	change. These impacts include warmer temperatures, altering the lengths of	
	the seasons, and interrupting traditional migration patterns, as well as causing	
	desynchronization with essential food sources and many other impacts.	
	Climate change is impacting species across all habitats, both coastal and	
	inland. It's causing accelerated sea-level rise and stronger ocean storms that	
	wreak havoc on coastal bird habitats in particular, drowning out nesting and	
	forging areas for species, including the federally protected Roseate Tern and	
	Piping Plover. The mitigation program for offshore wind should include	
	funding for both monitoring birds and for habitat improvement projects,	
	because we're not going to be able to detect all of the impacts. And we know	
	that the birds need this help with their habitat, particularly coastal breeding	
	birds and their colonies.	
13190-26-	The proposed one-by-one-nautical-mile layout, according to the Coast Guard,	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	will maximize safe navigation in the wind energy areas. And while this will	alternative.
	reduce possible energy generation in these areas by 30% or so, it addresses	
	important concerns which were raised by competing users of these areas.	
	However, increase or widening transit transit lanes, as in Alternative F,	
	appears likely to cause significant cost increases to utility customers and	
	further delays and greater environmental impacts. Alternative F would likely	
	reduce the benefits from offshore wind projects, such as reducing emissions,	

Index Number	Comment Text	Response
Rumber	and economic and job creation benefits; and we, therefore, urge you to reject this alternative.	
13190-27- 001	We are in a state of change, and our information clearly shows that the future for the Right Whale is under the cloud of climate change. And the hope will be that Vineyard Wind will be the first of a number of clean energy sources to change the course which seems so difficult. Critical to the whole story, in closing, is the agreement that was come to by CLF, NRDC and the National Wildlife Foundation. That agreement protects the Right Whales about as well as we can imagine, an adaptive management plan, one that particularly looks at development. So I thank BOEM for for this opportunity to make that statement. I think it's critical. And I would lastly say, I hope that BOEM will make sure that that agreement, which is so important, is applied to all future future developments in in these waters.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13190-28- 001	I would be remiss if I didn't also take this time to mention the substantial benefits of offshore wind energy development in general, and the Vineyard Wind Project in particular. Offshore wind energy is clean, renewable and reliable with average capacity factors similar to coal and typically higher than other renewable energy sources.	Thank you for your comment.
13190-28- 002	Building commercial scale offshore wind facilities will spur over \$70 billion in private investment and grow tens of thousands of well-paying U.S. jobs. In fact, according to a recent report from the American Wind Energy Association, building out 20,000 to 30,000 megawatts of offshore wind power by 2030 will support between 45,000 and 83,000 jobs in development, construction and operations and maintenance in the same period.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. While the estimates are national, jobs are anticipated to be concentrated in and near the east coast states that would host offshore wind.
13190-28- 003	Offshore wind development can also help mitigate the impact of climate change, the largest threat facing our ocean ecosystems and coastal communities vulnerable to the rise of sea levels.	Thank you for your comment.
13190-28- 004	Offshore wind development has been shown to improve recreational fishing opportunities and increased tourism, based on the experience of Block Island, the nation's first offshore wind facility.	Thank you for your comment.
13190-28- 005	The project will provide clean, renewable and cost effective electricity to 400,000 homes and businesses in Massachusetts saving ratepayers more than \$1.4 billion in energy related cost savings over the life of the project. Also, the Vineyard Wind project will create 3600 jobs for local residents while making a significant contribution towards climate change mitigation by avoiding almost 1 7 million tons of carbon dioxide from being emitted into the air per year.	Thank you for your comment.
13190-28- 006	Adding transit lanes to a uniform one-by-one-nautical-mile turbine spacing layout, spacing that is already greater than that of any existing offshore wind	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
	project in the world, would threaten the viability of all offshore wind projects	
	in the region and their ability to meet the clean energy supply goals.	
	Additional transit lanes will result in substantial technical challenges, delays,	
	cost increases to consumers, and more environmental impacts from offshore	
	wind development with marginal gains and, as identified by the Coast Guard,	
	potentially greater conflict among transiting and fishing vessels that are	
	funneled into the corridors thereby increasing traffic density and risks for	
	vessel interaction. For these reasons, Alternative F should not be selected.	
13190-29-	And so I'm speaking in favor of all this because of the opportunities to	Thank you for your comment.
001	possibly create new jobs and new careers for my members and the future	
	generations Vineyard Wind has made a commitment to us to do a project	
	labor agreement here in Connecticut, which is great. They've also talked	
	about Pathways programs for training. And again, it's all about our next	
	generation of construction workers. So on behalf of Fairfield County	
	Building Trades, we support the one-by-one layout.	
13190-30-	Compliments to the Bureau of Ocean Energy Management for development	Thank you for your comment.
001	of an accurate record. We believe this record supports public need for	
	renewable energy, public value for jobs, supply chain development,	
	economic development, review of alternatives that include that are	
	necessary for the for the Environmental Impact Statement and review of	
	impacts that have a theme to avoid, minimize, and mitigate these	
	environmental impacts.	
13190-30-	In terms of the alternative spacing, which has come up by several of the other	Section 2.5 of the FEIS has been added which includes the agency-preferred
002	speakers, we we support the one-nautical-mile-by-one-nautical-mile	alternative.
	spacing. I think the record is accurate and in supports the finding that this	
	one-by-one spacing is is is adequate for passage navigation and turning	
	for both commercial and fishing vessels. We do not support the four-mile	
	corridor alternative. This larger, wider corridor does not does not seem to	
	be supported by the record, does not seem to be necessary for navigation. If	
	this alternative were to be elected, it would result in the sacrifice of the	
	benefits and value of the renewable energy and the economic development	
	value.	
13190-31-	I'm enlisted in the classes to be an offshore wind technician that are being	Thank you for your comment.
001	offered by ACEMV and Bristol College. Climate change has got to be the	
	biggest thing for me, because as a 20-year-old growing up and watching	
	water levels rise is not something I want to be a part of. So anything I can do	
	to stop that, work towards a different path for the world and the economy in	
	the U.S., just everything. So yeah, all in all, I'm in full support and fully	
	invested in Vineyard Wind. It's	

Index	Comment Text	Response
Number		
13190-32-	You know this is going to bring quite a bit of power, 15,000 megawatts of	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	energy plus by by not going with this with this layout, more than then it	alternative.
	that matter that that the analysis are layer to adhered to	
12100.22	And with all the plants in Southeastern Mass and the Care that are being	Then I way for your comment
15190-52-	And with an the plants in Southeastern Mass and the Cape that are being	i nank you for your comment.
002	decommissioned, we are going to find, you know what we need to find, more	
12100.22	power. And this couldn't be coming at a better time for our need for power.	
13190-33-	And I wanted to first give my thanks to BOEM for the process of moving the	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	wind turbines off to about 15 nautical miles. The spreading out of the	alternative.
	turbines at one nautical mile apart, I think, mitigates any historical view	
12100.22		
13190-33-	From the fishery side, I've seen the fish being really negatively impacted due	I nank you for your comment.
002	to industrial fishing for the last hundred years. And so I'm really excited for	
	the opportunity for fish to come back from these turbines. I think there's	
	going to be a huge benefit to the marine habitat from these turbines. We've	
	seen that in Block Island already. And I've spoken to a number of	
	commercial fishermen on Nantucket, and they're all supportive of the project.	
	I want to thank BOEM for moving the turbines out to about the 20,000 edge.	
12100.22	I hat's an important fishing habitat, and so we appreciate that.	
13190-33-	The visual impacts have been mitigated. Vineyard winds has done a	I nank you for your comment.
003	phenomenal job of covering a number of the concerns with this project. And	
	I just please strongly ask you to move this project forward in an expedient	
	way. There is so many countiess benefits for this project, and it would be a	
12100.24	nuge disservice to slow it down.	TT1 1 0
13190-34-	The Vineyard Wind SEIS, which expands the prior cumulative activities	Thank you for your comment.
001	scenario for offshore wind development along the Eastern Seaboard reveals	
	that offshore wind can be done in an environmentally responsible way and	
	provide the clean energy that East Coast states are demanding. The analysis	
	notes that as offshore wind advances, we will see reduced emissions from	
	polluting fossil fuel plants and improve air quality, and every investment in	
12100.24	renewable energy helps in the fight against climate change.	
13190-34-	The expanded analysis produced by BOEM also predict that offshore wind	I hank you for your comment.
002	farms will generate approximately 22 gigawatts, enough to power nearly 8	
	million homes along the U.S. Atlantic Coast within the next decade. That full	
	scale of offshore wind development reinforces how important how it's	
	more important than ever to ensure that when projects adequately protect	
	coastal jobs and recreation and the future food that the oceans provide to the	
1	world.	

Index	Comment Text	Response
Number		
13190-34-	That's why the Sierra Club is supportive of Boeing's preferred alternative to	Section 2.5 of the FEIS has been added which includes the agency-preferred
003	distribute Vineyard Wind's winds turbines arrangement to one-nautical-mile	alternative.
	spacing. The arrangement of turbines in this orientation would allow vessels	
	to travel unobstructed and help to avoid navigational impacts. The approval	
	of this project, which will also have important economic impacts to the	
	region.	
13190-34-	I urge BOEM to accept the one-nautical-mile spacing proposal, which is by	Section 2.5 of the FEIS has been added which includes the agency-preferred
004	far the best option on the table to create a competitive dynamic coastal	alternative.
	marketplace for offshore wind projects that will also result in economic	
	growth and environmental protection for states from Maine to the Carolinas.	
13190-34-	The approval of this project, which will also have important economic	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by
005	impacts to the region. Vineyard Wind 1 will create 3,600 good-paying jobs	Vineyard Wind in Massachusetts alone would be approximately 3,100 to
	for local residents, and it's expected that project will save ratepayers more	3,600 FTE job years, including 1,100 to 1,550 job years during construction
	than \$1.4 billion in energy related cost over the 20-year contract with the	and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years)
	State of Massachusetts. The untapped offshore wind resource along the U.S.	during operation. These data were also provided in the DEIS. Section 3.6.1.1
	Eastern Seaboard is one of the most powerful in the world and is within reach	of the FEIS has been updated to provide estimates from several sources of
	of densely populated areas where energy demands are high and new resource	projected employment and investment resulting from growth of the wind
	options are few. The offshore wind energy could create 83,000 jobs by 2030	energy industry along the Atlantic coast. While the estimates are national,
	and deliver over \$25 billion in annual economic input by that same year.	jobs are anticipated to be concentrated in and near the east coast states that
		would host offshore wind.
13191-01-	We firmly believe that the D-2 alternative as presented in this SEIS,	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	including the proposed conservative mitigation put in place for the Vineyard	alternative.
	Wind 1 Project, represent the right compromise that will allow all existing	
	and future uses to coexist now and in the future. Other alternatives, in	
	particular the F Alternative with additional transit lanes, should, in our	
	opinion, not be considered as they would not provide additional navigation,	
	search-and-rescue or fishing benefits. To the contrary, however, they would	
	significantly impair the economic viability of existing and future offshore	
	wind projects, including Vineyard Wind 1.	
13191-02-	As recognized in the draft supplementary EIS, there will be major negative	The SEIS discusses the adverse impacts on commercial fisheries throughout
001	impact on both commercial fisheries and fishery independent surveys, both of	Section 3.11.1.1 and 3.11.2. Section 3.14 and Section 3.14.2 addresses
	which cannot continue as presently conducted.	potential project-related and cumulative impacts to scientific research and
		surveys in detail. The discussion of impacts on scientific research and
		surveys was developed jointly by BOEM and NOAA, and acknowledges that
		additional studies are needed and ongoing to assess uncertainties in scientific
		data collection and implement any changes to surveys. Therefore, no change
		to the FEIS is warranted. BOEM is actively working with NMFS on a
		process to adapt survey methodologies to the presence of offshore wind (see:
		https://www.boem.gov/environment/environmental-studies/20-x07).
Index	Comment Text	Response
------------------	---	--
Number		
13191-02- 002	I have on all occasions commented that surf clam vessels using hydraulic bottom tending gear would not be able to continue operations within a wind farm array where the individual turbines are not spaced at a minimum of two nautical miles apart.	Section 3.11 of the SEIS discusses the needs of some fishing operations for greater than 1 nautical mile clearance and the potential of practical exclusion of some fishing operations from Wind Development Areas. Therefore, no change to the FEIS is warranted.
13191-02- 003	I have also commented on the need for wind farms to have an orientation in line with prevailing currents, place placement of all vertical structures in straight rows and columns, and the need to bury all transmission cables at least two meters deep. Yet, upon reviewing all current and proposed design layouts of wind farm arrays, the comments from the surf clam industry have been ignored, essentially creating exclusion zones around wind farms in which surf clam vessels will not be able to operate.	Section 3.11.1.1 and 3.11.2 of the SEIS discusses vessel displacement and financial impacts on commercial fisheries, including the surfclam fishery. Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS discuss that some vessels may choose not to fish near the Proposed Action during its operational period due to restrictions on maneuverability from the presence of structures, the potential for hanging up on structures, and they have been updated to discuss potential mitigation measures. BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D for details of the FEIS.
13191-02-	Equally important as lost access to current clamming areas would be the	Section 3.14 of the SEIS addressed potential project-related and cumulative
004	inability of research vessels to operate within wind farm arrays to conduct the fishery independent surveys vital to developing the stock assessments for all the species managed by the Mid Atlantic and the New England fishery management councils. With lost data, scientific uncertainty increases for any stock. And this affects how quotas would be established in future years.	impacts to scientific research and surveys in detail, including the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed through collaboration with NMFS and BOEM will continue to collaborate on survey protocols. It has been acknowledged that additional studies are needed and discussions are ongoing to assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no changes to the FEIS are warranted. BOEM is funding a process to begin to understand the options available to mitigate potential impacts on scientific research and surveys. Regardless of such actions, long-standing NMFS surveys would not be able to continue as currently designed and extensive costs and efforts will be required to adjust survey approaches. Therefore, potential impacts on scientific surveys and research is anticipated to be major. Please refer to the following link: https://www.boem.gov/environment/environmental-studies/20-x07. Additionally, resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures.

