Virtual Public Meeting, Day 2
June 30, 2020
1:00 p.m.

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CHRISTINE DAVIS: Hello, everyone, my name is Christine Davis; $I$ want to thank you for joining us today.

I'm with ERM, a third party contractor working with the BOEM staff on the environmental review of the Vineyard Wind Project. I'm here to help you facilitate and guide you through this meeting today. So I appreciate you taking time to share your thoughts with us during the meeting. The purpose is to gather your input on Vineyard Wind's proposed offshore Wind 1 Project, and more specifically, on settlement to the draft environmental impact statement.

Your input will be used to refine and finalize the final environmental impact statement on this project. As such, we're recording and have court reporters documenting this meeting for the public record.

We learned during the first meeting that some might want to ask questions right away. So please note that we use the Zoom and $Q$ \& $A$ functions to the Zoom $Q$ \& A function on the bottom of your screen to address questions, and the chat function
to address technical issues.
If you're on the phone, and you have a technical issue, please press Star 0. I'll talk more about Zoom in just a few minutes. But before we go any further, I'd like to welcome Bill Brown. Bill Brown is the Chief Environmental Officer from the Office of Renewable Energy Programs at the Bureau of Ocean Energy Management, or BOEM as we will refer to it today. Bill will formally welcome everyone to this meeting, Bill.

BILL BROWN: Hello, everyone. As we just heard, my name is Bill Brown. I am the Chief Environmental Officer of BOEM, actually for everything BOEM does in the Department of the Interior. And $I$ thank you for joining us today, today's public meeting. I'm sorry that we can't be together in person, but $I$ hope that you and your families and friends are all safe and healthy.

On the other hand, we were fortunate to
have technology like this as an alternative. So who are we? BOEM is the federal agency that oversees development of federal offshore energy and mineral resources subject to environmental safeguards. Because of the nearly 2.5 billion acres of the
nation's Outer Continental Shelf or OCS, and that's a little more than the total land area of the United States, it's a big job and includes offshore wind and other renewable energy resources.

We have been working for over 10 years with states, tribes and diverse stakeholders to identify the best areas for offshore wind development. Now we have 16 active leases on the Atlantic, from Cape Cod to Cape Hatteras, and we foresee development of nearly 22 gigawatts of electrical power, contributing to state goals of almost 30 gigawatts. That's a whole lot of power. Under these leases, we have approved 10 site assessment plans. And we are currently reviewing seven construction and operation plans that we call COPS. We expect up to eight additional COPS submitted for our review in the next 12 months. We've hired new staff and we're using third party contractors to help manage the growing workflow.

The first turbines ever on the outer continental shelves were installed in this past month, offshore Virginia, the coastal Virginia Offshore Wind Project, and we anticipated dozen commercial scale wind farms during the coming
decade. We want to make sure these projects are done right with thoughtful consideration of all ocean uses: Wind energy, commercial fishing, maritime navigation and more. There will be impacts and our goal is for all users to coexist successfully.

Our task requires getting the best information we can, analyzing impacts and alternatives well, and identifying needed mitigation. We want to establish a strong foundation for all projects going forward. These public meetings are an opportunity to help us meet this goal and hear from you about the Vineyard Wind Project, in particular. Vineyard Wind is the first commercial offshore wind project analyzed under the one federal decision process. We have modified our approach as we work through the process, which we believe will facilitate future project permitting. But note BOEM received over 300 comments from stakeholders and cooperating agencies on the Vineyard Wind draft environmental impact statement. Some of these requests for a more robust analysis of cumulative effects.

As a consequence of these comments, we prepared a supplement to the draft environmental
impact statement for the proposed Vineyard Wind 1 Offshore Energy Project. When we opened the document for public comment on June 12 th the supplement expands to reasonably foreseeable future offshore wind development scenario in the draft EIS and analyzes the effects in that scenario. That supplement also analyzes previously unavailable fishing data, a transit lane alternative proposed by the fishing community and changes to the constructions and operation plan since the draft EIS was published. This enhanced analysis to both support and serve as a model for reviewing future projects. That's why your comments on the supplement are vitally important.

We are making an effort to hear from everyone concerned. This is one of five virtual public meetings we're having during the comment period, and your input will help us get this right. We are committed to the permitting process that minimizes user conflicts and establishes a strong foundation for wind projects moving forward. Thank you and stay well. And now $I$ would like to invite Lisa Engler, Director of the Massachusetts Office of Coastal Zone Management to offer her remarks.

LISA ENGLER: Thank you, Bill. Good afternoon. On behalf of Energy and Environmental Affairs Secretary Kathleen Theoharides, we are pleased to welcome the Bureau of Ocean Energy Management for today's public meeting on the supplement to the draft environmental impact statement for the Vineyard Wind 1 Project. Joining me from fellow Massachusetts agencies are Bruce Carlile from the Massachusetts Clean Energy Center and John Logan from the Massachusetts Division of Marine Fisheries. We're looking forward to the presentations and the opportunity to hear your comments and input to this federal review process for this project.

Global Climate Change presents a serious threat to the Commonwealth environment, residents, communities and economy. Governor Baker has expressed the need for action, stating, "The magnitude of the impacts from climate change requires all of us to put aside politics and act together quickly and decisively. We still have the opportunity to check the severity of future impacts by aggressively reducing greenhouse gas emissions and adapting to the changes that are ongoing."

With the 2008 Global Warming Solutions Act, Massachusetts became one of the first states in the nation to require carbon emission reductions of at least 80\% below 1990 levels by 2050, with interim targets every decade. In addition, in December of last year, Governor Baker committed the Commonwealth to net zero emissions by 2050. Meeting these targets will include effort and commitment by both the public and the private sectors and will require changes to business as usual. Responsibly cited, developed and operated offshore wind will be key to meeting these carbon emission reduction targets. For more than a decade, we have worked closely with our federal, state, local and tribal partners through BOEM's intergovernmental Task Force on offshore energy in the planning, siting, leasing and review of potential offshore wind projects on the Outer Continental Shelf.

We have also worked closely with stakeholders through state forms fisheries and habitat working groups on offshore wind and in community based meetings and discussions. The fishing industry is a critical partner in the development of offshore wind, and we value the
opportunity to use these venues for important dialogue and feedback in the responsible development of offshore wind.

In 2017, as directed by state legislation, Massachusetts issued a competitive request for proposals for offshore wind energy, and in 2018 selected the Vineyard Wind Project, which will result in significant greenhouse gas reductions at a highly competitive price. The Federal National Environmental Policy Act review process led by BOEM is a critically important component in our collective responsibility to avoid, minimize and mitigate potential adverse effects. And in the case of the Vinyard Wind Project the SEIS has provided a broader substantive basis for reviewing the project within the context of other offshore wind development.

The cumulative analysis included in the SEIS ensures that potential impacts beyond the individual project are evaluated. In parallel to the BOEM review, the Vineyard Wind Project was reviewed by state agencies, including the Massachusetts Department of Environmental Protection, the Energy Facility Siting Board, the Massachusetts Department
of the Massachusetts Environmental Policy Act Office, the Department of Public Utilities, and the Massachusetts Office of Coastal Zone Management. This Massachusetts State review is now complete.

Thank you all for joining us today. Your participation is so important as we continue to work with agencies, stakeholders and local communities in the review of the BOEM commercial leasing, construction and operations process. And with that, I'll turn it back over to Christine.

CHRISTINE DAVIS: Thank you, Lisa. Looking at today's agenda, now BOEM will provide a project overview, we'll discuss the environmental review process and next steps. We'll open meetings for public comment and testimony, and then we'll close by answering questions.

As a reminder, the focus of the meeting is to receive public comments. So let's spend the bulk of our time together today on that agenda item. As noted on the screen, everyone who would like to provide comments today will need to please press Star 1 and speak with a live operator to get in our queue. Even if you've preregistered, you'll need to press Star 1. Please note that it may take the
operator a little bit of time to get to you. So please be patient.

Again, the steps for everyone who wants to speak including the preregistered people is to press Star 1, wait to speak to the live operator. And so if you've not already you might want to do so now or anytime prior to the public comment. So that we can provide as many of the interested parties as possible the opportunity to provide their comments, we ask that you keep your comments to approximately five minutes. As an attendee, you're not going to be on camera today, but your voice will come through on the phone. Only BOEM, ERM presenters and I will be on video. Please note that the oral comments provided will be on the record and this entire meeting is being recorded and projected on the screen.

Okay, next slide, please. All right, so you've heard me refer to the $Q \& A$ and chat functions, those of you online should be able to see the icons on the bottom of your screen. If you click on the $Q$ \& A icon, you'll see a box pop up for you to type in a question. We'll answer the bulk of the questions at the end of the public testimony to maximize our
time for public comments. Some questions with short answers may be addressed right away, but for others, we'll have subject matter experts ready to respond in person later in the meeting. Do not be alarmed if you don't see your question right away. The questions will show up when we answer them verbally during the $Q$ \& $A$ session.

As briefly noted earlier, please only use the Zoom chat function to notify us of the technical issue with Zoom or the audio. And if you're on the phone, press Star 0 speak with the operator if you're having audio problems. Later on, we'll use Zoom chat to list the order for public comment. We'll only use the hand raising function if we need to call on you at some point. Anytime you have technical challenges using Zoom, you can continue to participate in this meeting by phone at 188-606-7043 participant code 6516733\#. If you want to give public testimony and have not already done so, please press Star 1 to speak to a live operator to get in the queue. And regardless of whether you signed up or not, or preregistered, you'll need to test with our live operator.

Does anyone have any questions specifically
about Zoom or the phone line that you'd like to ask at this time? If so, click on the $Q$ \& A and I'll glance over there. All right, we'll give it just a minute more. All right. I think at this point, I will turn it over to you Jennifer Bucatari from the Bureau of Ocean Energy Management. Jenn will explain the environmental review process and provide an overview of the supplement to the draft EIS. After her presentation we'll begin the public testimony. As a reminder to sign up for public comments later in this meeting, please press Star 1 to get in the queue, and you can enter your questions in the $Q$ \& $A$ box at any time.

So with that, we'll turn it over to Jenn. JENNIFER BUCATARI: Hey, thank you,

Christine. Welcome everyone to the Vineyard Wind supplement to the draft environmental impact statement. Also known as the SEIS virtual public meeting. We appreciate your participation in this meeting and look forward to hearing your comments following the summary presentation.

My name is Jennifer Bucatari, and I'm one of the environmental coordinators on this project. To the greatest extent possible we are working to
maintain services to the American people and our stakeholders, consistent with evolving guidance provided by the CDC, and state and local health authorities. As such, we are moving forward with our public meeting in a virtual environment in order to provide information to our public in the safest and most efficient way possible, and to receive feedback from our stakeholders. These public meetings while virtual are an opportunity for public involvement and an opportunity to provide comments on the supplemental EIS. BOEM has developed a virtual meeting room web page, the address we've seen here on the slide, you've likely visited this page to register but either way we encourage you to explore this page and the additional content that we have there. This content includes posters and presentations to mimic the stations that we normally have at an in-person meeting. The posters seen here on this slide will lay a brief summary of important topics to our stakeholder.

The presentations on the virtual meeting room webpage, as seen here on this slide, are summaries of impacts to several key topics or resources. The presentations were developed and
recorded by the BOEM subject matter expert, who also developed the supplemental EIS impact analysis for that resource.