Index	Comment Text	Response
Number		
		and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13191-02- 005	The commercial fisheries have been engaged at every opportunity, but our concerns and needs have been summarily dismissed. There should be an immediate five-year moratorium implemented on the development of offshore wind because the cumulative impact on commercial fisheries' resources and their habitats from wind farms in the foreseeable future are poorly understood or unknown. Therefore, I support Alternative G, no action at this time.	The FEIS considers all substantive comments, including public testimony, received on the DEIS and SEIS. The wind energy area offshore Massachusetts was reduced by approximately 50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for Information (see https://www.boem.gov/Revised-MA-EA-2014/). The area south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments. BOEM is evaluating Vineyard Wind's COP which is for the development of an 800-MW offshore wind farm and the potential impacts associated with their action. Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-03- 001	Offshore wind presents a tremendous opportunity to fight climate change, reduce greenhouse gas emissions, and grow a new industry that supports tens of thousands of well paying jobs. CLF believes that Alternative D-2, when combined with Alternative B, to establish a one-by-one-nautical-mile wind turbine layout and make landfall on Covell Beach, is the most responsible option that has been proposed and that BOEM should reject the other alternatives analyzed in the SEIS.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Vineyard Wind has indicated that New Hampshire Avenue landfall location is no longer a consideration as they have received all the necessary state and local permits for the Covell's Beach landfall site.
13191-03- 002	CLF also urges BOEM to reject Alternative F. CLF is very concerned that Alternative F and the incorporation of the RODA recommended transit lanes into the Vineyard Wind Project would reduce expected power generation capacity of offshore wind in Southern New England as noted in the SEIS. Accordingly, Alternative F is likely to produce or preclude Massachusetts and Rhode Island from meeting their renewable energy targets in mitigating the impacts of climate change. If that is the case, we cannot support Alternative F.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-03- 003	Further, as found in the MARIPARS report, the Coast Guard concluded that the Alternative D-2 layout would meet the Coast Guard's criteria for navigational safety. Given this conclusion, the addition of transit lanes for leased area under Alternative F appears unnecessary for the purpose of increasing navigational safety.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters;

Index Number	Comment Text	Response
		therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13191-03- 004	Finally, the SEIS only provides cursory consideration of the impact that following vessel traffic in the transit lanes would have on marine mammals and North Atlantic Right Whales. Due to this deficiency in BOEM's analysis, we cannot support Alternative F.	Section 3.5.2 discusses the addition of Alternative F and the potential consequences of implementation of the Alternative. Therefore, no change to the FEIS is warranted.
13191-03- 005	CLF appreciates that BOEM incorporated this agreement [between VW, CLF, Natural Resources Defense Council, and NWF] into the SEIS; however, the SEIS appears to assume that similar mitigation and monitoring will be put in place for future offshore wind projects. The assumption in the SEIS that similar monitoring and mitigation measures will be adopted appears to reduce the overall cumulative impact rating to our North Atlantic Right Whales. There's no guarantee that such mitigation and monitoring measures will be implemented for future offshore agreement, and the SEIS is flawed to the extent it speculates that similar measures will be adopted. CLF believes that in order to reduce impact on the North Atlantic Right Whale, it is necessary that BOEM and NOAA incorporate similar monitoring and mitigation letters into all future permits associated with offshore wind. In conclusion, Alternative D-2 is the best option for developing offshore wind responsibly. And other alternatives, including Alternative F, should be rejected.	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and monitoring measures that would be implemented to avoid, minimize, and mitigate adverse impacts to marine mammals, specifically the NARW, and include measures outlined in the referenced agreement. These measures include, but are not limited to avoidance of peak NARW presence, use of sound attenuation technologies, use of PSOs, PAM, soft start procedures, shut down procedures, vessel speed restrictions, injury and mortality reporting, and other measures. Further, should a Right Whale Slow Zone or DMA overlap the proposed Project area between June 1 and October 31 implementation of enhanced monitoring/mitigation measures for NARW would be required. Project activities will be conducted under the authority of a Project-specific IHA issued by the NMFS. Project-specific ESA consultations will be required for all future offshore wind development. Monitoring and mitigation requirements for other future offshore wind development may be driven by lessons learned from the Vineyard Wind 1 Project, but will be part of a separate decision making process. Future offshore wind projects will require separate NEPA processes and impact evaluations. At that time, BOEM may require similar or different mitigation measures to reduce impacts to sensitive species as conditions of COP approval.
13191-03- 006	And other alternatives, including Alternative F, should be rejected. Alternative F will prevent Massachusetts and Rhode Island from accomplishing their renewable energy targets, does not reduce the overall impact level for the fishing industry, and its uncertain impact on the North Atlantic Right Whale.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-03- 007	CLF also believes that the types of mitigation and monitoring measurements that Vineyard Wind has agreed to are needed on all future offshore wind projects. There's no guarantee such measures will be adopted on future projects, and the SEIS errs to the extent it assumes that similarly robust measures will be implemented. BOEM and NOAA must ensure that similar measures are incorporated into all future projects.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS

Index	Comment Text	Response
Number		
		has been updated to reflect this information. Future offshore wind projects will undergo separate NEPA reviews, and similar or different measures could be required for those projects to avoid or reduce the potential effects anticipated.
13191-04-	I strongly support Vineyard Wind's offshore wind project for several	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	reasonsI frequently go to Covell Beach where the cable will come to shore and the road will be disturbed. While this will be an inconvenience for a time, I know that Cape Cod is particularly vulnerable to the effects of climate change with the eroding coast lines, warming ocean temperatures, and severe weather. And we need to invest in renewable offshore energy now.	alternative. Vineyard Wind has indicated that New Hampshire Avenue landfall location is no longer a consideration as they have received all the necessary state and local permits for the Covell's Beach landfall site.
001	We [commercial fishing company for squid] were never consulted on the siting of those wind farms originally. And specifically, Vineyard Wind sits on productive sits on and near productive squid grounds, not only for fishing, but also for squid mops for nursery grounds.	The development of wind energy areas and lease issuance goes through at least two separate public notice and comment periods, in addition to the current environmental review for proposed activities on the lease.
13191-05- 002	There have been no peer-reviewed scientific studies in Europe on the impact of development operations on fisheries or fish stocks. There have also been no long term baseline studies here in the U.S. on wind energy areas that are much needed to track the changes that might happen over time. We've been asking for these baseline studies since we were first reached out to by Vineyard Wind 10 in 2016 and 2017. The development will prevent them from conducting their fishery research studies in that area, and that will create management uncertainty for the fishing industry.	Section 3.3 of the FEIS has been updated to include European studies of impacts from offshore wind facilities on finfish and Section 3.10 has been updated with a U.K. study (by Roach et al.) that shows catch rates remain the same at sites adjacent to offshore wind facilities and within offshore wind facilities. The environmental assessment for the Vineyard Wind 1 Project has relied upon the best available information regarding impacts from the proposed action by using the results of local site characterization information from the developer, the National Marine Fisheries Service, and others. Impact information from the Block Island Wind Farm and European projects are applicable to the anticipated impacts of the proposed action. Additionally, BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental-studies/20-x07).
13191-05-003	we also understand that there's a need for research and monitoring. And that this needs to be done right, because it's once it's done, we're going to be the ones who will have to pay for this ecologically and biologically You know, there's lots of things that are below the ocean that lots of people don't see and don't understand. And I think for some people, it can be out of sight and out of mind, and that's concerning to those of us who depend on the ocean for a living. So, again, we have been striving for coexistence, but we've been making it a very strong case since the beginning, we just want this done right.	Resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13191-05-	regarding this transit lane plan being put forth by Vineyard Wind and the	The FEIS considers all substantive comments, including public testimony,
004	other wind energy developers, we have sat down and worked withwind energy developers for years now. We've spent a lot of time and money on	received on the DEIS and SEIS. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments. Section 2.1.3

Index	Comment Text	Response
Number		
	several meetings to sit down and discuss the issues regarding transits with themafter the latest submission of transit lanes from the developer to the Coast Guard, it's clear that we've been ignored on this issue. Submitting this plan without industry consultation is not a compromise. And to hear that there's lots of support for that plan is concerning because I'm sure that a lot of that support is from people who don't operate on the water as part of the commercial fishing industry. And I think it's really important to listen to the people who actually are out there making a living and to consider what they need for safety regarding weather, radar interference, and possibly collisions. Real coexistence comes from working together on all issues, and it means being transparent. And that includes working together on mitigation compensation and transit. And those issues have left a lot of transparencies, especially given the latest mitigation compensation package coming out of Vineyard Wind for Massachusetts. That didn't involve any input from any fishing industry members, and neither did this one-by-one spread across the whole lease area. So I will put my support behind Alternative F, RODA's transit lane layout, and D-2.	of the FEIS was updated to clarify that Alternatives D1 and D2 were the direct result of scoping comments received from the commercial fishing industry (see April 30, 2018 comment from Tkjedle Law on behalf of the East Farm Commercial Fisheries Center on the Notice of Intent to Prepare an EIS). Alternative F was proposed by the Responsible Offshore Development Alliance through a collaborative process with commercial fishermen and the offshore wind industry. Section 3.11 of the SEIS also notes that some fisheries may require spacing greater than 1nm between wind turbines. Furthermore, the Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-06- 001	The Vineyard Wind Project is not just about energy. Choosing to build it with the one-mile spacing of the turbines under Option D-2 or to further delay and possibly kill it through proposals such as Option F is also a moral decision that may have possible life-and-death consequencesThis is the alternative to Vineyard Wind. Further permitting delays to Vineyard Wind will increase the likelihood of killing it and leaving New England to the mercies of fossil fuel companies. Their environmental justice impact would far exceed the environmental justice impact on low-income fishing workers from that one-mile layout of wind turbines	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects). Sections 2.2.2, 3.6.4, and 3.7.4 of the FEIS have been revised to note that Alternative F may reduce the capacity of offshore wind power generation in the RI and MA Lease Areas, resulting in a reduction of the potential benefits to minority and low income populations that could result from reduced fossil fuel power generation.
13191-06- 002	It's past time for the U.S. to join other developed nations with projects like this starting with Vineyard Wind. It can provide clean energy, local jobs, and it would have far less impact on human and environmental health and fossil fuels. Vineyard Wind has been studied for many years. There has been extensive engagement with stakeholders of all kinds. As been mentioned before, the Coast Guard states that the one-mile spacing plan is safe for shipping and fishing and deems the additional transit lanes unnecessary. The additional transit lane, as I said, would would probably kill the project. So please give the project a green light with that D-2 one-mile spacing plan.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-06- 003	I ask that special attention be paid to training and hiring people from local communities of color and low-income communities to build and maintain Vineyard Wind as partial recompense for the disproportionate damage	Section 3.8.1 and 3.8.2 of the SEIS noted that offshore wind development could result in job creation for low and minority residents. This beneficial impact, and the local hiring plan for the proposed Project described into

Index	Comment Text	Response
Number		
	they've already suffered from polluting energy projects. Please place climate justice, environmental and racial and economic justice at the center of your decision-making and permit this project.	Appendix D, is carried over into the FEIS. Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
13191-07- 001	Offshore wind is vital for meeting the clean energy goal of New EnglandThe SEIS, I thought, was critically responsive to the impacts on the needs of the beings who call the ocean home, and the environmental justice population.	Thank you for your comment.
13191-08- 001	Climate change is no longer speculative, it's here, and it's going to have a large impact on coastal communities in particular calling for expensive infrastructure adaptation and need for greater resilience for our energy systems. In fact, as I speak, sea surface temperatures in the Georges Bank area are above 80 degrees Fahrenheit. This is unprecedented and feeds into an increased probability of hurricanes and dangerous storms. Secondly, our fishing industry is threatened. It's threatened by climate change driving fish stocks northward by overfishing and by degradation of the marine environment. A third key concern is the need for high-quality jobs and a future for the next generation. The development of a responsible and responsive offshore wind industry addresses these concerns.	Thank you for your comment.
002	greenhouse gas emissions in the region, and it will provide renewable electricity at a significant cost savings for rate payers, particularly as compared to what is now an increasingly volatile fossil fuel industry. It's also important to note that the project financially supports community efforts to achieve our state and local renewable energy goals, and to increase the resilience of our energy systems to what is going to be an increasingly stormy future.	
13191-08- 003	The Vineyard Wind Project has done a remarkable job, in my opinion, over the last decade in making sure that the marine environment will be protected and has been responsive to the concerns of stakeholders in its exhaustive permitting process. As an example, the project has been altered to provide an improved and Coast Guard endorsed turbine layout for navigation at the cost of a reduced power output for the entire installation.	Thank you for your comment.
13191-09- 001	I support the construction of Vineyard Wind 1, which would finally bring large-scale offshore wind energy to the United States.	Thank you for your comment.
13191-09- 002	Vineyard Wind has built positive ties with the local community, including regional businesses and educational institutions, has pledged to act	Thank you for your comment.

Index	Comment Text	Response
Number		
	responsibly when treating and paying its workers fairly, and protecting	
	wildlife. For example, Vineyard Wind signed a landmark agreement to	
	mitigate the effects of their project on the critically endangered North	
	Atlantic Right Whale. This agreement with the National Wildlife Federation,	
	National Resources Defense Council, and Conservation Law Foundation	
	should be the model for all future offshore wind developers.	
13191-09-	The draft Supplemental Environmental Impact Statement has been a	Section 2.5 of the FEIS has been added which includes the agency-preferred
003	productive process by, one, expanding the scope of study for offshore wind	alternative.
	energies impacts; two, the proposal of a common one-by-one-nautical-mile	
	grid layout known as Alternative D-2, supported by the U.S. Coast Guard;	
	and three (inaudible) Covell Beach, Alternative B. (Inaudible) Vineyard	
	Wind as its first offshore wind project. It has now been thoroughly reviewed	
	by state and federal agencies, changes to the project have been made, and	
	now Vineyard Wind should be cleared for construction without further delay.	
13191-10-	this is the most public process I've seen so far where you're actually sitting	Thank you for your comment.
001	here taking testimony and fishermen and fishing industry has been heard.	
	And I commend that very much. But it's it's a real concern to those of us	
	that spent or lives livelihoods and invested a lot of money and time in our	
	industry out here [on the West Coast] as well as on the East Coast, I'm sure. I	
	know a number of people back there. And so that's really all I have to say	
	right now, is I wanted to find out how this process unfolds and take what I	
	learned back to the people I work with out here.	
13191-11-	we need to be able to move forward with these really important energy	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	developments like this project, and we need to do that in a way that keeps	alternative.
	everyone's voices involved, which I think this project has done exceptionally	
	well. So in summarizing, we support this project, D-2.	
13191-11-	And I think as someone else stated, obviously Wind 1 Project is not going to	Thank you for your comment.
002	change everything for climate change, but it's such an important project that	
	we bring a long process to completion with some incredible wind turbines,	
	and a lot of them, and really start charting the way for more offshore wind	
	development in the United States, and the momentum of this project is	
	incredibly important.	
13191-11-	I first wanted to commend the ongoing years of communication on	Thank you for your comment.
003	stakeholder engagement on the part of renewed wind, I think, including the	
	fishing communities. And that has really resulted in a proposal with	
	traditionally spaced out turbines, and then other offshore wind installation on	
	what changes that are meant to accommodate the interest in stakeholders. So	
	I want to commend that process.	