The National Environmental Policy Act, or NEPA, is a law requiring federal agencies to assess the environmental effects of their proposed action and reasonable alternatives. The NEPA process collects relevant information for the decision maker to either approve, approve with conditions or disapprove a plan. Through the NEPA process, an environmental impact statement or EIS must be prepared if the agency is proposing a major federal action that may significantly affect the quality of the human environment. The purpose of the analysis is to outline the impact of a proposed project on its surrounding environment. The process also includes public scoping, public comment periods, and an analysis of reasonable alternatives and cumulative effect.

BOEM's renewable energy leasing and development process occurs in four phases. For the Vineyard Wind 1 Project, we are in the fourth phase, which includes conducting an environmental review of the lessees construction and operations plan or COP.

The draft EIS was published for public review in December of 2018. And a supplement to the draft EIS, the SEIS, was published on June 12th, 2020. The Vineyard Wind 1 proposed project location is seen here, and is 12 nautical miles at its nearest point to land. The project is situated southeast of Martha's Vineyard. The proposed cable landfalls are in two locations on Cape Cod, Lewis Bay or New Hampshire Avenue.

A brief background on the project is presented here. The development of the SEIS began following public hearings that were held in February, 2019. As mentioned, comments from public and stakeholders requested an expanded cumulative analysis and an analysis of fishing data that was previously unavailable to BOEM.

In addition, updates to the Construction and Operations Plan were submitted by Vineyard WInd on January 31st, 2020, and March 9, 2020. BOEM developed the supplemental EIS to address comments from the public and stakeholders to expand the cumulative analysis, to analyze previously unavailable fishing data, to analyze a new alternatives and project changes. As mentioned, in

January and March of 2020 Vineyard Wind submitted updates to the Construction and Operations Plan, which included changes to the project envelope and onshore substation. The updates included an expansion of the turbine capacity to include up to 14 megawatt turbine. The total project capacity remains the same at 800 megawatts. And the change to the turbine capacity does not result in a change to the footprint or to the minimum turbine capacity, which is still eight megawatt. The proposed project include up to 106 wind turbine locations with up to 100 wind turbines. These turbines may be either all monopile foundations or $50 \%$ monopile and $50 \%$ jacket foundation.

Vineyard Wind also submitted changes to the onshore substation. For the expanded onshore substation, the total approximate area of ground disturbance would be 7.7 acres, which is 1.8 acres greater than the area analyzed in the draft EIS. The notice of availability for the supplemental EIS was published on June 122020 in the Federal Register. We're holding a series of five virtual public meeting as seen here. The comment period will close after 45 days on July 27th, 2020. For additional
project-related info please see the project website seen here. To be most helpful comments should be as specific as possible. On substantive comments discusses the accuracy of the information to just alternate methodologies and the reason or reasons why they should be used, provides new information relevant to the analysis, identifies a different source of credible research, which if used in the analysis, could result in different effects, or it provides clarification where needed.

The table on this side outlines the notable sections of the supplemental EIS, including where you can find information about the environmental analysis, cumulative impact scenario, the project design envelope, and the status of environmental consultation. While the SEIS includes analysis of the direct and indirect impacts of the proposed project, the focus of a supplement is on the expanded cumulative impact scenario, a new alternative and information that has changed or become available since the issuance of the draft is in 2018.

This inverted triangle represents the different levels of reasonably foreseeable
development that we considered in the cumulative scenario. A bar usually encompasses the bar below it, but the lower bars will often be duplicative rather than additive. For example, Vineyard Wind at the bottom, Vineyard Wind 1 is already included in the one above it, the 5.4 gigawatts of construction and operations plans submitted or approved. The previous standard for the scope of reasonably foreseeable offshore wind development was based on projects permitted and added to this projects entering the construction permitting process.

This time, we began by examining the greatest number of possible projects, and then eliminated offshore development that would be unreasonable to consider based on the lack of state demand or technical inability. The top bar is the total Atlantic offshore wind technical resource potential. This bar represents how much wind energy is available on the Atlantic Outer Continental Shelf or OCS with present technology. Such a build out is not only materially and physically impossible, but also the amount of energy exceeds the demand of the entire eastern United States; thus this level was not determined to be reasonably foreseeable.

The second bar down from the top is the technical resource potential of the Atlantic call, wind energy and lease areas. Call areas or areas that have not been named and are still being evaluated for whether they are suitable to be offered for lease. There's no guarantee that such areas will make it to the leasing stage. Therefore, evaluating construction on them is premature, and this level of development was not considered reasonably foreseeable at this time.

The third dark bar down from the top is fate capacity commitment. While the peer system in the draft EIS looked at development from a regulatory and project perspective, in this scenario, we examined future projects from a state demand perspective. This number has grown over the last several months, and is currently about 29 gigawatts with recent additional commitments from New Jersey. This exceeds the technical resource potential of existing Atlantic leases with existing technology and includes New York commitments that have been made in anticipation of future leasing occurring. Therefore, this level of development was deemed not reasonably foreseeable at this time.

The fourth bar from the top is the technical resource potential of the existing Atlantic leases. State capacity commitments are not evenly distributed along the coast and perhaps surprisingly are not tied to the existing available leased capacity within transmission range. For example, the state capacity commitments of New York and New Jersey exceed the technical resource potential of leases within that transmission range for those two states. Also there are going to be going to be conflicts such as with cultural resource site, historical site, essential fish habitat and navigation, as examples that will make developing the entire technical resource potential of the existing land Atlantic leases impossible. Therefore, this this level of development is not considered reasonably foreseeable.

The fifth bar from the top and all those follow below it make up our reasonably foreseeable cumulative scenario. This includes any projects with awarded off take, any projects that have entered or announced their intention to enter the permitting process, and of course any approved project. Basically, if a project has a name, it is included
here. After considering all projects with award construction operations plan, or that had been announced, there is still some state capacity leftover that has not been awarded. This potential for additional future development beyond named projects is also accounted for and analyzed in this scenario.

If you would like additional information on the cumulative scope or to hear this presented again, please visit the virtual meeting room web page to listen to a presentation on this subject.

The proposed action is the construction, operation, maintenance and eventual decommissioning of an up to 800 megawatt wind energy facility on the Outer Continental Shelf. Offshore Massachusetts within the proposed project area and associated export cables would occur within the range of design parameters outlined in the Vineyard Wind Construction and Operations Plan, subject to applicable mitigation measures.

Alternative $B$ excludes the New Hampshire Avenue landfall location to potentially reduce impact on environmental and socioeconomic resources. On June 26th, 2020 Vineyard Wind informed BOEM that
they are no longer pursuing the New Hampshire Avenue landing site. While the New Hampshire New Hampshire Avenue site was included in the construction and operations plan, Vineyard has obtained all of the state and local permits necessary to bring the cable on shore ath the Cobalt Beach landing site.

Alternative $C$ excludes surfact occupancy in the northernmost portion of the proposed project area to potentially reduce impact from the proposed projects and to reduce potential conflicts with existing ocean uses, such as marine navigation and commercial fishing.

Alternative $D-1$ would require a minimum of one nautical mile by one nautical mile spacing between wind turbine generators and the lanes between them. This alternative would potentially reduce conflict with existing ocean users, such as commercial fishing, and marine navigation.

Alternative $D-2$ would require a layout in the east-west direction, east-west orientation, and all of the turbines in the east-west direction would have a minimum spacing of one nautical mile between them to allow for vessels to travel between turbines, and to reduce conflicts with existing
ocean users such as commercial fishing.
Alternative E reduces the project size no more than 84 turbine. This alternative would potentially reduce impact on existing ocean users and on environmental resources. due to the fore foundation.

Alternatives $F$, the new alternative, would would include a vessel transit lane through the wind development area, in which no surface occupancy would occur. Any turbine presently planned for this area will be moved further south in the wind development area. This alternative could potentially facilitate transit of vessels through the project area from southern New England port to fishing areas on Georges Bank.

Alternative $G$ is the no action alternative. In this alternative the proposed project would not be approved and any potential environmental and socioeconomic costs and benefits associated with the proposed project would not occur. However, impacts from reasonably foreseeable future offshore wind and non-wind related activities would still occur or could still occur. And this alternative is required to be analyzed under NEPA.

Since the draft EIS was published, a new alternative has been added and analyzed in the supplemental EIS. Alternative $F$, the vessel transit lane alternative, includes a new vessel transit lane in response to the January 3rd, 2020 responsible offshore development alliance known as RODA layout proposal. The RODA proposal includes six total designated transit lanes, each at least four nautical miles wide, as seen in the figure here.

Although the proposal includes six total transit lanes, only one intersects the Vneyard Wind project as shown in this figure. As mentioned, the purpose of the proposed northwest to 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 transit lane would have no occupancy and, therefore, the turbines that would have occurred in these areas would not be eliminated, but instead the displaced turbines would be shifted south within the Vineyard Wind lease area. The layout shown in this figure, this figure is in Appendix A, as an apple, .7-17. This figure is shown for illustrative purposes only. It does not guarantee that the
positions identified by the black dots are buildable. The layout is based on the all developer agreement for east-west orientation and one nautical mile by one nautical mile spacing. The positions shown do not necessarily represent future turbine location.

The intent of this figure is to show the potential displacement of turbines if all six transit lanes were to occur, the turbine locations within the pale yellow lanes would not be utilized. Under the current cumulative scenario, a displacement of all of these turbine locations is not feasible. And, therefore, the addition of all six transit lanes would lead to elimination of some of the turbines that could have occurred within these lanes.

Our impact analyses include biological, physical and socioeconomic resources, as seen here. The subject matter experts that analyzed impacts to these resources are also on this webinar, and will answer questions later in the meeting.

The resources on the previous slide are also seen in the summary table found in the executive summary. This table summarizes the overall
direct and indirect and overall cumulative impact for each resource. The following five slides have the summaries for additional resources not seen here. I will discuss the impact levels for specific resources in more detail in a few slides, but wanted to orient you to the table and some key elements to the analyses here. More detailed analyses and impact levels for future offshore wind activities may be found for each resource in chapter 3, and in the tables in appendecies $A$, as in apple, and $B$, as in boy. The color coding in the table indicates if the highest impact level is minor, moderate or major with green being minor, yellow moderate, and orange major. You can find the definition of these impact levels in table 1.2-3 and Appendix $B$ as in boy of the SEIS. In addition, there is a poster on the project virtual meeting page, which details the impact level definition.

For resources with a direct and indirect impact level of negligible or minor the impact analyses have been moved to Appendix A, as in apple. This was done to meet the page limit goals outlined in the Department of Interior's Secretarial Order 3355 .

To understand the cumulative impact for each resource, BOEM analyzed the effects of the no action alternative, which includes baseline conditions, ongoing activities of all types, and future offshore activities other than wind. We then followed this with an analysis of future offshore wind activities and the potential cumulative effects of the proposed action and action alternative. Resource impact levels seen here include terrestrial and coastal fauna, coastal habitat, benthic resources, and fin fish invertebrates and essential fish habitat. Additional resource impact levels, as seen here, inclue marine mammal, sea turtles, demographic employment and economics and environmental justice.

We will talk about notable differences between alternatives in future slides. Resource impact levels seen here include cultural, historical and archaeological resources, recreation and tourism and commercial fisheries and for hire recreational fishing. Resource impact levels seen here include land use and coastal infrastructure and navigation and vessel traffic. Resources seen here include other uses. Other uses includes research and
surveys, military and national security, aviation and air traffic, cable and pipelines and radar systems. Resources seen here include air quality, water quality, bird and bat. All of these resources are included in Appendix $A$, as in apple.

Here we'll discuss the direct and indirect impacts of the proposed action. As summarized in the executive summary table, and assessed in detail in chapter 3 of the supplemental EIS BOEM determined that for most resources direct and indirect impacts were negligible to moderate and some major short and long-term impacts. The proposed action or certain action alternatives could have major direct or indirect impacts on environmental justice communities and other uses.

Somebody on the line I think needs to mute their phone. Sorry, I'm hearing some background noise.

The following major impacts of these resources are anticipated. Major direct impacts on environmental justice communities could occur from the proposed action and alternatives other than $B, F$ and the no action alternative G. The placement of cable and maintenance within Lewis Bay associated
with the New Hampshire Avenue landfall sites will lead to potential effects on vessel traffic and to environmental justice populations that rely on subsistence fishing or employment and income from marine businesses. This impact would lessen to moderate under alternative $B$, which would exclude the use of the New Hampshire Avenue landfall location.

As mentioned on the alternative slide, slide 18, Vineyard Wind is no longer pursuing the New Hampshire Avenue landfall location. Alternative F leads to lower direct and indirect impacts for environmental justice due to reduced impacts related to allisions and collisions and the presence of the transit lane. The reduced risk of collisions or allisions would lessen the impact on marine businesses, and also on the low income and workers employed in these industries. By reducing the impact on these businesses, alternative $F$ would have a smaller incremental impact on environmental justice populations, although those impacts would remain negligible to moderate.

The direct and indirect impacts for other uses was determined to be major for scientific
research and surveys for the proposed action and all action alternatives. The placement of structures within the wind development areas pose a navigational hazards to survey aircraft and vessels and restrict access to survey location. This would impact the statistical design of surveys and cause a loss of information leading to major impact. The analysis of other resource areas listed here found that direct and indirect impacts were also minor to moderate beneficial from the proposed action and action alternatives.

Here we will discuss the cumulative impact of the proposed action in addition to ongoing activities, future offshore non-wind activities and future offshore wind activity. For most resources cumulative impacts were minor to moderate with some major short and long-term impacts.

Major cumulative effects could occur to commercial fisheries and for hire recreational fishing for the proposed action and all action alternatives. Here the impact rating is driven mostly by changes due to fish distribution and availability associated with climate change, reduced stock levels due to fishing mortality, and permanent
impact through the presence of structures such as cable protection measures and foundations from offshore wind activity. Major cumulative impact on navigation could occur as a result of the presence of structures, which increases the risk of collisions and allisions under the proposed action and all the alternatives with the exception of $D-2$, F with D-2 and then no action, which is G. That impact level becomes moderate under $D-2$ with a one by one nautical mile uniform grid layout, and under alternative $F$, the vessel transit lane alternative, when paired with D-2, due to the large spacing between structures and the regular layout.

Major cumulative impacts on scientific researche of surveys, as mentioned on the previous slide under the other uses sections of the supplemental EIS, could occur as a result of the proposed action and all action alternatives due to the presence of structures, which could hinder surveys within the project area. This is similar to the direct and indirect impacts but greater in magnitude due to the cumulative scenario.

In addition, there would be major
cumulative impacts on military and national security
uses as a result of the proposed action and action alternatives other than $D-2$ and $F$ with $D-2$ due to the navigational complexity from structure presence, which would increase the difficulty to conduct or direct the operation. The major impact level goes down to moderate for search and rescue operations under alternative $D-2$ or alternative $F$ when paired with $D-2$, due to the uniform grid in $D-2$ for the vessel transit lane with the uniform grid, which would be alternative $F$ with $D-2$.

For some of these resources, there are also minor beneficial cumulative impacts. Such as for coastal habitats, recreation and tourism, land use and coastal infrastructure -- land use and coastal infrastructure and demographics, employment and economic.

This is the proposed schedule that you will see on the permitting dashboard. However, that schedule could change based on comments received. For example, if someone identifies a significant issue that we did not consider in the draft EIS or supplemental EIS that requires new analysis. There are also ongoing complications, including the Endangered Species Act, the Marine Mammal Protection

Act, the National Historic Preservation Act and the Magnuson-Stevens Fishery Conservation and Management Act complications that need to be completed prior to the signing of the record of the decision. BOEM is working with agencies to incorporate new project changes into existing consultation. Additional details about ongoing and completed consultations may be found in Appendix C of the SEIS. BOEM's Vineyard Wind web page includes a variety of informative documents, including Vineyard Wind's construction and operations plan, copies of the drafts and the supplemental SEIS, including a large print version of the supplemental EIS, and a link to the virtual meeting room web page. Within the virtual meeting room web page, as I mentioned, you will find posters and presentations along with some additional posters $I$ didn't mention that highlight key topic areas or resource areas, like our how to comment in poster.

I want to thank you for your attendance and your future participation today. We look forward to your comments and your questions. And with that, I'll hand it back over to Christine.

CHRISTINE DAVIS: Thank you, Jenn. So
today, you have an opportunity to provide comments. We've got instructions that we've tried a couple different times, that are also on your screen. As you can note, the comments will be open until July 27th, 2020. You can provide comments on the SEIS by using regulations.gov, providing oral testimony today or at any of the other public meetings, and by mailing comments the Office of Renewable Energy Programs at the address provided on the slide, and on the Vineyard Wind meeting page, virtual meeting page. If you haven't already done so, and would like to provide comments, please press Star 1 now and ask to speak to our operator. After you press Star 1 you'll have to be patient with Zoom, we have one operator today and a number of people on the line. We appreciate your patience with that.

If you prefer to submit your comments electronically, visit http://www.regulations.gov and search for docket number BOEM, B-O-E-M,-2020-0005. Next click comment here. Coments may also be submitted by mail with envelopes that are labeled Vineyard Wind supplements with draft EIS, addressed to the program manager at the office of renewable energy, Bureau of Ocean Energy

Management. The address is 45600 Woodland Road, $V-a-m-o-r-e-p$ or $V$ as in Victor, a as in apple, $m$ as in Mary -o-r-e as in echo, $p$ as in Paul, at Sterling, Virginia 20166. Comments must be postmarked no later than July 27th, 2020 .

BOEM doesn't consider any anonymous comments, so please include your name and address as part of your submittal. All comments will be made part of the public record and may be publicly posted without change. You may also submit your comments online at regulations.gov.

Please also take a minute or two now to submit any questions that you might have about the presentation just heard from Jenn, the SEIS in general or about BOEM up in the $Q$ \& $A$ box at the bottom of your screen. We'll respond to those questions after public comment.

So let's get to the public comments. Next slide, please. If you're filing comments today, your remarks will be recorded, transcribed and entered into the administrative record. So even though you may see your name in the chat box on your screen, if you're online, please state your name slowly and spell your first and last name for us. So that the
court reporter and those of us that are only on via phone today can hear your name clearly and accurately. Also, if you'd like please indicate any organization you're affiliated with, if applicable. The comments today provided will be taken into consideration by BOEM to update the final EIS and they'll be recorded and also publicly posted.

Please be mindful of time so that everyone has the opportunity to speak. I'll ask you to wrap things up at about the five minute mark. If you need more time, we'll put your name at the end of the queue. This will allow everyone the opportunity to speak at least once and if time allows we will give you another chance.

Please note if your comments are lengthy, you can also submit them in writing, as both written and oral comments are being considered equally. We will take briefly 15 speakers, but only after everyone who is interested has had a chance to speak at least one.

After identifying the first speaker we will note who is next to speak. In addition to putting the speaker's names in the chat box on the screen, I'll call out names for those on the phone.

Typically, I'd like to greet you when you arrive at a meeting on purpose in person, but since $I$ can't do that today, I won't be able to hear you pronounce your name. So $I$ sincerely apologize in advance if $I$ mispronounce anyone's name, $I$ know that everybody likes to have their name and hear their name properly pronounced, and $I$ ask you for your patience and understanding.

I'll commit to gathering all the questions and comments today and the other meetings and respond to them as appropriate in the final EIS. So with that, let's begin with our first speaker, and if you start looking at the chat box on the screen -- let's see if we have the names on the chat box. Yes, we do. Okay, so I'm seeing that there is an individual with the first name, but I'm not going to attempt, the last name Taylor. Second individual C, again a challenging $B-r-a-g-a$, after that Linda Lancaster, Eric P. and Daniel F. So I in just a moment, we'll turn it over to the first individual. Again, please remember to state and spell your name for us. Thank you. With that, N. Taylor, please. Give it just a minute, is N. Taylor available?

NOLI TAYLOR: Can you hear me? Hello?

CHRISTINE DAVIS: Great, go ahead, thank you.

NOLI TAYLOR: Okay, great. Thank you. My name is Noli Taylor, $N-o-l-i \quad T-a-y-l-o-r, ~ a n d ~ t h a n k ~$ you to everyone at BOEM for offering us the opportunity to submit public comment on the SEIS today. I live in the town of Aqquinnah on Martha's Vineyard, and the Vineyard Wind development will be distantly visible from my street and other lease areas are even closer to the shores near our home. I strongly support the Vineyard Wind development and the ongoing development of offshore wind in our region. I'm a mother with two young children, and $I$ believe that climate change poses the greatest threat to their future. Our kids are the 17th generation in their family to be born on Martha's Vineyard. And $I$ want this to be a place where my kids and the next 17 generations can continue to live. But the hazards of climate change from sea level rise to increased storm threats and more threaten their chances to continue to call this island home.

Vinyard 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 commercial fishing.

The changes Vineyard Wind has made in response to concerns from the commercial fishing industry are critical. The Vineyard's fishing heritage is important as is the livelihood of our relatives and neighbors. 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.

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. It asks something of those of us who live along the coast to support a development of this scale near our homes. But it is something we need to do, and we're ready for it.

Time is up for us to find other ways to get off of fossil fuels. 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.

CHRISTINE DAVIS: Thank you very much, Noli. And just a note to some folks, we are putting names up in the chat room five at a time. Otherwise, we would fill up our chat room and whatnot. So please use, again, the $Q$ \& $A$ for questions and then the chat room for any difficulties. So we'll use the chat room now to put the names in, and like I said, if you have questions about the products that you'd like us to answer at the end of the $Q$ \& $A, p l e a s e$ that use that $Q$ \& $A$ box for those of you online at

Zoom.
Okay. With that, I'm going to turn it over to the next speaker. First name with the letter C and the last name, $B-r-a-g-a, ~ a n d ~ g o ~ a h e a d ~ a n d ~$ provide your comments please.

YAIMA BRAGA: Hi, can you hear me?
CHRISTINE DAVIS: I can hear you just fine.
Thank you.
YAIMA BRAGA: Okay, great. Good afternoon. My name is Yaima Braga. I'm a little bit misspelled there. So it's Y-a-i-m-a, last name Greg a B-r-a-g-a, and I apologize in advance. I have my one year old in the background so if you hear her, that's what it is.

So yes, good afternoon, I work at Green Energy Consumers Alliance, we're a Boston-based nonprofit aimed at harnessing the power of energy consumers to feed the transition to a low carbon future. 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. We are aware
that the projects and the scale of the Vineyard Wind are bound to have some effects on the environment and applaud Vineyard Wind for their efforts to mitigate those as much as possible. 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 in order to bring much needed clean power to the region at low cost to ratepayers. At the outstanding low price of $\$ 74$ per megawatt hour for year one Vineyard Wind 1 will be very competitive in the New England electricity market.

In New England high prices dominate the market in the winter, as heating gets prioritized over electricity generation. So it's the highest priced resources get used usually the most polluting sources, dirty fuels, such as coal and oil, swinging up emissions in the winter. Actual wind has a high winter capacity factor, compared to other types of renewables in New England. For example, since it has been online the 30 megawatts Block Island wind farms
has achieved wintertime capacity factors of over 50 percent. Vineyard Wind and other large actual wind farms that are proposed in the region have even better wind time wind energy resources. Having hundreds or thousands of megawatts of offshore wind online will decrease the likelihood of encountering high winter prices in the future.