Index Number	Comment Text	Response
13191-12- 001	And I want to give my support to Vineyard Wind We have to do everything we can and whatever we can do to lower fossil fuel emissions and switch our energy production to renewable energy forms. I hope that renewable energy production like Vineyard Wind can shut down some of the existing plants that impact black and brown neighborhoods in both Massachusetts and Rhode Island.	Thank you for your comment.
13191-12- 002	I appreciate the fact that the jobs that this will create will be good paying jobs and hope that you can hire black and brown workers, and also diversify and train a maintenance crew to keep up and do maintenance on the project.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS. Most jobs would occur during the construction phase.
13191-13- 001	And I'm speaking in support of the Vineyard Wind offshore energy project. This project will provide new economic opportunities in the offshore wind industry. The offshore wind facilities on Martha's Vineyard alone will provide as many as 40 technical jobs, really, highly skilled positions that we are conducting already now, training programs at Martha's Vineyard High School and local community college. And that's much needed for our island community.	Section 3.6.2 of the FEIS provides information on short-term construction jobs within the geographic analysis area and long-term operations jobs that would result directly from the Vineyard Wind 1 Project. Many of the estimated 80 operational jobs would be located on Martha's Vineyard due to the location of the operations and maintenance facility and use of Vineyard Haven harbor. These data were also provided in the DEIS.
13191-13- 002	The Vineyard Wind Project has recommended the one-by-one-nautical-mile transit lanes for the project. I think that's the D-2. After an exhaustive and detailed examination and analysis, U.S. Coast Guard has determined that one-by-one-nautical miles is the optimum spacing for the transit lanes for the Vineyard Wind Project. The Coast Guard is the preeminent institution for navigation in U.S. waters. It has no big, financial, any other vested interest in the spacing of the transit lanes. The Coast Guard is neutral and is the government body assigned the responsibility to ensure and facilitate the safety and smooth functioning of navigation in U.S. waters. Its analysis and conclusions on transit lanes should be afforded predominant consideration and adoption by BOEM.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13191-13- 003	Support of critical offshore wind farm and infrastructure projects will be one of the very largest single measures we can take that addresses our need to mitigate climate change by reducing global greenhouse gas emissions, and it will have a positive effect on sea-level rise and reduce potential negative impacts to our coastal shorelines and ocean acidification impacts.	Thank you for your comment.
13191-13- 004	The risk of the offshore wind project's impact on the environment and communities, including fisheries, is very, very low. The risk that the continued burning of fossil fuels at the current pace will cause the above- described effect, it is not only very high but virtually a certainty. So low risk	Thank you for your comment.

Index	Comment Text	Response
Number	versus a virtual certainty. That makes it a clear choice. Thus thus, we must do all that is possible to convert to renewable clean energy.	
13191-14- 001	I strongly support building and operating the Vineyard Wind Project as part of New England's renewable clean energy plan. It has clearly been well researched over a number of years, and time is of the essence.	Thank you for your comment.
13191-15- 001	Mr. Peter Himchak was right in his assessment of the process being flawed as far as coexistence and involvement and taking heed to the concerns of the commercial fisheriesprobably the most preeminent concern is the safety of our crews operating within wind arrays with less than two-miles spacing.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative. Section 3.11.2 and 3.13.2 of the SEIS evaluates impacts from alternatives with different spacing of turbines and transit corridors (Alternatives D1, D2, and F) on commercial fisheries and navigation. Three of the Alternatives, D1, D2, and F, were a direct result of commercial fishing industry comments. Section 2.1.3 of the FEIS was updated to clarify that Alternatives D1 and D2 were the direct result of scoping comments received from the commercial fishing industry (see April 30, 2018 comment from Tkjedle Law on behalf of the East Farm Commercial Fisheries Center on the Notice of Intent to Prepare an EIS). Alternative F was proposed by the Responsible Offshore Development Alliance through a collaborative process with commercial fishermen and the offshore wind industry. Section 3.11 of the SEIS also notes that some fisheries may require spacing greater than 1nm between wind turbines.
13191-15-	The the other thing that scares us to death, as I mentioned in New York	Cold pool dynamics and potential impacts are addressed in Section 3.3.1 of
13191-15- 003	Buried cables we are a hydraulic dredge mobile-tending bottom gear. Buried cables are quite frightening to us. Use the only five wind turbines that are in the U.S. waters who have buried cables, and those cables have become unburied and will not be buried for another year. I think that's evidence enough that the wind energy developers do not have the proper ability to bury those cables where they won't interfere with commercial fisheries.	Section 2.1.1 of the FEIS has been updated to address cable burial risk for the proposed Project. The OECC would have a target burial depth of 5-8 feet (1.5-2.5 meters). BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for details.
13191-15- 004	the hindrance of federal surveys at sea [as a result of 1x1 spacing] will have terrible effects on our ability to accurately set quotas.	The SEIS addresses these issues throughout Section 3.14 (Other Uses, Scientific Research and Surveys), and Section 3.14.2 addresses potential project-related and cumulative impacts to scientific research and surveys in detail and discusses the potential for lower quotas. The discussion of impacts on scientific research and surveys was developed jointly by BOEM and NOAA, and acknowledges that additional studies are needed and ongoing to

Index	Comment Text	Response
Number		_
		assess uncertainties in scientific data collection and implement any changes to surveys. Therefore, no change to the FEIS is warranted. Additionally, resource sections of the FEIS include proposed mitigation, where applicable, and Appendix D of the FEIS, which is a summary of all proposed mitigation considered, has also been updated to include modifications and/or additional mitigation and monitoring measures. Additional mitigation and monitoring measures may arise from consultations and coordination with Federal and State resource agencies. These additional mitigation measures will be considered by decision makers and could be adopted in the Record of Decision and required as conditions of approval. Section 2.2.1 of the FEIS has been updated to reflect this information.
13191-15-	We think that more science needs to be done. And you will see that in our	BOEM is evaluating Vineyard Wind's COP which is for the development of
005	comments on the on the SEIS at a later date. And we would like I would	an 800-MW offshore wind farm and the potential impacts associated with
	like to support, as Sea Watch would, a five-year moratorium to allow that	their action. Section 2.5 of the FEIS has been added which includes the
	science to be done.	agency-preferred alternative.
13191-16-	I would like to offer our company's support for the project layout	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	recommendations offered by the leaseholders. As stewards of thousands of	alternative.
	acres of land in New England, we understand the difficult job required of	
	BOEM to safeguard the environment while we're responsibly providing for	
	commercial development. We believe that the easeholder recommendations,	
	particularly that for a uniform one-by-one-nautical mile layout represent a	
	solid balance between these two important goals. Additional fourmile four-	
	mile transit lanes, which are currently being considered by BOEM, would	
	unfortunately reduce the area available to supply wind energy to the region	
	thereby slowing New England's transition from a world dominated by fossil	
	fuel to a cleaner and more sustainable futureAs such, we urge BOEM to	
	adopt the one-by-one nautical mile layout provision as recommended by the	
	leaseholders.	
13191-17-	If the turbines are placed too close together, then the ability for us to fish in	Section 3.11.1.1 and 3.11.2 of the SEIS discusses vessel displacement and
001	the within the array is very dangerous if not impossible; and therefore, all	financial impacts on commercial fisheries, including the surfclam fishery.
	of that area will be lost to us. And that takes up about 1400 square miles of	Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS discuss that some vessels may
	highly productive clam grounds. The the measurement BOEM had said	choose not to fish near the Proposed Action during its operational period due
	in their EIS that that the fishing industry is going to be very negatively	to restrictions on maneuverability from the presence of structures, the
	impacted, and we want to point that out, that this is going to have a	potential for hanging up on structures, and they have been updated to discuss
	tremendous negative impact on us. And so we are going to possibly lose jobs.	potential mitigation measures.
	We surely are going to have to fish in other areas which are farther away,	
	which means we have much more cost in catching the product that we are	
	designed to to catch and to process.	

Index Number	Comment Text	Response
13191-17- 002	we have a good chance of losing jobs to thousands of people who lived in and work in Europe who build the turbines. We have no capacity capability of installing these turbines. The they will send, as there is a ship here now installing the two turbines off of Virginia Beach, Virginia, which is a European ship, European crew, European turbines. We don't have any capacity to build any of that stuff at this time. So we are thousands of jobs that they are talking about are all European jobs.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. The jobs and investment are anticipated to be concentrated in and near the east coast states that would host offshore wind. Over the next ten years, these studies foresee the growth of the domestic offshore wind supply chain.
13191-17- 003	the turbines are only about 35 percent effective during the year. So the lights go out when the wind stops blowing, they have to have the ability to produce the maximum power necessary to sustain the the area that that that grid is supplying. So, therefore, you have you have to have power plants, either nuclear power plants or conventional gas power plants, online all the time running at slow speeds. And when the wind stops, then you have a lag, usually the power goes out the lights go out, and then they come online and start back up. And so we sort of act like a third-world country.	Thank you for your comment.
13191-17- 004	we do not understand all of the negative impacts that are going to be on the habitat, the fish populations, or the fishermen, and all of the people who support the fishing industry. And we are going to be in a situation where the - this process is is not in the best interest of the United States as far as trying to reduce carbonWe I support and the people I work with support Number G, to do nothing until a lot of studies have been done which was described by Simmons and its scientists.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-17- 005	we need to also make sure that we have the capability of spreading these things out so and burying the cables deeply so that we can operate safely within the arrays and transit safely through the arrays, and build these turbines here in the United States.	Section 3.11 of the SEIS discusses restrictions on vessel maneuverability from the presence of structures, the potential for hanging up on structures, and alternatives with different spacing options and vessel transit lanes between wind turbines. BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D for details of the FEIS.
13191-18- 001	I would like you to listen to all of the people who have spoken and come up with a plan that that incorporates the whole thing. So you've got deep cables, you've got batteries, you've got local jobs, you've got healthy clams, you've got a healthy clam industry. And you do it in a way that other people	Thank you for your comment.

Index	Comment Text	Response
Number	can copy you. And I'm not sure how you're going to do all of that, but really	
	what I would like to see.	
13191-19-	The ocean is a public resource. The commercial fishing industry does not	Thank you for your comment.
001	have a primary claim on it. The Atlantic Ocean is very large, and commercial	
	fishing boats have access to the vast majority of it. This wind farm would	
	impact them only slightly, and that impact is greatly outweighed by the	
	positive impact on the environment through reduced fossil fuel power	
	generation. For these reasons, I vote that BOEM support the proposed action	
	Option A and allow this wind farm and many others be constructed as soon	
	as possible. Further delay of this wind farm project will negatively impact the	
	environment and raise electricity costs.	
13191-19-	Additionally, while the Environmental Impact Statement or report listed	The scope of this SEIS is to evaluate the environmental impacts from
002	potential and negative impacts to commercial fisheries or fishing, any	offshore wind development, not the impacts of commercial fisheries on the
	reduction in commercial fishing could positively impact the natural	environment.
	environment. Negative environmental impacts of commercial fishing include	
	plastic waste from discarded fishing nets which then degrade and spread	
	micro plastics in the water.	
13191-19-	Climate change will negatively impact far larger industry than clam	Thank you for your comment.
003	harvesting, jeopardizing livelihoods throughout the United States.	
	Construction of this wind farm and many others will help to reduce carbon	
	dioxide emission and thereby help the environmentSince the wind turbines	
	and offshore wind farms have higher capacity utilization rates, building	
	offshore wind farms take up a less overall space than other energy generation	
12101 20	options.	
13191-20-	I have operated boats around the Cape Islands and the wind lease area areas	Thank you for your comment.
001	for 30 years. For full disclosure, I have supplied vessels for avian or bird	
	surveys for our future wind Vineyard Wind Project, and worked as a guard	
	vessel on the Coastal Virginia Offshore Wind Project this Spring. This is	
12101 20	this shows that there is work for local companies in the wind industry.	
13191-20-	At one-mile spacing of the wind towers, these these channels are	steerion 2.5 of the FEIS has been added which includes the agency-preferred
002	unnecessary. If anything, the consistent one-mile spacing throughout with	allernauve.
	east-west and norm-south, letters and number markings would be best. As a	
	barbar is one third of a mile wide, and has 800 foot shine passing each other	
	every day. One mile is more spacing than any good boat operator needs to	
	transit	
13191-20-	believe that the towers and the anti-scouring stones around them at the bases	Section 3.10 and 3.11 of the SEIS discuss the potential for increased
003	will create fishing opportunities for private and smaller for-hire vessels.	opportunities for recreational fishing and for-hire recreational fishing from

Index Number	Comment Text	Response
		the increased presence of structures in the water column and on the ocean floor. Therefore, no change to the FEIS is warranted.
13191-21- 001	I hope that BOEM considers the interests of the younger generations while making their permitting decision on Vineyard Wind. We will approve Alternative D-2 and reject Alternative F, as this will maximize future investments in offshore wind and clean energy for the United States.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-21- 002	We in the United States cannot afford further delays to the Vineyard Wind proposed construction plan because we need to guarantee the stability of this industry because that will allow supply chains and work force training to take full effect for job growth in the United States.	Section 3.6.2 of the FEIS has been updated to note the importance of the Vineyard Wind 1 Project as the east coast's first large-scale offshore wind energy project. Approval could encourage and support continued investment in other offshore wind projects and the creation of a domestic supply chain for the offshore wind industry in the eastern United States.
13191-21- 003	the offshore wind industry provides a glimmer of hope and expansion for the job market. I think many [so to graduate] students want to enter the ground floor of a new and exciting career field. And the offshore wind industry can be that new, innovating and exciting job sector here in the United States. I hope that those beneficial impacts are not overlooked when drafting a final Environmental Impact Statement.	Section 3.6.1.1 of the FEIS has been updated to provide estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. The jobs and investment are anticipated to be concentrated in and near the east coast states that would host offshore wind. Over the next ten years, these studies foresee the growth of the domestic offshore wind supply chain.
13191-21- 004	I've also heard some prior comments regarding impacts to fisheries. And I want to add that the small reduced revenues for fisheries from Vineyard Wind will only be realized if fishing activity stops entirely in the lease area. But the one-by-one nautical mile layout will allow for fishing to continue once Vineyard Wind is operational. So I think that needs to be taken into account when the final permitting decision is made, as well as other mitigation strategies already agreed upon by Vineyard Wind and consultation with the fishing industry.	Section 3.10 and Appendix D of the FEIS have been updated with all mitigation strategies and these are taken into account during the decision making process.
13191-22- 001	We do not believe that this SEIS should be used as a template for the other developments and the other developers between Massachusetts and and Virginia. And I think BOEM while I really appreciate the opportunity to speak tonight has done a terrible job frankly in in encouraging the developers to work together to resolve issues like our ability to transit areas where we're going to be displaced because there are other areas where we can still catch fishSo I would like to see this outcome have Vineyard 1 be the leader in a rational transit system so that we can get around it and safely get through it. So, you know, maybe four miles is too long. But I wanted to point out that, you know, Alternative F we've heard a lot about environmental justice tonight. You know, it's a minor impact whether it's F or D-2, franklySo that's it. Okay. Well, we'll be filing written comments and we hope BOEM does a little better job of coordinating between these projects.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.

Index	Comment Text	Response
Number		
13191-23-	I want to urge BOEM to expedite approval of a robust option for the	Thank you for your comment.
001	Vineyard Wind Project. The scientific community agrees that we must	
	greatly reduce our greenhouse gas emissions to mitigate the worst impacts of	
	climate change. And we have about 10 years to accomplish this. If we fail,	
	the cumulative impacts of climate change will likely overwhelm society's	
	ability to adapt. The stresses induced by climate change will endanger our	
	very civilization. I recognize that this offshore wind project has some short-	
	term environmental and societal problems, but these risks are surely much	
	less than the irreversible and overwhelming damage certain to hit us if we fail	
	to curtail our dependence on fossil fuels.	
13191-24-	We see how the climate crisis is devastating our planet thanks to dirty fossil	Thank you for your comment.
001	fuels. Vineyard Wind is a key part of solving that crisis creating a clean	
	energy economy for New England where solar wind and other renewables	
	create hundreds of thousands of jobs and power our lives without polluting	
	our atmosphere. Our group gives our full support to this project, and we	
	express our hope that permitting will go forward as soon as possible.	
13191-25-	So in short, adverse impact on the environment, fish stocks, and on the	Thank you for your comment.
001	economics of the fishing industry have not been shown. Enough is known,	
	however, about the adverse impact on the environment and the economy	
	including the livelihood of fishers if nothing is done to develop renewable	
	energy such as the Vineyard Wind Project. Warming waters due in part to	
	carbon emissions are but one example of a far greater threat to fishers and	
	others than Vineyard 1. Vineyard 1 has shown that the economics of moving	
	ahead with this beneficial project are greatly diminished with additional	
	delays or unnecessary changes to the citing plan. So time is of the essence to	
	begin construction of Vineyard 1 so that Massachusetts and New England	
	can begin to see the benefit of having renewable and less carbon impact on	
	our environment.	
13191-25-	The issue of adding transit lanes, in my opinion, does not need to be	Section 2.5 of the FEIS has been added which includes the agency-preferred
002	revisited. The Coast Guard has already endorsed the one-by-one NM layout,	alternative.
	and the Coast Guard finds that the standardized spacing layout would be best	
	for navigational safety. They also have reported that additional transit lanes	
	are potentially less safe than the one-by-one NM layout.	
13191-25-	Since the inception of Vineyard 1, the company has done an exemplary job in	Thank you for your comment.
003	engaging the public and working with experts and scientists in refining their	
	proposal. Massachusetts and New England needs ocean wind energy, and this	
	Vineyard Wind Project, it's really essential that it gets started. We'll generate	
	clean, sustainable injury for more than 400,000 homes and businesses. And	

Index Number	Comment Text	Response
	the most important thing, as has been said this evening, is the need to reduce carbon emissions, which this project does by nearly 2 million tons annually.	
13191-26-001	I want to commend Vineyard Wind for committing to training the local work force on Martha's Vineyard, which is critical in the diversification of our local economy. It gives a generation of people, like myself, a hope to get new jobs, especially during very challenging times. Thank you for this opportunity to provide input. I urge BOEM to submit this project to move forward without delay.	Section 3.6.2 of the FEIS lists the grants and community programs that the Vineyard Wind 1 Project is committed to, including job training for offshore wind. This information was also provided in the DEIS.
13191-27- 001	In the construction of the first project [which in this case is VW], it increases our understanding and knowledge base significantly, and it will form all the projects to follow, hence reducing their risks and associated costs. What would happen if Vineyard Wind is delayed or not approved? The next project will have to carry the additional risk of being the first movers, something that they probably have not factored into their current models. A disillusioned supply chain would further compound that risk. Their risk profile has gone up significantly. Investors will be clear that they cannot be guaranteed a return on their investments. In best case, offshore wind development will be set back by years, and worst case scenario is that the projects projects will become financially unviable. In conclusion, in Section 3.7.2.1, and I'm quoting here, if the proposed project is not approved, it is assumed that the energy demand that the proposed project would have built would likely be met by other projects in the remaining areas off Massachusetts, Rhode Island, and New York leases. In other words, future offshore wind facilities capable of generating 9.4 megawatt would be 9.4 gigawatts would be built in the Rhode Island and Massachusetts lease areas. We believe that the premise of the assumption is incorrect, and we urge you to reassess this assumption. Further delaying the project, worst case we move not to approve Vineyard Wind, create a significant material ripple effect throughout the entire industry and the local supply chain.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet mandates/demand. This assumption was used to frame the No Action Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.
13191-28- 001	As I've been reviewing the SEIS, it references the COPs in determining various impact. However, if you go to the volumes and sections of the COP referenced, they are redacted. Not one or two sections, but several sections; many sections, actually. This prevents meaningful comment and external review, and therefore, cannot be used in decision-making.	The COP references in the FEIS have been updated where appropriate. The latest COP information is also available on BOEM's website here: https://www.boem.gov/vineyard-wind
13191-28- 002	Regarding a proposed action, we learned of the one-by-one-nautical-mile layout created by developers first in the media. It was not developed with us or with input from others in the commercial fishing industry who would be majorly impacted by the proposed project and cumulative projects, should they move forward. The U.S. Coast Guard Final MARIPARS, which also	The alternatives were developed using screening criteria for determining a range of reasonable alternatives, extensive coordination with state and federal agencies, and input from the public and potentially affected stakeholders through the DEIS scoping process and comment period (Appendix C). Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar

Index	Comment Text	Response
Number	accepted this layout, did not analyze radar interference impact, which were well documented and acknowledged by the U.S. Coast Guard study on the previously proposed Cape Wind Project as a result of wind turbines. Furthermore, mathematical errors and omissions in the Final MARIPARS demonstrate that further work is necessary regarding layout and navigational safety. The SEIS determines that there are major impacts to navigation and, therefore, navigational safety as a result of the proposed layout. However, due to the lack of radar analysis, and the errors and omissions in the MARIPARS, and particularly, since the size of turbines in the project design envelope has now increased from a 10-megawatt-turbine to a 14-megawatt- turbine maximum, we believe more analysis, including and especially a radar modeling of the project and surrounding areas based on 14 megawatt turbines is necessary before moving forward.	interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. The USCG, a cooperating agency for the FEIS that is the leading agency on navigational matters, found the 1 x 1 nautical mile, east-west layout (consistent with Alternative D-2, as described in the FEIS) to be acceptable. The Final MARIPARS (USCG 2020) concluded that additional mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection. Further, the USCG is the consulting agency with the expertise regarding navigation impacts and, therefore, BOEM considers the MARIPARS to be the best available information for purposes of analyzing the impacts to navigation resulting from the project.
13191-28- 003	The Vineyard Wind Project and the Mass/Rhode Island lease area are larger than any currently operating wind farms in the world, and it is important to get this right. Our vessels and our customers' vessels require safety at sea when transiting in the area, and they currently transit the area frequently. So we request this [radar] analysis to be done, this modeling to be done and analyzed prior to any approval.	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13191-28- 004	Our vessels and many customer vessels will be unable to fish in the project area during the life of the project or surrounding cumulative projects should they move forward due to being trawl vessels which are the primary fishing (inaudible) in the area. Any product these vessels and our facilities have relied on for decades will disappear. Due to cable batting on export cables, we will likely lose fishing area outside the project as well.	BOEM believes that measures proposed in the COP and enforced through terms and conditions of approval are sufficient to avoid interactions between fisheries gear and cable infrastructure. This includes a target burial depth of 5 feet (1.5 meters), cable inspection surveys, and a Distributed Temperature System on the export cable that will monitor if burial conditions have deteriorated or changed significantly and remedial actions are warranted. Additionally Vineyard Wind is required to submit an as-built cable installation report that will include location and burial depth. See the updated Sections 3.10.2, 3.10.8, and Appendix D of the FEIS for details. Sections 3.10.1, 3.10.2, and 3.10.8 of the FEIS also discuss that some vessels may choose not to fish near the Proposed Action during its operational period due to restrictions on maneuverability from the presence of structures and the potential for hanging up on structures. The FEIS states that some impacts due to the presence of structures may be permanent.
13191-28- 005	The SEIS determines major impact to commercial fisheries. Cumulatively, some seasonal fisheries and reliant vessels may not survive if all of build-out occurs. In contrast, the SEIS determines negligible to minor and minor beneficial impacts to air quality, i.e., climate change and greenhouse gas reduction. Since greenhouse reduction and air quality is the primary driver of this project, minor negligible beneficial impacts would override negative	Thank you for your comment.

Index	Comment Text	Response
Number	impacts to another renewable resource industry should the project move forward as proposed. Due to this fact and the lack of radar modeling for 14 megawatt turbines and the issues of the MARIPARS, we support more work on these prior to approval	
13191-28- 006	We also echo the need for a time series of baseline information prior to construction that was raised by previous commenters. Fisheries' renewable resources both inside and adjacent to the project area need to be carefully monitored for impacts before, during, and after projects are built.	The environmental assessment for the Vineyard Wind 1 Project has relied upon the best available information regarding impacts from the proposed action by using the results of local site characterization information from the developer, the National Marine Fisheries Service, and others. Impact information from the Block Island Wind Farm and European projects are applicable to the anticipated impacts of the proposed action. Section 3.3 of the FEIS has been updated to include European studies of impacts from offshore wind facilities on finfish and Section 3.10 has been updated with a U.K. study (by Roach et al.) that shows impacts to catch rates from offshore wind facilities. Section 3.10.2 of the FEIS was updated to discuss the proposed Project's plan for biological fisheries monitoring, which could provide an understanding of the effects of offshore wind development, benefit future management of commercial and for-hire fisheries, and inform planning of other offshore developments. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental- studies/20-x07)
13191-28- 007	A one-year baseline survey prior to construction is too statistically insignificant and uncertain to produce reliable data. Due to the very significant potential and expected impacts to the long fin squid resource, which cannot be farmed, and therefore, is important to sustain a monitor in the wild, measuring these impacts is very important, particularly due to the fact that air quality will only be affected in a minor capacity, conducting due diligence to majorly impacted natural resources and resource users is appropriate. Therefore, we support requiring this type of time series data collection as a prerequisite of permitting as well.	The environmental assessment for the Vineyard Wind 1 Project has relied upon the best available information regarding impacts from the proposed action by using the results of local site characterization information from the developer, the National Marine Fisheries Service, and others. Impact information from the Block Island Wind Farm and European projects are applicable to the anticipated impacts of the proposed action. Section 3.3 of the FEIS has been updated to include European studies of impacts from offshore wind facilities on finfish and Section 3.10 has been updated with a U.K. study (by Roach et al.) that shows impacts to catch rates from offshore wind facilities. Section 3.10.2 of the FEIS was updated to discuss the proposed Project's plan for biological fisheries monitoring, which could provide an understanding of the effects of offshore wind development, benefit future management of commercial and for-hire fisheries, and inform planning of other offshore developments. BOEM is actively working with NMFS on a process to adapt survey methodologies to the presence of offshore wind (see: https://www.boem.gov/environment/environmental- studies/20-x07).
13191-29- 001	And I'm speaking in support of Alternative D-2 of Vineyard Wind 1 It's easy to get mired in the details, but the big picture is simple, we need more	Thank you for your comment.

Index	Comment Text	Response
Number	renewable electricity; and then counterintuitively, we need to use more electricity for things like heating and cooling buildings and for transportation	
13191-29-	However, any minimal impacts from Vinevard Wind and other offshore wind	Thank you for your comment
002	projects in the queue are small compared to the massive impact of climate	Thunk you for your common.
002	change on birds on fisheries on humans and especially on the most	
	disadvantaged communities. This project is a no-brainer. Massachusetts has	
	been working on offshore wind for two decades. This is a great project for	
	iobs, for the economy, for the environment.	
13191-30-	I think that the Vinevard Wind process has really done a good job of	Section 3.4.2 and Appendix D of the FEIS discuss updated mitigation and
001	balancing that is in the Right Whale settlement agreement. As had been	monitoring measures that would be implemented to avoid, minimize, and
	stated earlier in this public comment period, or session, there's no guarantee	mitigate adverse impacts to marine mammals, specifically the NARW, and
	that any future offshore wind project would achieve that same that same	include measures outlined in the referenced agreement. These measures
	concensus and settlement around how to manage a crucial population in this	include, but are not limited to avoidance of peak NARW presence, use of
	ecosystem. So I think that that is that's one reason why I support	sound attenuation technologies, use of PSOs, PAM, soft start procedures,
	[Alternative D-2] this project.	shut down procedures, and other measures.
13191-30-	Vineyard Wind and other developers in the New England wind energy area	Thank you for your comment.
002	agreed to develop all future projects with a uniform one-by-one-nautical-mile	
	layout throughout the lease areas This, I think, is another reason why this	
	project should go forward. This change reduces the potential output of the	
	wind turbine projects by 30 percent, but does seem to address the main	
	concerns that have been articulated from the commercial fishing industry	
	raised during the comment period of the Vineyard Wind 1 Project.	
13191-30-	I also want to applaud Vineyard Wind for taking feedback from our island	Section 3.10.2.1 of the SDEIS stated that within the viewshed of the
003	community in incorporating aircraft detection lighting systems, or ADLS,	geographic analysis area, the use of ADLS for offshore wind projects would
	into their project, which will make nighttime lighting impacts reduced to	reduce the impact of nighttime aviation safety lighting to negligible.
	negligible. We encourage BOEM to require future developers to incorporate	Vineyard Wind has committed to use ADLS at night to greatly reduce
	ADLS on their turbines to significantly reduce the amount of time that light	nighttime impacts of aviation safety lighting on the wind turbines. BOEM is
	will be visible from the shore.	in the process of developing guidelines and minimum standards for other
		offshore wind development. Each applicant will be required to submit a COP
		that describes the proposed FAA lighting scheme. Therefore, no change to
12101 20	Development of offeners wind projects aligned with Martha's Vineward's	These you for your comment
004	goal to be a hundred percent renewable for heating electricity and	
004	transportation by 2040, and aligned with Massachusetts' target of being net	
	zero by 2050 Furthermore when naired with energy storage this project	
	aligns with the Massachusetts Clean Peak Standard, which is designed to	
	incentivize the use of clean energy technologies during neak hours instead of	
	relying on fossil fuel burning plants.	