Once they're built, offshore wind farms could use electricity for free, unlike natural gas plans. That means that the lower the price of buying electricity for the entire grid. So we call this phenomenon price suppression and it's a benefit also achieved by onshore wind, solar and energy efficiency.

And lastly, 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.
CHRISTINE DAVIS: Thank you very much. Okay, next I have Linda L. and then after that Eric P. and Daniel S. So Linda Lancaster, Eric P. and Daniel S.

Linda, at this time we welcome you to provide your comments, please.

LINDA LANCASTER: Thank you. Can you hear me?

CHRISTINE DAVIS: I can hear you just fine. Thank you so much.

LINDA LANCASTER: My name is Linda
Lancaster, it's spelled L-i-n-d-a,
L-a-n-c-a-s-t-e-r, and I'm a member of the South Shore and Cape Chapter of the Citizens Climate Lobby.

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.

Massachusetts needs clean energy and offshore wind is New England's biggest untapped clean energy source. 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.

Increasing the amount of clean energy in Massachusetts has other benefits as well. 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. And who knows, some European offshore wind farms have become tourist destinations. Maybe Vineyard Wind will become a tourist attraction in the future.

In conclusion, Vineyard Wind has been studied to death, it's time to build it and get the southeast Massachusetts economy going in the right direction, which is up. Thank you so much for your time.

CHRISTINE DAVIS: Thank you for your
comments. All right, up next we have Eric P. and then Daniel $S$. And as you see, we've got a few more names posted after that on the chat box online and I'll say them out loud for those of you on the phone. So Eric P., Daniel S., individual first name that starts with a Z. last name Drake, William H. And then David B. So, Eric, you're up next with your comments. Eric P. Let me know if we can hear Eric at this time.

We'll pause on Eric. Perhaps we'll go ahead to the next individual, Daniel. If you get Eric back, I will take him back into the queue. So let's go ahead with Daniel Seidman. Daniel, are you available?

DANIEL SEIDMAN: Yes, ma'am, I am.
CHRISTINE DAVIS: All right, Daniel.
DANIEL SEIDMAN: And you did say my name right but that's because they misspelled my last name. It's S like Sam, E like echo, I like India, D like David, M like Mary, A like alpha, N like November. I am on the Vineyard Wind Board and was originally on the initial MV Co-op, which was put forth by a fella that passed away not too long ago,
and this was sort of his dream to bring fossil fuel -- or fossil-free energy to the island. And I want to thank BOEM for their extensive research. I know it did cause some consternation for some folks when there was a cumulative impact document that was going to be prepared and has now been prepared. Obviously, offshore wind or marine renewable energy devices, as some people refer to them, MREDs, are going to be a major source of energy, at least on the coast going forward. It does make sense to look at the cumulative impact. So I do thank you for doing that.

We have worked closely with the local fisheries, the official groups that are on the island and on the Cape. 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. When you develop offshore wind, you have, you know, initially two phases that need to be looked at, the initial construction phase
and how that affects the benthic, the soil or the bottom of the ocean for lack of a better term, and also the pelagic the water column of water. So during development, there can be -- there's, you know, the concern about noise. And, again, when BOEM was on the island of Martha's Vineyard, they had some wonderful posters showing different animals, mammals, seals, fish, et cetera, 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 items, 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 Bergstrom. I'm sorry by Bailey, excuse me, done 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 . Also an excellent article.

Anytime you do anything, there's always going to be benefits and detriments. We are not going to be able to eliminate all detriments, but what Vinyard 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. The other report I did mention was Bergstrom, which is the effects of offshore wind farms on marine wildlife, a generalized impactic assessment. That's Lena or Lana Bergstrom, Lana Kautsky -- I'm sorry, I'm murdering these names I'm sure. Torleif Malm, Rutger

Rosenberg, Mangus Wahlberg, Natassja Capetillo and Dan Wilhelmsson. These are mainly from the Swedish University of Agriculture Sciences. That one talks more about the cable, et cetera, and how there are some temporal spatial extents, the pressure associated with those. Again, there are always going to be detriments when you build something. What 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. When the first wind farm went up, it was two kilowatts, I believe. Now we're talking about 14 per turbine. So 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.

So we again believe this is a good project. We have reached out, we listen, and we look forward to moving ahead with this to provide power.

CHRISTINE DAVIS: All right, thank you very much. I noticed that Daniel had some materials that he was referencing, and if you have support materials like that, I would recommend that potentially you post that to the comments electronically or via mail. We'll have that screen up again in a little bit when we get done to the public -- at the end of the public comment period. But just so you know, go to regulations.gov, look for the docket BOEM, B-O-E-M-2020-0005, and you can post supplements or comments that you provide today or additional comments. So thank you.

With that, $I$ will turn it over to the next speaker. First initials V., last name Drake, and then looking at the rest of the queue, we've got William H. David B., Gary H. and John H. So with that I'll turn it to V. Drake and please state and spell your name because we we've got some names here that we've been not getting our spellings correct and apologies again and thank you for your patience. ZIVEN DRAKE: Excellent. Thank you, Christine. I appreciate it. Good afternoon. My name is Ziven Drake. That is indeed spelled correctly on your screen. I am a member of local Union 56, Commercial Divers and Pile Drivers. And I am also - I work for the North Atlantic state Carpenters Training Fund. So $I$ do a lot of our recruiting and retention of newer members looking to join the trades here in Boston and elsewhere throughout New England, and when $I$ speak to young divers, none of them want to go dive in the Gulf of Mexico on oil rigs anymore, they are all incredibly excited at the potential for offshore wind.

I had the honor of taking the offshore survival training class offered through Mass Maritime and the Global Wind Organization. And I
have a statement from a young diver. She also took the class with me, she is one of our youngest members at Local 56. And she put together a very, very poignant statement that $I$ absolutely second, so I would like to read that on her behalf.

This is a statement from Natalie MacDonald, member in good standing of Local Union 56 Commercial Divers and Pile Drivers. "I'm a 20 year old female pile driver who has taken the training required to be able to work on building offshore wind farms. To imply that $I$ do not care about the future of our planet, the animals that live there, or the people who also work in these waters for a living is totally incorrect. I see what we've 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 wildife, 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 are the future. You can resist the change and demand that, as an industry, fishing should be given precedence over turbines for ocean space. But
you cannot 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 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 future we want to secure for future generations. Change is hard. Not all the world embraced the Industrial Revolution. But nonetheless it prevailed. We are now at the point where we can make a very positive change in 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 interests of their employees and not just to take all they can from our oceans. We can all share the oceans, but we have to be willing to work together, to concede a little on both sides, and to do what we can to make the world a cleaner and more sustainable planet. I deserve to be able to work just as much as
local fishermen and we should be able to work together. This world is too often about pitting everyone against each other. Speaking as perhaps one of the youngest voices investmented in this project, we should show the world what collaboration and cooperation can look like." Thank you.

CHRISTINE DAVIS: Thank you, and I'm going to ask you to do me a couple of favors, and one of them is can you spell your name for the court reporter and then also, you read a letter by Natalie, if you can state and spell her name to just so we can get those accurately spelled into the record, that would be super helpful.

ZIVEN DRAKE: Yes, ma'am. My name is spelled Z-i-v-e-n D-r-a-k-e. Natalie's name is spelled $N-a-t-a-l-i-e ~ M-a-c-d-o-n-a-l-d$.

CHRISTINE DAVIS: All right, thank you very much. Just going to pause for a minute give folks a couple of reminders. We are looking at questions and answers that are on the bottom, we've got a number of subject matter experts that will be taking a look at those questions and answering them at the end of the public comment period. Also, we've got a few more names that are posted that we're going to go
forward with. As a reminder, if you haven't done so already, please press Star 1 and wait to speak to the operator to get into the queue. And I think those are some of the housekeeping things that I wanted to just touch on.

As I'm looking forward at the list $I$ see William H., David B., Gary H. John H., so I'm wondering if William Hamner is available next to speak. Can we potentially get William on the line?

WILLIAM HAMNER: Hello, can you hear me? CHRISTINE DAVIS: I can hear you just fine. Thank you. If you can state and spell your name, thank you.

WILLIAM HAMNER: Sure I'm William Hamner. H-a-m-n-e-r. My family has owned a home in Chilmark for 40 years. I am also the representative of a company in Texas called Offshore Wind Power System of Texas and I'm their New England representative. And my main concern to communicate here is that the environmental impact statement is significantly defective in its consideration of reasonable alternatives regarding the type of technology to be installed. NEPA requires that all reasonable alternatives to a project be considered. The project
as 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 have. Monopiles and jacket foundations require that they be driven into the seabed. This creates significant impacts for sound and for disruption of the benthic habitat.

The resulting foundations are also permanent, they cannot be moved quickly if they are causing problems in the future. In the offshore industry for over 50 years another technology has been used to install large things offshore, they are called mobile jack up platform. These are floating platforms on which structures are assembled on shore and loaded out into place, and then the legs of the structure are lowered down to the seabed and then the structure is raised up on the legs. This 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 been used for decades and eliminates that impact completely. This is a real problem
because it results in not only the necessity of mitigating the impacts of pile driving, but the technology currently proposed, which is monopiles and jackets, requires the use of an offshore construction ship to lift the turbines and install them on top of the structure. Those ships do not exist in the United States, they will have to come from Europe where they are already built. They add hundreds of millions of dollars to a project, thus raising the cost of the electricity that is produced and that is a burden to the ratepayers. And the ships themselves have significant impacts. They have to have a port, they create air pollution and other types of pollution when they are in use. Whereas, the mobile jack up platform requires no ships at all.

The entire system is assembled on shore and a tugboat simply tows the whole unit out and installs it in a couple of days. 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 jackets are removed, if they are driven into the seabed they have to be cut out or blown up and that creates impact. Whereas, a mobile
jacket platform simply lifts its legs up and floats back to it. So the EIS, which apparently is entire EIS, is focused on the disruption impact from the use of turbines, and there is no mention of this other technology.

Now, to be clear, go to mobile jack ups on Google and look at it, you will see literally thousands of pictures of these mobile jack ups. We have also created a website called Windbaseoffshore.com, whic you can see, where the design of the jack up platform from our company in Texas has already been built and installed in the ocean off its reef holding a meterological tower, which was done six years ago by the Eon Offshore Wind Farm Company in Norway and Sweden. So this technology is proven, it exists, it has been demonstrated. It eliminates most of the risks that are already addressed the EIS, and BOEM's director, Walter Cruickshank, and the National Renewable Energy Laboratory all know this and has been informed of it for over five years. We are baffled why this has not been addressed as a reasonable alternative in the EIS.

To be clear, we are not opposing the wind
farms at all. But we are very concerned that the public is not being given adequate information about reasonable alternatives that the proposed technology for selling the turbines obviously has significantly more environmental and construction and demolition with it than the alternative technology we think 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 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.

Finally, the 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. That is how install them around the world. So considering that we have unproven technology proposed, there is no reasonable alternative for those screening the EIS, I believe -- we want this to go forward, to be clear we want the wind farm to go forward as fast as possible, but
it is almost certain in our opinion that it will be challenged in court because a potential effect on impacts on light whales, an endangered species, that will be negatated until the latest technology is used. Thank you for your attention.

CHRISTINE DAVIS: Thank you for your comments. Okay, next I've got David B., after that Gary H., John H., Brandon B. and Margaret D. So I will turn it over to David to begin your comments. DAVID BORRUS: Hi. Can you hear me? CHRISTINE DAVIS: Yes, $I$ can hear you just fine. Thank you.