Index Number	Comment Text	Response
13191-30- 005	offshore wind projects are anticipated to have a continuous long term beneficial impact on local employment and economics. It provides new employment and economic opportunities, including for communities like the Martha's Vineyard's community to the development and expansion of port, shipping, and related industries.	Section 3.6.2 of the FEIS provides information on the jobs that would result from the Vineyard Wind 1 Project and states that operational jobs from the Vineyard Wind 1 Project would be concentrated on Martha's Vineyard. Section 3.6.1.1 of the FEIS provides estimates from several sources of projected employment and investment resulting from growth of the wind energy industry along the Atlantic coast. The jobs and investment are anticipated to be concentrated in and near the east coast states that would host offshore wind. This information was also included in the SEIS (Section 3.6.2.1), and the FEIS provides additional detail and analysis.
13191-31- 001	We need the renewable energy, we need the jobs, and we need to move to non fossil fuel generated electricity. So I think Vineyard Wind 1 and Vineyard Wind has done a great job (inaudible) to move this project forward.	Thank you for your comment.
13191-32- 001	The Massachusetts wind energy areas, including Vineyard Wind were chosen without any input from New York fisherman that fish in federal waters where the WEAs were selected. Massachusetts/Rhode Island state-formed task force at no point included New York representation nor did they notify federal fishery stakeholders from other states to offer input to the process from the beginningThe Rhode Island/Mass BOEM task force did not include any of New York's economic catch data and none of the historical traditional fishing grounds of importance to the trawl fleet of New York. We were removed from consideration. New York fishermen have no compensation package and no safe, direct, and four-nautical-mile-wide transit lane to either travel directly to our fishing grounds or to our home port.	The development of wind energy areas and lease issuance goes through at least two separate public notice and comment periods, in addition to the current environmental review for proposed activities on the lease. Section 3.10 and Appendix D of the FEIS discuss mitigation measures. Section 3.10 of the FEIS has been updated to include that Vineyard Wind has expressed that funding for fishing interests from all other affected states would be added to either of these existing funds or grouped into a third fund. Vineyard Wind has voluntary committed to set aside \$3.3 million and voluntary establish a fund for claims of direct compensation from other affected states. BOEM is open to working with state partners and the commercial and recreational fishing industries to investigate alternative strategies to negotiate compensatory mitigation agreements.
13191-32- 002	Without wide and safe transit lanes, such as the example submitted by RODA, commercial fishermen from New York will not be allowed to directly home to their ports from fishing grounds within the Rhode Island/Massachusetts wind energy area Now, imagine a turbine 900 feet tall a mile apart in every direction. Now add black fog, which laymen refer to as pea soup, and 20- and 30-foot seas, and winds up to 40 miles per hour or more. Those that have spoken before mehave no idea how dangerous the offshore environment is.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. Vessels that could continue to navigate within the WDA would still need to navigate with more caution than is currently necessary to avoid WTGs and ESPs, especially during inclement weather. In such adverse conditions, mariners may choose to navigate around the WDA. The USCG, a cooperating agency for the FEIS that is the leading agency on navigational matters, did not find the expanded transit lanes in Alternative F to be necessary. BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the FEIS.
13191-32- 003	"Green-Energy Companies Have Human-Rights Problem", by Adam Minter, discussed a new report that uncovered striking abuses in the renewables business [Another] report from the Business and Human Rights Resource Centerspoke of at least 197 allegations of human rights abuses that have been leveled against renewable energy projects in recent years, including	Thank you for your comment.

Index	Comment Text	Response
Number		
	land grab, dangerous working conditions, and even killings. Meanwhile,	
	many of the world's largest publicly held solar and wind companies are	
	failing to meet wildly accepted human rights benchmarks. Iberdrola is a 50	
	percent partner in the Vineyard Wind Project through Avangrid renewables.	
	Iberdrola is a Spanish multinational electric utility who scored a 53 percent	
	overall in that report of 13 core indicators developed, tried and tested by the	
	corporate human-rights benchmark to measure a company's alignment with	
	the United Nations' guiding principle on business and human rights.	
13191-32-	the fish species caught within the Vineyard Wind wind energy area and the	Thank you for your comment.
004	Rhode Island/Massachusetts wind energy area are not only some of the	
	freshest and most sustainable, but are also some of the most economically	
	attainable with a low price point by all U.S. consumers, including and	
	especially those in the most disadvantaged communities.	
13191-32-	The cost alone to electric consumers for this highly subsidized project has	Section 3.7 of the SEIS assesses the economic impacts of offshore wind
005	been shown to be a real concern for environmental justice, for low-income	within the geographic analysis area based upon anticipated employment and
	families who cannot afford electricity at five times the average rate of power	economic activity, infrastructure improvements, grants and local and state tax
	purchase agreements. While the wind subsidies are being handed out by the	revenue. The FEIS has been updated to provide more recent information on
	federal government to these foreign-owned energy and investment companies	investments and job training. The analysis of environmental justice and
	to bring double digit rates of return to their foreign country's pension funds,	economic impacts within the geographic analysis area is valid regardless of
	Americans will be forced to pay for this energy, especially, again, in the time	federal and state subsidies. Ratepayer costs depend on numerous variables
	of COVID when many Americans have lost their jobs. It is a no-win/no-win	beyond the scope of the EIS.
	for Americans, especially those affected during this pandemic, and those in	
	the most disadvantaged communities.	
13191-32-	We do not support moving forward with this project at this time. We believe	BOEM is evaluating Vineyard Wind's COP which is for the development of
006	a five-year moratorium should be put in place to allow for thorough scientific	an 800-MW offshore wind farm and the potential impacts associated with
	studies by the National Marine Fisheries Service and the Northeast Fishery	their action. Section 2.5 of the FEIS has been added which includes the
	Science Center.	agency-preferred alternative.
13191-33-	The design of the specific lease areas also reflected extensive public	Thank you for your comment.
001	comment and built a firm foundation for the environmental review of the	
	individual projects. BOEM fostered dialogue, conversation, which led to the	
	process that brought the developers together to agree to the one-by-one grid	
	that underpins the design of Vineyard Wind that should move forward at this	
	pointThe NEPA processdid what it was supposed to do. It has narrowed	
	the issues. The issue that has emerged through the process is the question of	
	the impact on the human environment, specifically navigation, and even	
	more specifically, the impact on navigation regarding fishing. That issue has	
	been addressed by the most expert of those agencies, the United States Coast	
	Guard. And BOEM is legally obligated and, inclined to follow the	
	guidance of that expert federal agency, the United States Coast Guard. The	

Index	Comment Text	Response
Number		
	issues have been raised, the issues have been discussed, the issues have been	
	resolved. The process has been extensive. A hard look has been taken at the	
	issues that have been raised, and it is time to bring the process to a	
	conclusion to move forward with Vineyard Wind and to move forward with	
	the development of this important new industry.	
13191-34-	Adding six additional transit lanes of four nautical miles would severely	Section 2.5 of the FEIS has been added which includes the agency-preferred
001	constrain even further the overall clean energy production in the wind energy	alternative.
	area. At a minimum, it would result in yet more delays and substantial cost	
	increases to consumers. At worst, it could possibly kill wind projects It	
	would not meaningfully improve navigation or safety as the Coast Guard has	
	indicated. In fact, they would act as funnels for traffic and actually increase	
	risk. I urge you to reject Alternative F and select the Coast Guard	
	recommended one-by-one-nautical-mile layout in Alternative D-2.	
13191-35-	I represent Surfside Foods and support Option GThere's not been any	BOEM is evaluating Vineyard Wind's COP which is for the development of
001	modeling to see the effects of removing that wind energy from the	an 800-MW offshore wind farm and the potential impacts associated with
	environment and what that will do to the New York Bight. I support a five-	their action. Section 2.5 of the FEIS has been added which includes the
	year moratorium on build-out of wind energy areas in the New York Bight,	agency-preferred alternative.
	and would support an analysis and modeling to see how much wind energy	
	we can safely remove from these areas, just as we must do those analyses	
	before we remove any other resource from the Mid Atlantic Bight.	
13191-36-	The process has not been adequate for the fishing industry. I am a past	Thank you for your comment.
001	member of the New England Fisheries Management Council. During my	
	time there, I heard many presentations by BOEM to the council on keeping	
	us up to date on what was going on, and we appreciate that. However, during	
	that process, my I expressed my concern many, many times of the process	
	BOEM used in reaching out to the industry. We are federally permitted	
	vessels working in federal waters. And the state-by-state process that BOEM	
	has developed does not work for us.	
13191-36-	People have mentioned mitigation, and clearly, you know, if we're down off	Resource sections of the FEIS include proposed mitigation, where applicable,
002	of New Jersey, you're running the cable in through the state of New Jersey,	and Appendix D of the FEIS, which is a summary of all proposed mitigation
	and you're going to do a one-off mitigation plan with them? What about us?	considered, has also been updated to include modifications and/or additional
	This is federal waters.	mitigation and monitoring measures. Additional mitigation and monitoring
		measures may arise from consultations and coordination with Federal and
		State resource agencies. These additional mitigation measures will be
		considered by decision makers and could be adopted in the Record of
		Decision and required as conditions of approval. Section 2.2.1 of the FEIS
		has been updated to reflect this information. Future offshore wind projects
		will undergo separate NEPA reviews, and similar or different measures could

Index Number	Comment Text	Response
		be required for those projects to avoid or reduce the potential effects anticipated.
13191-37- 001	I fully support the Vineyard Wind 1 Project under the attachment of the supplement to the draft Environmental Impact Statement, including the one- by-one-nautical-mile turbine layout deemed acceptable by the U.S. Coast Guard. Vineyard Wind 1 has conducted the requisite survey and research to make sure that the project minimizes environmental impact, especially those associated with the critically endangered North Atlantic Right Whale	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-37- 002	Vineyard Wind 1 presents an unparalleled economic opportunity. Project document and maintenance will bring billions of dollars to the region and provide well-paid jobs for thousands of workers across many disciplines.	Section 3.6.2.1 of the FEIS notes that the estimated direct job creation by Vineyard Wind in Massachusetts alone would be approximately 3,100 to 3,600 FTE job years, including 1,100 to 1,550 job years during construction and about 80 jobs lasting at least 25 years (resulting in 2,000 FTE job years) during operation. These data were also provided in the DEIS.
13191-37- 003	During a time of significant economic uncertainty, with the effects of the coronavirus expected to last for years to come, Vineyard Wind offers much needed economic security for islanders and Massachusetts residents alike. In specific in specific regard to the SEIS, BOEM claims that Vineyard Wind 1 and offshore wind development as a hole will only have minor beneficial impact. Frankly, I believe BOEM is vastly underestimating the long-term benefits of offshore wind and should consider that environmental justice communities include diverse groups whose health and wellbeing will be positively impacted by clean offshore energy development.	Sections 3.7 and 3.8 of the SEIS and Sections 3.6 and 3.7 of the FEIS include information on economics and environmental justice, respectively. These discussions include the potential positive effects of the proposed Project on these resources.
13191-38- 001	Vineyard Wind will be able to create 3600 jobs for local residents over the life of the project as an industry build-out over the next few yearsThis organization will also offset about 1.7 million tons of CO2 from the atmosphere yearlyAdditionally, the development of offshore wind project aligns with Martha's Vineyard's goal to be a hundred percent renewable for electricity, heating, and transportation by 2040Furthermore, offshore wind produces power at long-term fixed prices and produces a hedge against loss of field volatility In conclusion, I support the development of offshore wind turbines for the numerous benefits that they bring, and I urge BOEM to allow this project to move forward without delay and to choose Alternative D-2.	Section 2.5 of the FEIS has been added which includes the agency-preferred alternative.
13191-39- 001	And what I don't see is any any information on what it's going to do to the squid fishery, squid d[ie] from the low frequency vibrations from wind mills. The fish beneath our fishery in the North Sea was destroyed by the wind farms, but that's never mentioned.	Section 3.4 of the SEIS discussed the potential impacts of WTG operational noise and construction noise on squid. Given the nature and extent of impacts anticipated, BOEM has no reason to expect that finfish and invertebrate communities, or longfin squid in particular, would not fully recover, even after the impacting agent is gone and remedial or mitigating action is taken. Quantitative stock assessments are beyond the scope of this EIS. The FEIS discusses qualitative and quantitative impacts to the squid fishery throughout

Index	Comment Text	Response
Number		
		Section 3.10, including potential impacts from construction and projected revenue exposure over 10 years during the build out of future offshore wind development. Section 3.10.2 and Appendix D of the FEIS were updated to discuss additional mitigation including daily two-way communication during construction in order to reduce conflict with the commercial squid fishery in the spring and summer.
13191-39- 002	I won't transit through the wind farms, period. I won't fish through the wind farms, period. It's too dangerous for me. This morning, we had pea soup fog. We had sailboats, we had little sport boats, and they are notoriously hard to see as it is. And in a wind farm, you're not going to see them with this with the radar clutter.	Sections 3.11.1 and 3.11.2 of the FEIS provide discussions of potential radar interference, including an expanded discussion of potential impacts on marine radar in Section 3.11.1. As stated in Table A-4 in Appendix A, BOEM assumes that all offshore wind developments would use 1 x 1 nautical mile spacing in fixed east-to-west rows and north-to-south columns. This arrangement would reduce, but not eliminate, navigational complexity and space use conflicts during the operation phases of the projects. Navigational complexity in the area would increase during construction as WTGs and ESPs are installed, would remain constant during simultaneous operations, and would decrease as projects are decommissioned and structures are removed. The Final MARIPARS (USCG 2020) concluded that general mitigation measures, such as properly trained radar operators, properly installed and adjusted vessel equipment, marked wind turbines, and the use of AIS all enable safe navigation with minimal loss of radar detection.
13191-39- 003	And I listened to somebody else say something about how easy it is for the tankers and everything to transit because with a mile separation. Well, the Nantucket to Ambrose traffic lane is not one mile wide. Each traffic lane, the east lane is two miles wide, the west lane is two miles wide with a six-mile separation zone; that's 10 miles. That's a lot more than one mile. And I've seen many close calls, many.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG is a cooperating agency for the FEIS that is the leading agency on navigational matters; therefore, BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the EIS.
13191-39- 004	you're going to kill the squid to come in shore because the squid won't go through the wind farms. The recreational fisherman are going to blame the commercial fisherman because the fluke, the sea bass, the striped bass and all their other fish, aren't getting one of their prey, so commercial will be blamed for decreasing those fishies not coming in.	Thank you for your comment.
13191-39- 005	New York was excluded from any compensation pack. My home port is Greenport, New York. So even though I fish in these areas, no thought was given to us.	Section 3.10 and Appendix D of the FEIS discuss mitigation measures. Section 3.10 of the FEIS has been updated to include that Vineyard Wind has expressed that funding for fishing interests from all other affected states would be added to either of these existing funds or grouped into a third fund. Vineyard Wind has voluntary committed to set aside \$3.3 million and voluntary establish a fund for claims of direct compensation from other affected states BOEM is open to working with state partners and the

Index Number	Comment Text	Response
Trumber		commercial and recreational fishing industries to investigate alternative strategies to negotiate compensatory mitigation agreements.
13191-39- 006	Today, the wind turbines would not have turned. Zero energy from these things, that if you listen to all the other commenters, are going to save the world. So zero energy today. Zero energy yesterday. One study off of Virginia said they are going to go a week, 10 days with zero energy from the summer doldrums when we need the energy the most. So wind farms are not the panacea that all these people seem to be making it out to be.	Thank you for your comment.
13191-39- 007	I'm a hundred percent against these wind farms. I'm a hundred percent against foreign companies coming in here and telling the fishermen to go blank themselves.	Section 3.6.1.1 of the FEIS has been updated to include additional projections of economic investment from offshore wind (updating information that was included in Section 3.7.2.1 of the SEIS). The projections are sufficient to support conclusions that offshore wind would support jobs and businesses within the geographic analysis area. Consideration of the nationality of the applicants is not required under NEPA and is not necessary to support the findings in Section 3.6.1.1.
13191-40- 001	Yes, BOEM has done lots and lots of studies, but they haven't done studies on vibration, magnetism, electric currents, and other impacts on fisheries fisheries migration, fisheries spawning, fisheries habitat.	Thank you for your comment.
13191-40- 002	even though our fisheries are sustainable and clean, the fish American consumers eat is 70 to 85 percent caught by foreign fishermen and companies. We need U.S. fishing people. Just ask those people who are living through, as we all are, COVID-19, meat, chicken and other shortages in our supermarkets. And yet, out here in California, down in our commercial dockside, we supply the local people with high protein, sustainable, fresh, American-caught seafoodBut it seems to me, from what I've heard, that basically what the fishermen who have spoken before me are asking for, is for a seat at the table, and for some new or renewed cooperation so that they don't lose their livelihood.	Thank you for your comment.
13191-40- 003	I also am concerned by outsourcing our country's energy needs, which is pretty much what I see happening, given the rapidity with which many of these companies are pushing ahead. Haven't we learned anything from the last six months about outsourcing personal protective equipment, medicines, respirators, masks?	Section 3.7.1 and 3.7.2 of the SEIS base all impacts on projected employment and investment within Massachusetts or the geographic analysis area. Section 3.6 of the FEIS has been updated with additional data and analysis.
13191-40- 004	we're facing old enemies [in climate change] in the sense that our salmon streams were ruined by banks investing in ranching and development, and energy companies that brought in those days that the way to get energy was by building multiple dams, which actually we're tearing down now. Now we're facing another group of huge energy companies, their bankers. And	Thank you for your comment.

Index Number	Comment Text	Response
Itumber	again, the solution for our energy needs seems to be just in one place,	
13191-41- 001	The SEIS claims that if Vineyard Wind is not approved, the economic potential of the offshore wind industry will be realized by future projects.	BOEM determined that it is reasonable to assume that if the proposed Project is not built, another project or projects would be constructed to meet
	1 will have a chilling effect on future investments and could send the signal that the United States is not serious about offshore wind. If Vineyard Wind 1 is not approved, the chances this industry moves forward in the United States will be severely compromised, potentially resulting in a reduction in projects built as well as uncertainty in manufacturing supply chain investments.	Alternative and also allowed BOEM to assess the maximum-case scenario in terms of potential impacts.
13191-41- 002	In conclusion, we urge approval of Vineyard Wind 1. This is the greater renewable energy transition our economy has seen. The working men and women of the United States deserve a vision of their future that integrates economic prosperity and environmental health.	Thank you for your comment.
13191-41- 003	Additionally, the industry has already conceded 13,000 megawatts of capacity in over 1,000 turbine locations by accommodating fisherman with this proposed one-by-one-nautical-mile layout. As referenced in Alternative - in Alternative F in the SEIS, additional transit lanes would reduce capacity by another roughly 4,000 megawatts in over 300 turbine locations. This translates to an estimated 1400 turbines that will not be built. Cancellation of this project would mean thousands of fewer jobs for the skilled men and women in the region, with no additional benefits to navigation safety.	Section 3.11.5 of the FEIS has been revised and contains additional information to address this comment. The USCG, a cooperating agency for the FEIS that is the leading agency on navigational matters, did not find the expanded transit lanes in Alternative F to be necessary. BOEM relies on, and does not question, the USCG's expertise and analyses for purposes of informing the navigational impacts in the FEIS.
13191-42- 001	The State of Massachusetts has set goals to limit greenhouse gas emissions, and the Vineyard Wind Project is not only vital to reaching these goals, but it will also launch the industrial offshore wind industry in the U.S. which will minimize this country's polluting contributions.	Thank you for your comment.
13191-42- 002	I've seen environmental racism and classism in my own backyard as children in Roxbury, Massachusetts, are diagnosed with asthma six times more often than children in Greater Boston. This is a result of heavy automobile traffic through the area, specifically the MBTA buses. Electrifying public transportation and personal vehicles is another vital part of mitigating climate change which goes hand in hand with the benefits of the Vineyard Wind.	Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects). An evaluation of electrifying vehicles is outside of the scope of the analysis for the proposed Project.
13191-42- 003	It's clear when reading the document that BOEM's SEIS underestimates the benefits of offshore wind projects and renewable energy to the wider environmental justice community as well as the major positive impacts these projects would present. Vineyard Wind also offers countless benefits for local stakeholders. The project will provide 400,000 Massachusetts homes and businesses with clean and cost effective electricity. During the first 20 years of the project alone, rate payers will save \$1.4 billion in energy costs.	Section 3.8.1 and 3.8.2 of the SEIS noted that offshore wind development could result in job creation for low and minority residents. This beneficial impact, and the local hiring plan for the proposed Project described into Appendix D, is carried over into the FEIS. Section 3.6 of the FEIS has been updated to provide summary projections of regional and national job creation and investment from studies used in the analysis for the SEIS as well as additional studies. Although projections specific to the geographic analysis

Index	Comment Text	Response
Number		
	And in addition, community members will see 3600 new jobs created over the life of the project.	area are not available, the FEIS uses the larger scale projections to support a reasonable conclusion that impacts on employment and economic activity within the geographic analysis area would be a moderate benefit. Section 3.6 of the FEIS has been updated to a moderate beneficial rating; this is a change from the minor beneficial impact given in the SEIS. Section 3.7.1 of the FEIS has been revised to discuss the health impacts of fossil fuel consumption and resulting degraded air quality on different racial groups, as well as different income groups, as well as benefits from reduction of fossil fuel power generation displaced by offshore wind energy (including the proposed Project and other projects).
13191-43-	We fully understand the threat that climate change actually does pose to the	Section 3.11 of the SEIS discusses the threat of climate change on fisheries
001	fisheries. I don't believe our industry is anti-wind. I do believe, looking down at the process generally, that the the failure, and I think it has been a significant failure, is one of process. If we look at this holistically, it should have been known, it should have been obvious. It was obvious to the commercial fisheries from the outset that our industry would be the most vulnerable and negatively impacted of the ocean users with the onset of offshore wind. And so one would have assumed, one would have thought, one would have hoped, number one, that intra-governmental agencies would have been consulted with each other.	and governmental agencies are consulted during the NEPA process and comment on the DEIS and SEIS. Therefore, no change to the FEIS is warranted.
13191-43-	And if [the locations of fishing boats] are readily available, and	The wind energy area offshore Massachusetts was reduced by approximately
002	photographically depicted, spaghetti lines of where federally permitted fishing boats are going are actually overlaid on top of lease areas, one would immediately see the incredible conflict between these two industries. Now, that's not to say that the wind industry and the fishing industry can't coexist, but one would tend to think that if these two industries are the most conflicted, that a process would have developed that would have attempted to accommodate both of these.	50% through the removal of the Nantucket Lightship Habitat Closure Area based on comments from the fishing industry and fisheries managers. This occurred as part of the official public notice and comment period for the Request for Information (see https://www.boem.gov/Revised-MA-EA- 2014/). The area south of Cox Ledge was removed from leasing consideration by BOEM during the Area Identification process. Through this process, high value fishing areas were identified by the Rhode Island Fisheries Advisory Board and removed prior to leasing. Section 2.1.3 of the FEIS was updated to clarify that Alternatives D1 and D2 were the direct result of scoping comments received from the commercial fishing industry (see April 30, 2018 comment from Tkjedle Law on behalf of the East Farm Commercial Fisheries Center on the Notice of Intent to Prepare an EIS). Alternative F was proposed by the Responsible Offshore Development Alliance through a collaborative process with commercial fishermen and the offshore wind industry. Section 3.10 of the FEIS includes Figures 3.10-2, Figure 3.10-5, Figure 3.10-6, and Figures 3.10-12 through 3.10-19, which use chart plotter and VMS data as part of the assessment.
13191-43-	Now, we are not interested in financial mitigation. We want to earn our	BOEM appreciates the comment and is open to working with state partners
003	money by fishing. But interestingly, because there is no regional approach	and the commercial and recreational fishing industries to investigate

Index	Comment Text	Response
Number	that has been taken to that, you have two states that have come up with	alternative negotiation strategies for future projects. However, the
	compensatory mitigation plans without fishermen really being involved. And	methodology followed for the Vineyard Wind Project was sufficient to
	we have boats that are coming out of Cape May that are fishing along New	develop the mitigation measures analyzed in the FEIS.
	Jersey, New York, Rhode Island, Massachusetts, you know, Maine, and these	
	boats don't know state borders, and yet the between the wind industry and	
	the separate states, the fishing industry, which is a regional fishery is literally	
	kind of cut out of these conversations because in a sense we were chopped by	
	artificial lines. In fact, I would tend to think it may be, you know, a	
	constitutional violation, taking a state-by-state approach when you're dealing	
	with this type of intrastate industry such as the commercial fisheries.	
13191-43-	Holistic planning should have occurred in advance to minimize these	The FEIS considers all substantive comments, including public testimony,
004	impacts. So I am in favor of RODA's navigation safety corridor. I would	received on the DEIS and SEIS.
	hope that if this project is approved, it is not used as a template, and that, in	
	fact, a vigorous process take place that actually includes the commercial	
10101.44	fisheries, which wants to cooperate.	
13191-44-	So I take exception to accusations of apathy to low-income minority	Section 3.6.1 of the FEIS has been revised to describe communities in
001	communities, which I heard a few of tonight. I especially take exception	accordance with the National Marine Fisheries Service Social Indicator Map,
	when these accusations are leveled at the same time that people are	which classifies fishing communities as having varying levels of social
	summarily ignoring the unanimous concerns of lishermen. I won't	Vulnerability, in part based on commercial lisning engagement and reliance.
	islands, and also along the coast, the law income and at risk communities are	affebre wind development could have a moderate impact on amployment
	istands, and also along the coast, the low-income and at-fisk communities are	and accommiss related to commercial fishing. Section 3.6.1 of the EEIS
	provided continuity, stability, and culture in these places for hundreds of	undates data from the DEIS on the size of the commercial fishing industry in
	vers I can't speak directly on behalf of those communities since I'm not	relation to the coastal county economies
	living their experience, but I do know that to the extent that offshore wind	relation to the coustal county continues.
	liobs are temporary or transitory in nature, they can never replace what those	
	communities have built and maintained for generations. So we really need to	
	figure this out.	
13191-44-	to repeat what each fishing expert who had spoken tonight has voiced, most	Section 3.11 of the SEIS discusses impacts of climate change on fisheries.
002	of them are very concerned about climate change and the environment, but	Section 3.6.2 of the FEIS is updated to conclude that a moderate beneficial
	they have also unanimously said they are concerned about economic and	impact on employment and economic activity would result from offshore
	environmental uncertainty. And the SEIS with it's facts-based analysis also	wind development in the RI and MA Lease Areas. It also notes a potential
	reflects that I've heard everyone who is not a fisherman saying that these	moderate adverse impact on the commercial fishing industry. The FEIS
	concerns have been addressed. And I just want to put these wonderful	considers all substantive comments, including public testimony, received on
	intentions that I hear voiced towards justice and equity toward a genuine	the DEIS and SEIS.
	effort to hear what these communities are saying on their own behalf and to	
	afford equity to those voices as well.	
13191-45-	There is no set plan for the decommissioning of these wind farms, and yet the	As described in Section 2.1.1.3 of the FEIS, pursuant to 30 CFR Part 585 and
001	social justice people, the environmentalist, the climate change people sit idle.	other BOEM requirements, Vineyard Wind would be required to remove or

Index	Comment Text	Response
Number		
	Should this type of development be on land, be a solar farm or a wind farm,	decommission all installations and clear the seabed of all obstructions created
	there are decommissioning plans that are bonded in place before they start	by the proposed Project. Vineyard Wind would need to obtain separate and
	construction. Yet nothing like this is in place for this type of project. What	subsequent approval from BOEM to retire any portion of the Proposed
	they are basically going to do is they are going to liter the ocean with the	Action in place. If the COP is approved or approved with modifications,
	worn-out turbines in to 30 years.	Vineyard Wind would have to submit a bond that would be held by the U.S.
		government to cover the cost of decommissioning the entire facility. This
		explanation has been added to Section 2.1.1.3 of the FEIS.