DAVID BORRUS: Okay. My name is David
Borrus. I see on the screen My name is spelled incorrectly, so I'll spell it. Last name B-o-r-r-u-s. I am the business manager for Pile Drivers and Divers Local 56. I know you've heard from some of my members just previously and $I$ know there's been written comments submitted as well.

We represent over 500 men and women who are skilled marine trades workers. We have been advocating on behalf of offshore wind for the better part of 16 years. And we have developed a relationship with several of the developers of
offshore wind. And we have followed the development of Vineyard Wind very closely, we are training our members to go to work in this in this field. You heard from two who just completed the GWO course in March. So we're committed to this. And we believe that the -- you know, the permitting process has been long, and we understand the need to be thorough. And 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. Jobs offshore, jobs onshore, and we recognize their cultural contributions to Massachusetts as well. However, the ocean is a shared resource. All of us have an opportunity to make a living there, marine construction workers as well.

The fishermen have advocated on behalf of themselves very well, have received some $\$ 17$ million in funds, I believe from Vineyard Wind, for essentially for work they haven't done yet. We're still waiting for the opportunity to go to work. So to that effect, I'd like to speak to the permit primarily today. The original delay was caused,
there was a delay, 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.

We have heard that there's opposition 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. And at this point, we don't need that, 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. And we're here to support the
implementation of the SEIS as it stands and issue that permit. So on behalf of the pile drivers and divers of Local 56 , we strongly support the application of Vineyard Wind for a permit to proceed. Thanks very much.

CHRISTINE DAVIS: Thank you for your comments. Next step, we've got Gary H., John H., Brandon B. and Margaret D. I'm going ask everyone, please, as those of you that are on Zoom can see, please state and spell your name, we realize that we've had some challenges getting the spelling of names correctly, and we want to make sure that our record is just as accurate as we can possibly make it, so you can help us out by stating and spelling your name for us. So with that, I will turn it over to Gary and go ahead with your comments, please.

GARY HARCOURT: Yeah, it's Gary Harcourt, and it's spelled right, $G-a-r-y ~ H-a-r-c-o-u-r-t . ~ I ' m$ a resident of Oak Bluffs, I'm a renewable energy advocate, and $I$ also served on the board of Vineyard Power Cooperative on Martha's Vineyard. 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. And climate change is coming at us like a freight train down a mountain with no brakes, and we have to move. As a nation we've been dragging our feet on offshore wind and really we've stepped forward and get something done.

The research that's been done to date is exhaustive. I believe that this project 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. As a supporter of our local fishermen, I'm happy that fishermen add a voice and the project developers made 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 fisharies. The one mile
turbine spacing in the revised layout is generous and is adequate, and $I$ see no reason to reduce the project size for additional transit lanes and in no case should a four mile corridor be required. I mean, let's face it, Vineyard Sound itself is only three miles and navigable in only two miles. Cape Cod Canal is only 480 feet wide at its narrowest, roughly one $10 t h$ of a 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.

I just heard Mr. Hamner speak of the jack up foundations. Clearly, the developers are aware of all available technologies, they do use jack up platforms to work on the turbines, they use them to go out and do the testing of the sea bottom. And I'm also sure everybody trying to sell a foundation 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.

We also regularly hear on the news that our
federal government is fast tracking new oil and gas exploration and pipelines. And we don't ever hear that they're fast tracking offshore wind, but it's time that we start to move in that direction. And this is not fast tracking. This has been looked at for decades and this particular project for many, many years, and $I$ would ask that we approve it as quickly as possible with no restrictions. Thanks. CHRISTINE DAVIS: Thank you for your comments. All right. Next we have John H., then Brandon B., Margaret D., David D., and Sarah G. So with that, $I$ turn it over to John, please state and spell your name, please. John, are you with us? Give John just one more minute. John, if you are hearing me but not able to speak, please press Star 1 and maybe we can get you back in the queue, and I'll take this moment just to say that for anyone that's new, we do have more names in the queue than we're able to show on the screen, but in few minutes if you haven't seen your name, please do press Star 1 and speak to the operator to get added to us. If you haven't done so already now would be a great time. We have a few names after Sarah. So if after the group of names after Sarah you don't see yours
you might want to do that too. All right.
I just see you now if John $H$. is available. JON HARTZBAND: Yes, I am. Can you hear me?

CHRISTINE DAVIS: Yes, $I$ can hear you
great. Go ahead and begin your time.
JON HARTZBAND: Sorry about that.
CHRISTINE DAVIS: No worries. Go ahead.
JON HARTZBAND: My name is Jon, J-o-n, got
the name right, Hartzband, $H-a-r-t-z-b-a-n-d$. Thank you for the opportunity to contribute. Thank you for the opportunity to contribute my thoughts here. I live on Martha's Vineyard with my wife and my two children. And we as a family support renewable projects, including offshore wind, and hope to see these projects move forward for a variety of reasons. The obvious reason to support these projects, including our local Vineyard 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. We have an opportunity to be on the forefront of a new industry harvesting clean, renewable sources of energy. This is not only a win on the environmental front, but a huge win on the
economic front. The global pandemic has had a unique ability to find weak spots in almost every aspect of life. Here on Martha's Vineyard, and I think in most coastal communities, 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 Vineyard.

This is an unbelievable opportunity to create good paying year-round jobs that do not rely specifically on tourism. This is not only true for Martha's Vineyard, but up and down the East Coast of the United States in every coastal community. I believe that the Vineyard Wind estimate is 3600 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. We are in an incredibly unique time. And $I$ think developing renewable sources of energy and supporting these projects and industries is a win for both the environment in which we are all
responsible, and our economic stability.
Thank you so much for your time, my time, your time.
CHRISTINE DAVIS: Thank you. Okay, looking forward, I've got next step Brandon B., Margaret B. and then David D. and Sarah G. So I'll give it just a minute and we'll see if we can get Brandon on the line. Brandon by chance are you available? Then we have quite a few people on the phone today, so I just want to be patient with our operator to see if she can get Brandon B. up next, please.

All right. I don't know that Brandon is with us any longer, so let's move forward to Margaret and if we get Brandon back we'll bring him back into the queue. So I'm looking at Margaret D. Margaret Downey by chance. Can we bring Margaret online to provide comments?

MARGARET DOWNEY: Hi, can you hear me?
CHRISTINE DAVIS: I can hear you just fine, if you could state and spell your name, Margaret, that would be great. Thank you.

MARGARET DOWNEY: Hi. My name is Margaret, M-a-r-g-a-r-e-t, Downey, $D-o-w-n-e-y . ~ S o ~ g o o d$ afternoon, everyone, as $I$ said my name is Margaret Downey, and $I$ am the administrator of the Cape Light

Compact Joint Powers Entity, which is an entity representing all 21 pounds, up to 15 pounds on Cape Cod and 6 pounds on Martha's Vineyard. I'm here today to provide comments on the Bureau of Ocean Energy Management's, BOEM's SEIS, supplemental environmental impact statement, for the Vineyard Wind's offshore energy project.

I want to start out by thanking the federal
and state agencies and all of the stakeholders who have participated in the many aspects of the review of the offshore wind project. Thank you for your time and your effort, especially during a global pandemic. The fact that we were able to continue to move this conversation forward says a lot about the commitment and interest of all of the parties and stakeholders involved, and so behalf of the Cape Light Compact, thank you. The Cape Light Compact has been working to address the impacts of climate change on Cape Cod and Martha's Vineyard for our energy efficiency and power supply programs for almost 20 years. The Cape Light Compact supports the development of offshore wind in the Eastern United States and recognizes the need and importance of offshore wind in meeting clean energy and our
emission reduction goals. 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 time and consideration this afternoon. I appreciate the opportunity to offer my comments are in support of the offshore wind industry. Thank you very much.

CHRISTINE DAVIS: Thank you. All right, next we have David D. Sarah G., Kara S., Daniel W., and then Richard D. And I believe those are the names that we have available to us right at this time. If you don't see your name on the list, please press Star 1 and wait to speak to the operator and make sure your name is on the queue. And if you've just gotten inspired and want to provide comments, now would be a great time to as we get close to the end of of the list of names that we have available.

So with that, I will turn it over to David.
David, if you can state and spell your name, please. DAVID DOW: My name is David Dow. D-a-v-i-d

D-o-w. And I'm a retired marine scientist, grassroots environmental activist living in Falmouth, Massachusetts. My written comments on the the Vineyard Wind SEIS focused on the cumulative effects assessment of 20 wind farms along the Atlantic seaboard on marine biota and their habitats. A promo of the Martha's Vineyard Wind Project will provide a template for other wind farms, potentially generating 22 gigawatts of renewable electricity.

These other wind farms will range from North Carolina through Maine. 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 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. North Atlantic Right Whales females breed in the winter off the southeastern U.S. Atlantic seaboard, and both sexes migrate into Northeastern waters from spring to early fall to feed.

Northwest Atlantic Right Whale critical habitat under the Endangered Species Act runs from Northern Florida-Georgia coastal waters through Maine. Thus, they overlap with a range of the proposed 20 wind farms. NOAA Fisheries manages lobsters in federal waters, that's 3 to 200 miles under the Magnuson-Stevens Sustainable Fisheries Act. Marine mammal NGOs and some scientists are pushing for ropeless lobster fishing gear, or closed areas to lobster pots when North Atlantic Right Whales are in the vicinity. Thus, there's a lot of controversy between commercial fishing interests and constituents interested in restoring North Atlantic Right Whale populations. NOAA Fisheries will begin an environmental assessment process in the fall of 2020 to come up with a plan to reduce North Atlantic Right Whale mortality from lobster gear entanglements and reduce impacts from other human stressors such as climate change, ocean noise,
seasonal hypoxia, shifts in essential fish habitat, alteration of the marine food chain, and how the other human uses of the ocean, which include wind farms.

Having commented on the Council
Environmental Qualities proposed changes to the National Environmental Policy Act, I have two potential concerns about the BOEM SEIS on wind farms along the Atlantic seaboard conflicting with the NOAA Fisheries EIS on north array brightwell 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 depending on other human uses of the same ocean ranges.

The North Atlantic 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. The

Martha's Vineyard Wind SEIS contains alternatives F-1 and $F-2$, based on comments submitted by RODA to reduce the number of wind turbines and 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. Recently NOAA Fisheries released the 2020 status of ecosystem reports for 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 apprpriate policies and regulations, which can be a time-consuming process. Thank you for listening to my comments. CHRISTINE DAVIS: Thank you. Next up we'll have Sarah G. and then Kara Smith, Daniel W.,

Richard D. and we have Brandon B. back in the queue.
I have two quick announcements before we go to Sarah, and that is, one, if you would like to speak, please press Star 1 and speak to the operator. And then also, we are still taking questions and answers, we'll have a question and answer period after the public comment testimony is complete, and so please use the $Q \& A$ box for that. We have subject matter experts that are monitoring that and they're getting prepared to answer your questions. So if you can put them in advance that'll give them a chance to find the information that you'd like to hear.

So with that, I'm going to turn it over to Sarah G. If you could state and spell your name, please.

SARAH GRISCOM: Hello, can you hear me?
CHRISTINE DAVIS: Yes, $I$ can hear you just fine, thank you.

SARAH GRISCOM: Oh, good. My name is Sarah Griscom. That's S-a-r-a-h. Last name, G-r-i-s-c-o-m. I am calling and commenting on behalf of the Pleasant Bay Community Boating. We are located in Harwich on Cape Cod. And I also am a member of the

Cape Cod Climate Change Collaborative as well as the Chatham Climate Action Network. So I'm very much interested in any kind of way to move quickly to 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 it. And that's the end of my comment. Thank you.