K.6. REFERENCES

- Ainley, D.G., E. Porzig, D. Zajanc, and L.B. Spear. 2015. Seabird flight behavior in response to altered wind strength and direction. *Marine Ornithology* 43:25-36.
- Barclay, R.M.R., E.F. Baerwald, and J.C. Gruver. 2007. "Variation in Bat and Bird Fatalities at Wind Energy Facilities: Assessing the Effects of Rotor Size and Tower Height." *Canadian Journal of Zoology* 85: 381-387.
- Bergman, Magda, Gerard Duineveld, Pieter van't Hof, and Evert Wielsma. 2010. Final Report: Impact of OWEZ Wind Farm on Bivalve Recruitment. Accessed: September 1, 2020. Retrieved from: https://www.noordzeewind.nl/en_nl/knowledge/ecology-and-environment/_jcr_content/par/tabbed content/tab_262700658/textimage.stream/1554304934749/faea0627789bcf818af58a5900dd334d7efbc390 /owez-r-262-t1-benthos-recruitment-t1.pdf
- BOEM (Bureau of Ocean Energy Management). 2019a. National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Continental Shelf. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Sterling, VA. OCS Study BOEM 2019- 036. May 2019.
- BOEM (Bureau of Ocean Energy Management). 2019b. Vineyard Wind Offshore Wind Energy Project Biological Assessment. For the National Marine Fisheries Service.
- Broström, G. 2008. "On the Influence of Large Wind Farms on the Upper Ocean Circulation." *Journal of Marine Systems* 74: 585-591.
- Causon, Paul D., and Andrew B. Gill. 2018. "Linking Ecosystem Services with Epibenthic Biodiversity Change Following Installation of Offshore Wind Farms." Environmental Science and Policy 89: 340-347.
- Chen, Changsheng, R.C. Beardsley, J. Qi, and H. Lin. 2016. Use of Finite-Volume Modeling and the Northeast Coastal Ocean Forecast System in Offshore Wind Energy Resource Planning. Final Report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. BOEM 2016-050.
- Clark, S., F. Schroeder, and B. Baschek. 2014. "The Influence of Large Offshore Wind Farms on the North Sea and Baltic Sea A Comprehensive Literature Review." *HZG Report* 2014-6.
- Curtice, Corrie, Jesse Cleary, Emily Shumchenia, and Patrick Halpin. 2018. Marine-Life Data and Analysis Team (MDAT) Technical Report on the Methods and Development of Marine-Life Data to Support Regional Ocean Planning and Management. Prepared on behalf of the Marine-life Data and Analysis Team (MDAT). Accessed: October 30, 2018. Retrieved from: http://seamap.env.duke.edu/models/MDAT/ MDAT-Technical-Report.pdf
- Cryan P.M., M. Gorresen, C.D. Hein, M.R. Schirmacher, R.H. Diehld, M.M. Husoe, D.T.S. Hayman, P.D. Fricker, F.J. Bonaccorso, D.H. Johnson, K. Heist, and D.C. Dalton. 2014. Behavior of Bats at Wind Turbine. *Proceedings of the National Academy of Sciences*. 11(42): 15126-15131.
- Cryan, P.M., and R.M.R. Barclay. 2009. Causes of Bat Fatalities at Wind Turbines: Hypotheses and Predictions. *Journal of Mammalogy* 90:1330-1340.
- de la Vega, David, James Matthews, Lars Norin, and Itziar Angulo. 2013. "Mitigation Techniques to Reduce the Impact of Wind Turbines on Radar Services." Energies 6. Accessed: September 1, 2020. Retrieved from: https://www.mdpi.com/1996-1073/6/6/2859/htm
- Desholm, M. 2006. Wind Farm Related Mortality Among Avian Migrants—a Remote Sensing Study and Model Analysis. PhD thesis. Dept. of Wildlife Ecology and Biodiversity, NERI, and Dept. of Population Biology, University of Copenhagen. National Environmental Research Institute, Denmark. 128 pp.
- Desholm, M., and J. Kahlert. 2005. "Avian Collision Risk at an Offshore Wind Farm." *Biology Letters* 1, no. 3: 296–298. doi:10.1098/rsbl.2005.0336.

- Dodge, K.L., B. Galuardi, T.J. Miller, and M.E. Lutcavage. 2014. "Leatherback Sea Turtle Movements, Dive Behavior, and Habitat Characteristics in Ecoregions of the Northwest Atlantic Ocean." *PLoS One* 9(3): e91726.
- DoN (Department of the Navy). 2017. Atlantic Fleet Training and Testing Draft Environmental Impact Statement / Overseas Environmental Impact Statement. Accessed Month17, 2020. Retrieved from: https://media. defense.gov/2018/Aug/16/2001955256/-1/-1/1/VOLUME_I_AFTT_DRAFT_EIS_OEIS.PDF
- Dowling, Zara, Paul R. Sievert, Elizabeth Baldwin, Luanne Johnson, Susanna vonOettingen, and Jonathan Reichard. 2017. Flight Activity and Offshore Movements of Nano-Tagged Bats on Martha's Vineyard, MA. U.S. Department of the Interior, BOEM, Office of Renewable Energy Programs, Sterling, Virginia. OCS Study BOEM 2017-054. Accessed: October 30, 2018. Retrieved from: https://www.boem.gov/ Flight-Activity-and-Offshore-Movements-of-Nano-Tagged-Bats-on-Marthas-Vineyard/
- English, P.A., T.I. Mason, J.T. Backstrom, B.J. Tibbles, A.A. Mackay, M.J. Smith, and T. Mitchell. 2017.
 Improving Efficiencies of National Environmental Policy Act Documentation for Offshore Wind
 Facilities Case Studies Report. U.S. Department of the Interior, Bureau of Ocean Energy Management,
 Office of Renewable Energy Programs. OCS Study BOEM 2017-026. Accessed: September 9, 2020.
 Retrieved from: https://tethys.pnnl.gov/sites/default/files/publications/English-et-al-2017-BOEM.pdf

Epsilon Associates, Inc. 2018a. Vineyard Wind Connector: Final Environmental Impact Report. EEA#15787.

- Epsilon Associates, Inc. 2018b. Vineyard Wind Connector: Draft Environmental Impact Report. EEA#15787.
- Epsilon Associates, Inc. 2018c. Vineyard Wind Connector: Supplemental Draft Environmental Impact Report. EEA#15787.
- Epsilon Associates, Inc. 2018d. Draft Construction and Operations Plan: Volumes II-A and II-B. Vineyard Wind Project. October 2018. Accessed: October 14, 2020. Retrieved from: https://www.boem.gov/sites/ default/files/renewable-energy-program/State-Activities/MA/Vineyard-Wind/Vineyard-Wind-COP-VolumeII-Combined.pdf
- Epsilon Associates, Inc. 2019. Draft Construction and Operations Plan, Addendum to Volumes I, II, and II. Vineyard Wind Project. May 2019. Accessed: June 20, 2019. Retrieved from: https://www.boem.gov/ sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-COP-Addendum.pdf
- Epsilon Associates, Inc. 2020a. Draft Construction and Operations Plan: Volume III. Vineyard Wind Project. June 2020. Accessed: October 14, 2020. Retrieved from: https://www.boem.gov/Vineyard-Wind/
- Epsilon Associates, Inc. 2020b. Draft Construction and Operations Plan. Volume I. Vineyard Wind Project. September 2020. Accessed: October 14, 2020. Retrieved from: https://www.boem.gov/Vineyard-Wind/
- Epsilon Associates, Inc. 2020c. Draft Construction and Operations Plan: Volume III. Appendix D. Vineyard Wind Project. June 2020. Accessed: October 14, 2020. Retrieved from: https://www.boem.gov/Vineyard-Wind/
- Epsilon Associates, Inc. 2020d. Draft Construction and Operations Plan: Volume III. Appendix III-Ha. Vineyard Wind Project. June 2020. Accessed: October 14, 2020. Retrieved from: https://www.boem.gov/Vineyard-Wind/
- Erickson, W.P., M.M. Wolfe, K.J. Bay, D.H. Johnson, and J.L. Gehring. 2014. A Comprehensive Analysis of Small-passerine Fatalities from Collision with Turbines at Wind Energy Facilities. *PLoS ONE* 9(9): e107491.
- FAA (Federal Aviation Administration). 2019. Order JO 7400.2M: Procedures for Handling Airspace Matters. Effective Date February 28, 2019. Retrieved from: https://www.faa.gov/documentLibrary/media/ Order/7400.2M_Bsc_w_Chg_1_2_dtd_7_16_20.pdf
- FAO (Food and Agriculture Organization of the United Nations). 2018. Fishing Techniques: Tuna Trolling Lines. Accessed: November 29, 2018. Retrieved from: http://www.fao.org/fishery/fishtech/1015/en

- Fox, A.D., Mark Desholm, Johnny Kahlert, Thomas Kjaer Christensen, and Ib Krag Peterson. 2006. "Information Needs to Support Environmental Impact Assessment of the Effects of European Marine Offshore Wind Farms on Birds." *Ibis* 148: 129-144.
- Froese, M. 2017. Cracking the Icing Problem on Turbine Blades. Accessed November 17, 2020. Retrieved from: https://www.windpowerengineering.com/cracking-icing-problem-turbine-blades/
- García-Quismondo, M., I.C.T. Nisbet, C. Mostello, and J.M. Reed. 2018. "Modeling Population Dynamics of Roseate Terns (*Sterna dougallii*) in the Northwest Atlantic Ocean." *Ecological Modelling* 368: 298-311.
- Hasager, Charlotte Bay, Nicolai Gayle Nygaard, Patrick J.H. Volker, Ioanna Karagali, Søren Juhl Andersen, and Jake Badger. 2017. "Wind Farm Wake: The 2016 Horns Rev Photo Case." *Energies*, Vol. 10, Issue 3. March 7.
- Hatch, Shaylyn K., Emily E. Connelly, Timothy J. Divoll, Ian J. Stenhouse, and Kathryn A. Williams. 2013.
 "Offshore Observations of Eastern Red Bats (*Lasiurus borealis*) in the Mid-Atlantic United States Using Multiple Survey Methods." *PLoS ONE* 8, no.12:e83803. doi:10.1371/journal.pone.0083803.
- Hawkes, L.A., A.C. Broderick, M.S. Coyne, M.H. Godfrey, and B.J. Godley. 2007. "Only Some Like It Hot Quantifying the Environmental Niche of the Loggerhead Sea Turtle." *Diversity and Distributions* 13: 447-457.
- HDR. 2019. Benthic Monitoring During Wind Turbine Installation and Operation at the Block Island Wind Farm, Rhode Island–Year 2. Final Report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2019- 019. Accessed: February 12, 2020. Retrieved from: https://espis.boem.gov/final%20reports/BOEM_2019-019.pdf
- Hemery, L.G. 2020. "Changes in Benthic and Pelagic Habitats Caused by Marine Renewable Energy Devices".
 In: OES-Environmental 2020 State of the Science Report: Environmental Effects of Marine Renewable Energy Development Around the World. A.E. Copping and L.G. Hemery, eds. Accessed: August 27, 2020. Retrieved from: https://tethys.pnnl.gov/publications/state-of-the-science-2020
- Hudecz, A., M.O.L. Hansen, L.Battisti, and A. Villumsen. 2014. Icing Problems of Wind Turbine Blades in Cold Climates. Department of Wind Energy, Technical University of Denmark.
- Hüppop, O., J. Dierschke, K. Exo, E. Frerich, and R. Hill. 2006. Bird Migration and Potential Collision Risk with Offshore Wind Turbines. *Ibis* 148: 90-109.
- Johnston, A., A.S.C.P. Cook, L.J. Wright, E.M. Humphreys, and N.H.K. Burton. 2014. Modeling Flight Heights of Marine Birds to More Accurately Assess Collision Risk with Offshore Wind Turbines. *Journal of Applied Ecology* 51, 31-41.
- Jones, I.T., J.A. Stanley, and T.A. Mooney. 2020. "Impulsive Pile Driving Noise Elicits Alarm Responses in Squid (Doryteuthis pealeii)." *Marine Pollution Bulletin*. Accessed: March 20, 2020. Retrieved from: https://www.sciencedirect.com/science/article/pii/S0025326X19309488?via%3Dihub
- Kinlan, B.P., A.J. Winship, T.P. White, and J. Christensen. 2016. Modeling At-Sea Occurrence and Abundance of Marine Birds to Support Atlantic Marine Renewable Energy Planning: Phase I Report. U.S. Department of the Interior, Bureau of Ocean Energy Management, OCS Study BOEM 2016-039. Sterling, VA.
- Kirkpatrick, A., Sharon Benjamin, Geret DePiper, Tammy Murphy, Scott Steinback, and Chad Demarest. 2017. Socio-Economic Impact of Outer Continental Shelf Wind Energy Development on Fisheries in the U.S. Atlantic. Volumes I and II. U.S Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. Prepared under BOEM Interagency Agreement No: M12PG00028. OCS Study BOEM 2017-012.
- Kneebone, J., and C. Capizzano. 2020. A Comprehensive Assessment of Baseline Recreational Fishing Effort for Highly Migratory Species in Southern New England and the Associated Wind Energy Area. New England Aquarium, Anderson Cabot Center for Ocean Life, Boston, MA, Final report to Vineyard Wind. May 4, 2020, 56 pp.