CHRISTINE DAVIS: Thank you. All right, up next, you've got Kara, Daniel, Richard and Brandon. And I believe that gets us to the end of the list. So, Kara, would you please announce yourself and spell your name, please. We will give it just a minute, $I$ know I'd seen her in the chat, so Kara Smith, or you might need to press Star 1 again, hopefully, that's not or, you know, there's a potential that you'll need to do that. We'll try and get to you.

Okay, I'll move forward down with Daniel W. Daniel, if you state and spell name, please. Daniel, are you with us?

DANIEL WOLF: How about now?
CHRISTINE DAVIS: I can hear you just fine
now. Thank you.
DANIEL WOLF: Yeah, I don't know whether they can mute me or $I$ have to unmute or whatever. But anyway, Christine, it's great to talk to you. And thank you so much for holding these hearings. Just by way of background, my name is Daniel Wolf. D-a-n-i-e-l $W$-o-l-f. I'm the founder and currently the CEO of Cape Air, which is the largest regional airline -- actually, largest commuter airline in the United States. But we're based here on Cape Cod, and we've been around for 32 years. Also, by way of background, I served three years in the Massachusetts State Senate representing Cape Cod, and the islands in Martha's Vineyard in Nantucket. During that time, $I$ did a lot of work in and around renewable energy and specifically around offshore wind and was involved in some of the legislation in Massachusetts and working with BOEM. So again, I thank you very much for the opportunity to talk today. I've served on the board of the Association to Preserve Cape Cod. One of the leading environmental organizations on the Cape. Currently serve on the board of the Center for Coastal Studies. And $I$ see in the queue, the next speaker is
actually the Executive Director of the Center for Coastal Studies, Rich Delaney. So I'm going to yield my time to him very quickly.

I do want to state that there -- I think as the studies have shown, there will be no adverse impact on aviation in the area. So $I$ just want to get that taken care of first when $I$ speak, but the main reason $I$ wanted to call today and weigh in is that we submitted testimony back in April of 2018. And so here we are two years later, and not a whole lot has changed, unfortunately, here we are I'm going to be submitting the same written testimony again today after $I$ talk to you verbally. But what $I$ do want to say is what has happened in the last two years is we're 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 half percent of global climate change emissions. As we get closer to doing it responsibly and in a carbon free way, we really need sources of renewable energy to provide the electricity to move 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 project and why now is the time to get it done. And I, again, to my good friend, Rich Delaney, who's up next in the queue defer the rest of my time and, again, Christine, thank you so much.

CHRISTINE DAVIS: Thank you. All right. Next, we'll move forward with Richard D. Richard, can you state and spell your name, please. And then
after that, we'll have Brandon. And I believe we're getting close to the end. So if you haven't already done so, please press one and wait for the operator to get into the queue so we can make sure that we get you in. Thank you. With that, Richard.

RICHARD DELANEY: Thanks very much,
Christine. It's Richard Delaney. R-i-c-h-a-r-d D-e-l-a-n-e-y. I'm the President of the board of directors of the Cape Cod Climate Change Collaborative. And as Dan just mentioned, the President of the Center for Coastal Studies.

The Collaborative is an interesting group. It's actually a large coalition of organizations, businesses, and citizens all committed to mitigating the climate crisis on Cape Cod and the islands. Now, they are all volunteer, it's a nonprofit group. That includes very effective leaders and leadership from virtually every sector of our community: the business sector, local and regional planning groups, the financial sector, building and housing sector, the transportation, renewable energy, and right on down the line, including our faith community and our educators. And the key is we are all working together to achieve a net zero emissions goal for

Cape Cod in the islands. So you probably couldn't find a more representative group or cross-section of a coastal community.

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 2050. A lot of those examples are quite exciting. Dan Wolf just mentioned one of the most exciting that Cape Air has made a commitment to bring on electric airplanes as part of that solution.

So 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. So we have reviewed the SEIS and we believe that it thoroughly covers all related issues that should be approved without delay, and after that the subsequent final approvals for the Vineyard Wind Project to be issued as soon as possible. And subsequently $I$ just would add a couple of specific comments. 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.

We also support alternative $B$ for the cable landing, that's at Colwells Beach landfall. And I also like to note that 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 wideranging protections for the North Atlantic White Whale.

So in conclusion, 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. And, furthermore, we urge BOEM do this and take all other actions to move offshore wind development in general
up and down the east coast forward as fast as possible. I keep thinking, we've heard some comments from various sectors about the potential negative impacts on whales and fisheries from this project, but $I$ 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. Thank you very much for this chance to comment today.

CHRISTINE DAVIS: Thank you. Okay, next we're going to have Brandon and Kara. So Brandon and Kara, thank you very much for your patience and working through this with us. We appreciate it very much. As $I$ am seeing it right now they are, let me just do a real quick check, I believe the last folks we have on the queue -- Yep. So if you are interested in speaking after Brandon or Kara, please press Star 1 now. And we'll get you in the queue. And then also continue to get the $Q$ and A's
for those of you on Zoom using the $Q$ \& A function on your screen.

So with that, I'll turn it over to Brandon. BRANDON BURKE: Hello, can you hear me? CHRISTINE DAVIS: I can hear you just fine. Thank you.

BRANDON BURKE: Wonderful. Thank you so much. As I mentioned, my name is Brandon Burke, last name is spelled $B-u-r-k-e, ~ a n d ~ m y ~ f i r s t ~ n a m e ~ i s ~$ spelled correctly. I'm the Policy and Outreach Director for the Business Networks for Offshore Winds.

The Business Network is the only $501(C)(3)$ nonprofit organization that is exclusively focused on the development of the U.S. offshore wind industry and its domestic supply chain. Since 2012 the network has brought together business and government, both domestically and internationally, to educate and enable American businesses of all sizes to enter the U.S. offshore wind market. The network uses the voice of its diverse membership comprised of the full spectrum of the offshore wind supply chain to educate and support federal, state and local policymakers to advance the development of
the U.S. offshore wind industry. And, in fact, the network since its inception has been a proud partner of the Bureau of Ocean Energy Management, and, in fact, on June 11th of this year, Acting Director of foam Walter Cruickshank appeared on the network's IPF livestream virtual conference to communicate directly to industry about the supplement to the EIS that we're here to talk about tonight. The network looks forward to continuing its successful partnership with BOEM, and we would like to thank BOEM for conducting these virtual public meetings about the SEIS under the challenging circumstances. And as we can see, with my own comments here, I really do want to speak 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.

The business that offshore winds serves as the convener of the offshore wind supply chain, responsibly developed U.S. offshore wind projects are truly world class infrastructure projects and present a once in a generation opportunity for Americans. Vineyard Wind and other offshore wind projects like it that are currently under review at

BOEM serve as unparalleled engines of economic development and, more importantly, economic recovery. And this is at a time when Americans need this most, particularly in light of the ongoing COVID-19 crisis and record unemployment. There are 40 million Americans that are 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. More importantly, disapproval will begin a domino effect that will ultimately put tens of thousands of hardworking Americans from across the economic spectrum and from literally all walks of life -- just for example, some of whom we've heard from today, the building trades, vessel captains and deckhands, accountants, dock workers, 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 Vineyard Wind and other offshore wind projects.
Vineyard Wind will also significantly
contribute to energy security and improve local air
quality in New England. We at the business network for offshore wind look forward to submitting more substantive written comments and, once again, thank the Bureau of Ocean Energy Management for the opportunity to comment today. We look forward to continuing to partner with BOEM to support the robust growth and responsible development of the U.S. offshore wind industry. Thank you very much for your time.

CHRISTINE DAVIS: Thank you for your comments here. Kara, hopefully we can get you up now and and provide an opportunity for you to provide comments. Yeah, of course.

KARA SMITH: Hi. Can you hear me?
CHRISTINE DAVIS: We can hear you just fine. Thank you so much.

KARA SMITH: Great. Thank you so much. My name is Kara Smith, and I'm a member of the Chappaquiddick Wampanoag Tribe of Martha's Vineyard, formerly known as Noepe. Thank you again for making this process transparent to the public. I appreciate the opportunity to be heard. The Chappaquiddick Wampanoag sustained the ecology of the region for more than 10,000 years prior to colonization. So I'm
certainly in favor of sustainable energy. By the same token, I'm concerned with the impact on the endangered marine life, the seabed and erosion. Those impacts appear clearly assessed.

Now, Mr. Hemner's comment raises some concerns that are new to me. I do not see any assessment of cultural impact of the Vineyard Wind, for instance, the windmills will dominate views from wave screen and the north neck high ground. These grounds are where we hold ceremonies from our lost ancestors and rising sun. Growing up, I found a great deal of solace and communion with my ancestors looking out at the horizon. For 10,000 years with experience, this view has been unaffected by man-made structures. I'm compelled to speak in the interest of preserving our traditions for my children.

My questions are, which category assesses cultural impacts? And how do you plan to mitigate these impacts? Thank you.

CHRISTINE DAVIS: Thank you for your comments, Kara. I don't have anyone else in the queue at this time. So I'm just going to pause and give it a few minutes to see if anyone else wants to
press Star 1 at a time to provide comments to the operator, and we'll get you into the queue. Also I remind folks that we do have that $Q$ \& $A$ function at the bottom of the screen if you're on Zoom. And we will be having three additional public meeting. I cannot believe it, but it's July already, starting tomorrow. So there'll be three meetings later. One later this week and then two next week. So I'm just going to pause one more moment here, and not seeing anyone else. So all right, with that $I$ am going to close the public comment period at 2:58 eastern time and we'll move forward with the $Q$ \& A section. So two way communication is very much a priority for BOEM. At this time, we're going to try and answer the questions that we have seen, that we've already gathered and if you have some more that you'd like us to answer, please continue to use that $Q$ \& $A$ function for the next 15 to 20 minutes or so. Some of you have already entered the questions. We will take time to answer them. We've got some dedicated subject matter experts that have been watching the box and are prepared to answer your questions.

Additionally, $I$ encourage you to visit the
frequently asked questions on the virtual meeting webpage. And so there's a lot of information that you can see on that site as well. At this time, I'm going to turn it over to Isis Farmer with BOEM. And she's going to address the questions that we received and open the meeting up for further questions. As a reminder, you can use the Zoom function to submit your questions at any time. Isis. ISIS FARMER $>$ Thanks for the introduction, Christine. My name is Isis Farmer, and $I$ am an environmental coordinator here at the Bureau of Ocean Energy Management. And with Jen one of the co-leads for the Vineyard Wind 1 Project's supplemental environmental impact statement.

So we're going to get started with answering your questions and answers. So I am going to start with some general questions that we received earlier in the evening. So, Michelle, would you mind turning on your camera, unmuting line and introducing herself. Hi,

MICHELLE MORIN: Hi, thank you. My name is Michelle Morin. I'm the Chief of BOEM's environment Branch for Renewable Energy. Great. So the first thing that we received is, will you continue to
provide online public presentations and public comment periods like this one permanently? These issues are important to many more than can take the time to be there in person. Thank you for this online forum.

Thank you. Yes, I think these are going very well. I'm very proud of our virtual meeting room and invite everyone that hasn't looked at it, to please do so. We are having this format of meeting because of the COVID-19 crisis. But we have heard a lot of positive feedback, and so we will consider doing something similar in the future.

ISIS FARMER: Thank you, Michelle. And the next question that $I$ have for you is what financial assurances has Vineyard Wind provided to BOEM for purposes of decommissioning at the end of the lease area?