- Krijgsveld, K.L., R.C. Fijn, M. Japink, P.W. van Horssen, C. Heunks, M.P. Collier, M.J.M. Poot, D. Beuker, and S. Dirksen. 2011. Effect Studies Offshore Wind Farm Egmond aan Zee: Final Report on Fluxes, Flight Altitudes, and Behavior of Flying Birds. Bureau Waardenburg Report no. 10-219.
- Kunz, T.H., E.B. Arnett, W.P. Erickson, A.R. Hoar, G.D. Johnson, R.P. Larkin, M.D. Strickland, R.W. Thresher, and M.D. Tuttle. 2007. Ecological Impacts of Wind Energy Development on Bats: Questions, Research Needs, and Hypotheses. *Frontiers in Ecology and the Environment* 5:315–324.
- La Sorte, F.A. and D. Fink. 2017. "Migration Distance, Ecological Barriers and En-Route Variation in the Migratory Behavior of Terrestrial Bird Populations." *Global Ecology and Biogeography* 26: 216–227.
- La Sorte, F.A., D. Fink, W.M. Hochacka, and S. Kelling. 2016. "Convergence of Broad-Scale Migration Strategies in Terrestrial Birds." *Proceedings of the Royal Society B* 283: 20152588.
- Lefaible, N., L. Colson, U. Braeckman, and T. Moens. 2019. "Evaluation of Turbine-Related Impacts on Macrobenthic Communities Within Two Offshore Wind Farms During the Operational Phase." In *Memoirs on the Marine Environment: Environmental Impacts of Offshore Wind Farms in the Belgian Part of the North Sea*. S. Degraer, R. Brabant, B. Rumes, and L. Vigin, eds. 73-84. Brussels: Royal Belgian Institute of Natural Sciences, OD Natural Environment, Marine Ecology and Management. Accessed: February 12, 2020. Retrieved from: https://odnature.naturalsciences.be/downloads/mumm/ windfarms/winmon_report_2019_final.pdf
- Ling, H., M.F. Hamilton, R. Bhalla, W.E. Brown, T.A. Hay, N.J. Whitelonis, S. Yang, and A.R. Naqvi. 2013. Final Report DE-EE0005380 Assessment of Offshore Wind Farm Effects on Sea Surface, Subsurface and Airborne Electronic Systems. University of Texas at Austin.
- Loring P.H., P.W.C. Paton, J.D. McLaren, H. Bai, R. Janaswamy, H.F. Goyert, C.R. Griffin, and P.R. Sievert. 2019. Tracking Offshore Occurrence of Common Terns, Endangered Roseate Terns, and Threatened Piping Plovers with VHF Arrays. Sterling (VA): U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2019-017. 140 pp. Retrieved from: https://espis.boem.gov/ final%20reports/BOEM_2019-017.pdf
- Loss, Scott R., Tom Will, and Peter P. Marra. 2013. "Estimates of Bird Collision Mortality at Wind Facilities in the Contiguous United States." *Biological Conservation* 168: Pages 201-209. Retrieved from: https://doi. org/10.1016/j.biocon.2013.10.007
- Madin, Kate. 2009. "Turtle Skulls Prove to be Shock-Resistant." *Oceanus Magazine*. January 14, 2009. Retrieved from: https://www.whoi.edu/oceanus/feature/turtle-skulls-prove-to-be-shock-resistant/
- Martin, G.R. and J. Shaw. 2010. "Bird Collision with Power Lines: Failing to See the Way Ahead?" *Biological Conservation* 143(11): 2695-2702.
- Marmo, B., I. Roberts, M.P. Buckingham, S. King, C. Booth. 2013. Modelling of Noise Effects of Operational Offshore Wind Turbines Including Noise Transmission Through Various Foundation Types. Edinburgh: Scottish Government.
- Miller, J.H., and G.R. Potty. 2017. "Overview of Underwater Acoustic and Seismic Measurements of the Construction and Operation of the Block Island Wind Farm." *Journal of the Acoustical Society of America* 141, no. 5: 3993–3993. doi:10.1121/1.4989144. Accessed: September 9, 2020. Retrieved from: https://asa.scitation.org/doi/10.1121/1.4989144
- Miller, L.M. and D.W. Keith. 2018. "Climactic Impacts of Wind Power." Joule 2: 2618-2632.
- MMS (Minerals Management Service). 2007. Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf: Final Environmental Impact Statement. U.S. Department of the Interior. OCS EIS/EA MMS 2007-046. Accessed: July 3, 2018. Retrieved from: https://www.boem.gov/Guide-To-EIS/
- MMS (Minerals Management Service). 2009. Cape Wind Energy Project Final Environmental Impact Statement. January 2009. U.S. Department of the Interior. OCS Publication No. 2008-040. Accessed: July 11, 2018. Retrieved from: https://www.energy.gov/sites/prod/files/DOE-EIS-0470-Cape_Wind_FEIS_2012.pdf

- MNHESP (Massachusetts Natural Heritage and Endangered Species Program). 2019. List of Endangered, Threatened, and Special Concern vertebrate species in Massachusetts. Accessed: April 8, 2019. Retrieved from: https://www.mass.gov/service-details/list-of-vertebrates.
- Normandeau Associates, Inc., Exponent, Inc., T. Tricas, and A. Gill. 2011. Effects of EMFs from Undersea Power Cables on Elasmobranchs and Other Marine Species. Final Report. U.S. Department of the Interior, Bureau of Ocean Energy Management, Regulation and Enforcement, Pacific OCS Region, Camarillo, CA. OCS Study BOEMRE 2011-09. Accessed: September 9, 2020. Retrieved from: https://espis.boem. gov/final%20reports/5115.pdf
- NMFS (National Marine Fisheries Service). 2020. Endangered Species Act Section 7 Consultation Biological Opinion: Construction, Operation, Maintenance, and Decommissioning of the Vineyard Wind Offshore Energy Project (Lease OCS-A 0501). GAFO-2019-00343. 326 pp.
- Parsons, George, and Jeremy Firestone. 2018. Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism. U.S. Department of the Interior, Bureau of Ocean Energy Management.
- Pelletier, S.K., K. Omland, K.S. Watrous, and T.S. Peterson. 2013. Information Synthesis on the Potential for Bat Interactions with Offshore Wind Facilities–Final Report. U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM No. 2013- 01163. Accessed: September 1, 2020. Retrieved from: https://tethys.pnnl.gov/sites/default/files/publications/BOEM_Bat_Wind_2013.pdf
- Pettersson, J. 2005. "The Impact of Offshore Wind Farms on Bird Life in Southern Kalmar Sound, Sweden: a Final Report Based on Studies 1999–2003. Report for the Swedish Energy Agency, Lund University, Lund, Sweden.
- Pierdinock, Capt. Michael. 2018. Email to the MA Fisheries Working Group on Offshore Wind. September 19, 2018.
- Powell, E.N., R. Mann, K.M. Kuykendall, M.C. Long, and J.R. Timbs. 2019. "The Intermingling of Benthic Macroinvertebrate Communities during a Period of Shifting Range: the "East of Nantucket" Atlantic Surfclam Survey and the Existence of Transient Multiple Stable States." *Marine Ecology* 40(4): e12546
- RICRMC (Rhode Island Coastal Resources Management Council). 2010. Ocean Special Area Management Plan. Chapter 7: Maritime Transportation, Navigation, and Infrastructure. Accessed: August 8, 2018. Retrieved from: http://seagrant.gso.uri.edu/oceansamp/pdf/samp_approved/700_marinetrans_OCRMchanges_ 5.4_Clean.pdf
- RI DEM (Rhode Island Department of Environmental Management). 2019. Rhode Island Fishing Value in the Vineyard Wind Construction and Operations Plan Area. Division of Marine Fisheries. January 14.
- Roach, M., M. Cohen, R. Forster, A.S. Revill, and M. Johnson. 2018. "The Effects of Temporary Exclusion of Activity Due to Wind Farm Construction on a Lobster (Homarus gammarus) Fishery Suggests a Potential Management Approach." *ICES Journal of Marine Science*, doi:10.1093/icesjms/fsy006.
- Robinson Willmott, J., and G. Forcey. 2014. Acoustic Monitoring of Temporal and Spatial Abundance of Birds near Outer Continental Shelf Structures: Synthesis Report. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Herndon, VA. BOEM 2014-004. 172 pp. Accessed: September 7, 2020. Retrieved from: https://espis.boem.gov/final%20reports/5349.pdf
- Robinson Willmott, J., G. Forcey, and A. Kent. 2013. The Relative Vulnerability of Migratory Bird Species to Offshore Wind Energy Projects on the Atlantic Outer Continental Shelf: An Assessment Method Database. Final report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2013-207. Accessed: September 7, 2020. Retrieved from: https://espis.boem.gov/final%20reports/5319.pdf
- Roby, P., M. Gumbert, and M.J. Lacki. 2019. "Nine Years of Indiana bat (*Myotis sodalis*) Spring Migration Behavior." *Journal of Mammalogy* 100 (5): 1501-1511.

- Russell, D.J.F., G.D. Hastie, D. Thompson, V.M. Janik, P.S. Hammond, L.A.S. Scott-Hayward, J. Matthiopoulos, E.L. Jones, and B.J. McConnell. 2016. "Avoidance of Wind Farms by Harbour Seals is Limited to Pile Driving Activities." Journal of Applied Ecology, 53: 1642–1652. Accessed: September 9, 2020. Retrieved from: https://besjournals.onlinelibrary.wiley.com/doi/epdf/10.1111/1365-2664.12678
- Russell, D.J.F., S.M.J.M. Brasseur, D. Thompson, G.D. Hastie, V.M. Janik, and G. Aarts. 2014. "Marine Mammals Trace Anthropogenic Structures at Sea." Current Biology 24, R638–R639. Accessed: September 9, 2020. Retrieved from: https://www.cell.com/action/showPdf?pii=S0960-9822%2814% 2900749-0
- Scott, Kevin, Petra Harsanyi, and Alastair R. Lyndon. 2018. "Understanding the Effects of Electromagnetic Field Emissions from Marine Renewable Energy Devices (MREDs) on the Commercially Important Edible Crab, Cancer pagurus (L.)." Marine Pollution Bulletin 131: 580-588. https://doi.org/10.1016/j.marpolbul. 2018.04.062
- Skov, H., S. Heinanen, T. Norman, R.M. Ward, S. Mendez-Roldan, and I. Ellis. 2018. ORJIP Bird Collision and Avoidance Study. Final report. The Carbon Trust. United Kingdom. April 2018.
- Smythe, T., H. Smith, A. Moore, D. Bidwell, and J. McCann. 2018. Analysis of the Effects of Block Island Wind Farm (BIWF) on Rhode Island Recreation and Tourism Activities. U.S. Department of the Interior, Bureau of Ocean Energy Management. Sterling, VA. OCS Study BOEM 2018-068.
- Stantec (Stantec Consulting Services). 2016. Long-Term Bat Monitoring on Islands, Offshore Structures, and Coastal Sites in the Gulf of Maine, Mid-Atlantic, and Great Lakes—Final Report. Prepared for the U.S. Department of Energy. Accessed: October 30, 2018. Retrieved from: https://tethys.pnnl.gov/sites/ default/files/publications/Stantec-2016-Bat-Monitoring.pdf
- Starbuck, Kimberly, and Andrew Lipsky. 2013. 2012 Northeast Recreational Boater Survey: A Socioeconomic and Spatial Characterization of Recreational Boating in Coastal and Ocean Waters of the Northeast United States. Technical Report. Doc #121.13.10. Accessed: September 1, 2020. Retrieved from: https://www.openchannels.org/sites/default/files/literature/2012%20Northeast%20Recreational%20Boate r%20Survey.pdf
- TEWG (Turtle Expert Working Group). 2009. An Assessment of the Loggerhead Turtle Population in the Western North Atlantic Ocean. NOAA Technical Memorandum NMFS-SEFSC-575. A Report of the Turtle Expert Working Group. U.S. Department of Commerce.
- Thompson, M., J.A. Beston, M. Etterson, J.E. Diffendorfer., and S.R. Loss. 2017. "Factors Associated with Bat Mortality a Wind Energy Facilities in the United States." *Biological Conservation* 215: 241-245.
- USCG (U.S. Coast Guard). 2007. Guidance on the Coast Guard's Roles and Responsibilities for Offshore Renewable Energy Installations (OREI). Navigation and Vessel Inspection Circular No. 2–7. U.S. Department of Homeland Security, Washington, DC.
- USCG (U.S. Coast Guard). 2020. The Areas Offshore of Massachusetts and Rhode Island Port Access Route Study. Final Report. Docket Number USCG-2019-0131. May 14, 2020. Accessed: October 29, 2020. Retrieved from: https://downloads.regulations.gov/USCG-2019-0131-0101/content.pdf
- Veit, Richard R., Timothy P. White, Simon A. Perkins, and Shannon Curley. 2016. Abundance and Distribution of Seabirds off Southeastern Massachusetts, 2011-2015: Final Report. U.S. Department of the Interior, Bureau of Ocean Energy Management, Sterling, Virginia. OCS Study BOEM 2016-067. Accessed: October 30, 2018. Retrieved from: https://www.boem.gov/RI-MA-Seabirds/
- Vineyard Wind. 2019. Response to "Request for Information to Vineyard Wind, Request No. 21e" for Cable installation methods refined. March 21, 2019.
- vonOettingen, Susi. Email to David Bigger and Michelle Morin. July 23, 2020

- Watts, Bryan D. 2010. Wind and Waterbirds: Establishing Sustainable Mortality Limits within the Atlantic Flyway. Center for Conservation Biology Technical Report Series, CCBTR-10-15. College of William and Mary/Virginia Commonwealth University, Williamsburg, VA. 43 pp. Accessed: September 1, 2020. Retrieved from: https://www.ccbbirds.org/wp-content/uploads/2013/12/ccbtr-10-05_Watts-Wind-andwaterbirds-Establishing-sustainable-mortality-limits-within-the-Atlantic-Flyway.pdf
- White, T.P., and R.R. Veit. 2020. Spatial Ecology of Long-tailed Ducks and White-winged Scoters Wintering on Nantucket Shoals. *Ecosphere* 11(1):e03002. 10.1002/ecs2.3002. Accessed: October 20, 2020. Retrieved from: https://esajournals.onlinelibrary.wiley.com/doi/epdf/10.1002/ecs2.3002
- Winship, A.J., B.P. Kinlan, T.P. White, J.B. Leirness, and J. Christensen. 2018. Modeling At-Sea Density of Marine Birds to Support Atlantic Marine Renewable Energy Planning: Final Report. OCS Study BOEM 2018-010. Sterling, VA. 67 pp. Accessed: September 7, 2020. Retrieved from: https://coastalscience.noaa .gov/data_reports/modeling-at-sea-density-of-marine-birds-to-support-atlantic-marine-renewable-energyplanning-final-report/

-Page Intentionally Left Blank-
-Page Intentionally Left Blank-

The Department of the Interior Mission



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the sound use of our land and water resources, protecting our fish, wildlife and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island communities.

The Bureau of Ocean Energy Management



The Bureau of Ocean Energy Management (BOEM) works to manage the exploration and development of the nation's offshore resources in a way that appropriately balances economic development, energy independence, and environmental protection through oil and gas leases, renewable energy development and environmental reviews and studies.

www.boem.gov