MICHELLE MORIN: Yes, thank you. So a leasee is required to return their lease area to the previous condition, meaning that in this case Vineyard Wind would have to remove or decommission everything that it installs and clear the seabed of any obstructions that were created from the project. But prior to commissioning, Vineyard Wind must
submit a bond to BOEM to cover decommissioning and an estimate BOEM's estimate for this bond. We assume the need to contract work and all cost with engineering and permitting for decommissioning, and we don't include adjustments, say, for like salvage value. And our estimate would include removing all structures, meaning foundations, cables, gower protection to at least 15 feet below the seabed.

ISIS FARMER: Thank you, Michelle. So the next question $I$ have is actually for me, so I'll take this one. And the question is, how will BOEM address the impacts of future construction and operations plans submitted that conflict with previously submitted construction and operations plans that are currently under review. For example, lease areas are limited in size. So the siting is limited, but the generator size may change and reduce/slash expand the desired location. With most multiple construction and operations plans these may conflict. How do you plan to analyze such submissions?

So for each construction and operations plan, it's important to acknowledge that, you know, BOEM will go through -- each project submitted will
go through its own project specific environmental analysis. So while the cumulative impact scenario that's being used for the Vineyard Wind supplemental environmental impact statement will be used as a guide for analysis of future offshore wind projects, BOEM will continue to update and refine the scenario based on the best available information. With respect to changes in turbine sizes, a leasee is limited to their lease area for placement of proposed turbines. So changes to turbine sizes may change the number of individual turbines within a single lease. So for more information about the assumptions we made about future offshore wind development, please see Appendix A of the supplemental EIS. And specifically page A, and that's A as in apple,-9 specifically goes into more detail about construction and operation of future offshore wind projects.

So for the next question, I'm going to go to Jenn Bucatari. Jenn, would you mind turning on your camera and unmuting your line?

JENN BUCATARI: Hi, everybody. Jenn Bucatari, I'm another NEPA coordinator. I'm coordinating the Vineyard Wind, the EIS.

ISIS FARMER: And I'm going to make sure that anyone aside from Jenn or myself should mute their line, if you please.

JENN BUCATARI: Thank you.
ISIS FARMER: Okay. so, Jenn, the question that $I$ have for you is, as there may be both positive and negative impacts on resources, how did BOEM weigh the positives and negatives to come up with a single score, negligible, moderate, et cetera, to get a score for a resource?.

JENN BUCATARI: Thanks, Isis. Our subject matter experts, or we call them SMEs, considered each applicable impact-producing factor when determining the overall impact level for a resource, because the impact level is an expert determination that utilizes the impact level definition that you can find in Appendix $B$, as in boy, of the SEIS, and the impact level is determined then by our SMEs with input from the agencies with expertise for the resource.

The overall impact level isn't determined by adding the negative and positive impact. Instead, it's determined by considering the overall impact of all the impact-producing factors from the proposed
project and from ongoing activities, future non-offshore wind activities to future offshore wind activities on a resource. The analysis and determination considers the timing and the magnitude of each of these impacts to determine the overall impact level appropriately. For any of these additional detail analyses about these impact levels and the impact-producing factors, please see the additional tables that we have in Appendix A, as in apple, and $B$, as in boy, of the SEIS.

ISIS FARMER: Thanks, Jenn. Okay, we want to try the next question. So, the question is general nature. And so I'll start with the first part. And then I'll also ask for Arianna, if you wouldn't mind unmuting your line and turning on your camera.

So I'll read go ahead and read the question. A friend had a question but not the time to participate today. In summary, will this SEIS be used to guide the development of all future offshore wind projects, at least in the southern New England area, and how will BOEM consider the guidelines from the MARIPARS study?

So for the first part of the question, I think $I$ partially answered that in my previous
response. We will use the cumulative impact analysis, that scenario that we use as sort of a guideline moving forward for future projects. But it's really important that we have comments on our cumulative impact scenario. And so we really invite you to submit your comments, and review the cumulative scenario and see, you know, let us know if there's anything that needs to be updated or changed, if there's any inaccurate information $I$ think that we should incorporate into the final EIS and potentially other projects moving forward. So for the next part of the question, Arianna, could you address the portion about MARIPARS?

ARIANNA BAKER: Absolutely, thank you, Isis, and good afternoon, everyone. So for anyone who's not familiar now, MARIPARS, as it's closely referred to, is Massachusetts and Rhode Island Port Access Route Study that was conducted by the Coast Guard over the last calendar year. So while MARIPARS is a study and not a rulemaking. Coast Guard is the federal government's navigational safety expert and as they are a cooperating agency in the environmental impact statement process under One Federal Decision, the Coast Guard is involved in
the development of those supplemental environmental impact statements that we are discussing today. And they will continue to be involved in developing the final environmental impact statement. So, while due to the publication timelines, we have referenced the draft MARIPARS report in the supplemental environmental impact statement, we will also be referencing the final MARIPARS report in the final environmental impact statement. And I should note that the recommendations from the final MARIPARS report mirror alternative $D-2$ in the supplemental environmental impact statement.

ISIS FARMER: Thanks, Arianna, and would you mind introducing yourself? I can't recall if we did.

ARIANNA BAKER: I didn't, no, apologies. So, my name is Arianna Baker, and I'm the navigation analyst here at BOEM.

ISIS FARMER: Thank you. Okay, we also received a couple of questions about cumulative, our cumulative impact scenario. So, Ian, would you mind turning on your camera and unmuting your line?

IAN CLAYTON: Hello, can you hear me?
ISIS FARMER: Yes. I can hear you just fine.

IAN CLAYTON: All right. My name is Ian Clayton, I'm a physical scientist at BOEM.

ISIS FARMER: Thanks, Ian. So the question I have for you is what will be the cumulative impact in terms of lost power capacity to all developers in the Massachusetts wind energy area due to the proposed compromise of a one by one nautical mile turbine layout, alternative D-2?

IAN CLAYTON: So I have -- stick with me here -- I have an answer, but there's a long walk to it. So the difference in power capacity would be directly related to the size of the turbine generator that would be built, and it gets complicated due to factors involving optimal spacing. So, a wind farm laid out with energy extraction in mind would be spaced between five and eight or so, depending on the designer rotor diameters apart, so how large the blade bases are really. So, the spacing that is optimum depends on the rotor diameter, and also a turbine field will be arranged in a scattered, randomized layout to avoid wind weight And so it depends on the turbine size as to what the ideal spacing would be. The dimensions of a 12 megawatt turbine is about 722
feet for the rotor diameter and so that would be a spacing ideally of . 6 to . 95 nautical mile.

I don't want to get too off in the weeds here. What it comes down to is in alternative $A$ of this proposal there already with that layout is some deviation from that ideal layout. And so there was something given up there. And then if you compare it to, say, an average of . 7 nautical mile spacing between turbines, you'd be giving up something like 1000 positions, potential positions within the Massachusetts, Rhode Island lease area. And so you're talking about, you know, several gigawatts, maybe even as much as 12 gigawatts will be a 12 megawatt turbines on average for all those positions. But that number will be smaller if turbines continue to grow and continue to be larger. So at the heart you can't put an exact figure on it. But it's some, yep.

ISIS FARMER: Thank you, Ian. The next question $I$ have is for Brian Hooker. Brian, would you mind turning on your camera, unmuting your line and introducing yourself?

BRIAN HOOKER: Sure. Hi, Isis. My name is Brian Hooker. I'm a biologist with the Renewable

Energy Program.
ISIS FARMER: Great. So the question I have for you, Brian, is please explain the various fishery mitigation funding packages by the state of Rhode Island, Massachusetts, by Vineyard 1 .

BRIAN HOOKER: Sure, I'd be happy to answer that. So in Appendix B, we discuss it in the main text of the the SEIS as well. But the easiest way the most concise place to find it is in Appendix $B$, table 3.11-5. And in there we describe the two formal mitigation packages that were negotiated between Vineyard Wind and the state of Rhode Island in the state of Massachusetts.

So for the state of Rhode Island, there is a $\$ 4.2$ million direct compensation fund to be held in escrow to compensate for any claims of direct impacts Rhode Island vessels or Rhode Island fisheries interest in the project area. Also in Rhode Island, there is a 12 and a half million dollar Rhode Island Fisherman's Future Viability Trust. The trust is to further the policies of the Ocean Special Area Management Plan with respect to continued viability and success of Rhode Island's fishing industry to support and promote the
compatibility of offshore wind with commercial fishing interests. With more detail in the SEIS, but as you can see, it's a broader fund rather than direct compensation for revenue or gear loss.

In Massachusetts, they have a similar kind of break between two different funds. There is a \$19.2 million direct downstream and cumulative compensation fund that's held in escrow for folks -- for domestic based fishermen to apply toward, and then in addition to that, they've also have a Fisheries Innovation Fund is a $\$ 1.75$ million fund to support programs and projects that ensure safe and profitable fishing, continue as Vineyard Wind and other future offshore wind projects are developed in northern Atlantic waters. So again, that's in table 3.11-5 and Appendix B.

I'll also note that we talk more about mitigation more broadly in the DEIS, so if you remember this, in the supplement to the DEIS. So it doesn't replace with DEIS. We talk about more broadly like some other general programs that Vineyard Wind has committed to have funding available for impacted entities from other states. But they're not as formal as what has been agreed to
via these negotiations between Rhode Island and Massachusetts. And that was it, Isis.

ISIS FARMER: Thank you. Brian, And the next question, I'm going to go back to Arianna. Arianna, would you mind turning on your camera and $I$ umuting your line? Thank you.

So another question that came in: for comparison, how wide are the shipping lanes into New York Harbor? And I'm assuming that this is in reference to the lanes that we discussed in talking about alternative $F$.

ARIANNA BAKER: Yeah, so the specific New York shipping channels formerly termed traffic separation scheme. There's three traffic lanes allowing movement into New York Harbor from points south, from points east and from point southeast. So at the widest part, furthest from the harbor, these lanes start at an average of about 13 nautical miles wide, and they have an average of about a three nautical mile wide separation zone between the inbound and outbound lane. And then they shrink to an average of slightly over three nautical miles wide near the entrance to New York Harbor with about an average of a 1.15 nautical mile separation zone.

So, similarly, there are other nearby lanes that are also intended to be deep draft traffic near the Massachusetts and Rhode Island lease areas. They include the traffic separation schemes for both Narragansett Bay, which is 11 nautical miles long and four nautical miles wide, and Boston which is 127 nautical miles long and four nautical miles wide as well.

So both of those lanes also include a one to two nautical mile separation zone in the middle between opposite directions of traffic. They're also used by a larger traffic volume and a larger individual backflow size than would ever really appear in the entirety of the Rhode IslandMassachusetts waste areas post-construction. In those areas, the largest licensed commercial fishing vessels found to be used in the area is about 138 feet.

ISIS FARMER: Great. Thank you, Arianna. Okay. And for the next question, we're going to go to Michelle, would you turn on your camera and your line?

MICHELLE MORIN: Thank you, Isis.
ISIS FARMER: Thanks, Michelle. So the
question for you is at its initial public meeting, and I'm assuming he's referring to the meeting now -- the virtual public meeting that we held last Friday, BOEM stated that the Coast Guard concurred with BOEM's Alternative Analysis and that BOEM's assignment of major as a potential cumulative impact to navigation. It's the Coast Guard's analysis to support its concurrence documented in BOEM's record? If not, when will it be posted?

MICHELLE MORIN: Thank you, Isis. So the navigation analysis, as we previously said, was prepared collaboratively with and reviewed by the Coast Guard as a cooperating agency. There's not a formal concurrent document. The Coast Guard comments are captured during that cooperating agency review, and that all goes into the administrative record. We don't typically post those sort of back and forth on our website with other documents.

ISIS FARMER: Thank you, Michelle. So now we're going to go into some questions about marine mammals. So, Kyle and Ian, I'm going to ask that you both turn on your camera and unmute your line. But I'm going to start with Ian for this one question. Okay, to start with Ian, here's the
question: How many piles driving vessels will be present/operating offshore? Will multiple pile driving events occur concurrently? What is the anticipated separation distances? And if so, How were these events addressed in the cumulative impact assessment? Ian, we will start off with you.

IAN SLAYTON: Yeah, I'm going speak to this from the perspective of a cumulative scenario and Kyle will, you know, get more specifically.

So the assumptions that were made about vessels were done to capture the highest impact level foreseen based on present information and technology for the industry as a whole. And so this isn't like a forecast or prediction, but rather a projection based on current known plans in technology. And so in terms of pile driving vessels, it's assumed that in the scenario, all projects and all development will solve vessel procurement challenges and meet current schedules and timelines. So each project that we know of will be able to find the pile driving vessels they need to meet their timeline and things progress on schedule. And if there's something comes to pass, then the amount of development occurring and the timing of the
development will be somewhat less impactful than what we analyzed. And so we're not really putting a number on the vessels so much as we are talking about the development and assuming they have adequate vessels. And so, in table 3.5-2, on page B-33, which is an appendix $B$, we have -- we show the number of projected potential concurrent pile driving days possible for neighboring and nearby projects. And those are groups of regionally. So, for example, Massachusetts, Rhode Island is a group. And so that information is used to look at the incremental contribution, and $I$ emphasize that, of the proposed project, that is Vineyard Wind 1 proposed project in this scenario. And so this information can be used for considering future development. It's not, it's not, you know, predicting it necessarily so much as projecting it.

So, sorry, my notes here are jumping around. And it's important to keep in mind that the Vineyard Wind proposal is the only development that's being approved, disapproved or approved conditions in this current NEPA analysis. So the scenario is more of a thought device to help consider Vineyard Wind's potential footprint within
this emerging industry, and as part of whole, the whole of activities on the OCS, but Kyle can speak more specifically to how that's considered with the scenario that we constructed and had him and others consider.

ISIS FARMER: Thank you, Ian. So, Kyle, I'm going ask if you can introduce -- start out by introducing yourself and then just respond.

Kyle, I think you're on mute still. No worries we're just going hold here for just a second while Kyle gets his audio back on. Okay. I think we're going to maybe give Kyle a second to reconnect his line.

So how about we move on to a question that we received on cultural resources in Section 106 . So I'm going to ask Brandi Carrier if you wouldn't mind turning on your video and unmuting your line. And would you mind starting by introducing yourself?

BRANDI CARRIER: Hi, Isis, my name is Brandi Carrier, and I'm an archaeologist with the Renewable Energy Program.

ISIS FARMER: Thanks, Brandi. And the question for you is which category assesses visual cultural impacts? And that was a comment -- a
question that we receive during our comment period today.

BRANDI CARRIER: Sure, $I$ can answer that. So the supplemental environmental impact statement addresses visual impacts to cultural resources, which of course include traditional cultural practices. It's section 3.9 of the document. The development of future offshore wind projects, we know we've introduced new, modern and intrusive visual elements to the fuschias of cultural resources along the southern coast of Rhode Island and Massachusetts, which also includes Martha's Vineyard, Nantucket and the adjacent islands like Chappaquiddick. The SEIS supplemental environmental impact statement also reflects input from BOEM's essential and ethics consultation. And these have included, of course, the Chappaquiddick Wampanoag Tribe as a consulting party. And this consultation prompted BOEM to identify Chappaquiddick Island as the separate traditional control property that may be impacted visually by the introduction of structures that are out of character with the tribe's traditional uses.

ISIS FARMER: Thank you, Brandi. And as a
follow up question to that one, how does Vineyard Wind plan to mitigate visual cultural impacts?

BRANDI CARRIER: Sure. Historic properties visual impact assessment for the proposed action determines that the construction of the wind turbine generators would adversely affect three historic properties, and Chappaquiddick Island TCP, which I mentioned a moment ago, is one of those.

The study also determined that the scale, the extent and the intensity of these impacts would be partially mitigated by environmental and atmospheric factors. These are things like cloud haze, fog, sea spray, vegetation and wave height that would partially or fully screen the wind turbine generators during various times throughout the year.

In addition, the proposed action was found to only affect southern views from these resources and the study also indicates that viewers would not be able to see any wind turbine generators from approximately 59 percent of the locations within the Chappaquiddick TCP or traditional cultural property due to topographic and other landscape features. Again, these are hills, ridges, vegetation and
existing buildings. The proposed action would further mitigate these visual impacts by taking the following actions: Avoiding the use of three turbine locations in the northwest corner of the wind development area. In other words, so close to the islands, including Chappaquiddick. The use of non-reflective pure white and light gray paint on offshore structures, and then funding a mitigation plan to resolve impacts pursuant to section 106 under a memorandum of agreement. So creative mitigation methods and concepts for ways to minimize and mitigate these visual impacts are being considered under the section 106 review process that's ongoing and that will continue and be completed alongside the NEPA schedules, so approximately December of this year.

ISIS FARMER: Thank you, Brandi. Do you think maybe there was another question, you know, more generally about cultural resources? And about cultural resource 30?

BRANDI CARRIER: I did not see that when $I$ -- ISIS FARMER: Could you read it to me? BRANDI CARRIER: Oh, yeah, no problem. Here, I think there was just some general
information, general questions about maybe cultural resources in general. And so we have some notes here about marine cultural resource surveys within the Vineyard 1 development area.

ISIS FARMER: If it's not a question, you can move along.

BRANDI CARRIER: Yeah, again, I can speak to that very generally. So the there were marine cultural research surveys conducted throughout the area potential effects in the offshore and the onshore areas where the project will have seabed or ground disturbing impact. All of the shipwrecks that were identified as the result of the surveys will be avoided. Surveys also identified 34 Paleo landform features that are dated to the time of human occupation. While we haven't found any evidence of archaeological sites within those Paleo land form features, they are considered to possess the possibility of having those sites inside them. And as a result, you know, we consider those something that needs to be addressed. So the project is going to be able to avoid 19 of those 35 . The remaining 16 the project will not be able to avoid, and as a result of that we're going to be engaging with
tribal stakeholders through the section 106 process to identify suitable mitigations that would allow the tribes to have voice and decision-making authority and involvement and engagement in the project as we make decisions about how to appropriately mitigate tohse potential effects.

ISIS FARMER: Thank you for that additional information, Brandi. Okay, and then we also have a question on visual impacts. Ben, would you mind turning on your camera and unmuting your line as well as introducing yourself?

BEN SUSSMAN: I'm happy to do that. My name is Ben Sussman. I'm an impact assessment specialist with ERM, a consultant to BOEM on this project, visual impact specialist as well. So the question is more broadly, does the new visual impact analysis include images of the turbines on clear days from Nantucket and Muskeget or Tuckernuck Islands, as well as nighttime views including any necessary lighting?

So various sections of the supplemental EIS discussed the direct and indirect visual impacts of the proposed action on a variety of resources. This includes employment and economics in Section 3.7 of
the supplemental EIS, cultural and historic resources in Section 3.9, as we just heard Brandi discuss in quite a bit of detail, and recreation and tourism in section 3.10. The simulations that are used to analyze these potential impacts include the large -- larger 14 megawatt turbines for the proposed actions, as well as simulations of cumulative visual impacts of the proposed action along with reasonably foreseeable other actions as presented in Appendix A. Vineyard Wind provided both daytime and nighttime simulations of these two categories, including both proposed action alone and the overall combination of proposed action with cumulative actions from multiple locations on the islands. This includes Nantucket and Martha's Vineyard. Martha's Vineyard in locations that are considered to be representative of many of the observation points on those islands. The locations for individual simulations are representative of the coast lines in particular, including Aquinnah on the south and South Beach on Martha's Vineyard and Madaket Beach on Nantucket.

ISIS FARMER: Thanks, Ben. Do you want Kyle back on the line? If not, we do have a few
more questions that we'll go through before coming back to him.

Okay, we'll just pause here for a second and go back up to some of our additional questions that have come in since we started our $Q \& A . O k a y$. So, Michelle, looks like we have one question for you. But $I$ see Eric, thanks for turning on your camera and unmuting your line. Does the permit allow the foundations to be designed to repower the wind turbine generators to a larger size as technology advances?

MICHELLE MORIN: Yes, thank you. So, we would consider these kind of requests on a case by case basis. And this -- as you can see in the EIS we analyze a design envelope, and then the purpose of a design envelope is to allow for improved advances in technology. If Vineyard Widn down the road, if the project was approved, and Vineyard Wind down the road wanted to use an even larger turbine that was outside the scope of the EIS, that would trigger a revision to the construction and operation plan, which would then trigger a new review and approval process.

ISIS FARMER: Thanks, Michelle. So it looks
like we may have Kyle back on the line.
Kyle, would you try turning on your camera and unmuting our line?

KYLE BAKER: Can you hear me now?
ISIS FARMER: We can, great.
KYLE BAKER: Oh, sorry about that. There was a problem somehow. Yeah, so following back on Eric K.'s question about how we're going to analyze impacts to the mammals. First off, my name is Kyle Baker, I am a marine biologist with BOEM's Office of Renewable Energy Programs, I'm a subject matter expert in mammals and turtles. Yeah, so we did look at the impacts of the current pile driving. And the way we did that was we looked at the maximum number of potential overlapping construction days in the neighboring project areas. And we defined neighboring project areas as those over kind of big geographic regions such as Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland and Virginia. And look at the total construction days, and generally how far animals can travel and swim over that time. And it seems reasonably conservative to look at these big areas that way as neighbors where they could be potentially exposed to
construction from two or more projects.
So the Rhode Island, Massachusetts area has a greatest potential for concurrent contracting to occur, on the total number of potential concurrent construction days ranges from 16 to 103 days. If one foundation was put in a day, or eight to 50 days if two foundations are installed per day, depending on the year only -- in relation to the Vinyard WInd Project only the Southfork Wind Farm may be constructed currently, and that has a limited number of turbines proposed, so potentially it could be eight to 16 days of concurrent construction between Vidyard Wind and Southfork Wind Farm. Additionally, under the cumulative scenario, Delaware and Maryland have the potential for 11 days in concurrent pile driving, and there's no concurrent pile driving reflected in any of the other remaining areas based on schedule.

So, yeah, so we did assess that in the SEIS. And we looked at the hearing impact, the behavioral impact, and $I$ think you mentioned, there's a table in the SEIS, table 3.5-2.

ISIS FARMER: Thank you, Kyle. We
appreciate that. And so there was also another
question about infrasound. And so the question was, there are comments on the Federal Register for the supplemental EIS about the infrasound disturbances. Can you outline what this is, and if it was analyzed as part of this SEIS, not the supplemental EIS, in the draft EIS for this project? Are there impacts of concern?

KYLE BAKER: Yeah. So we're still looking at those comments. We will consider all comments we receive. I can't say -- we did consider some of the impacts of infrasound in the SEIS. There are sounds sounds below that which humans can hear, but some animals can, just barely whales. Some sounds I think --

ISIS FARMER: I think your audience cut out, unfortunately.

KYLE BAKER: Only for sounds that can be created by the operation of the -- (Loss of Audio) Hello?

ISIS FARMER: Yeah, we can hear you now but you're cutting in and out a little bit.

KYLE BAKER: Okay, apologies. Can you hear me now?

ISIS FARMER: I can.

KYLE BAKER: Okay, sorry about that. Yeah, so $I$ was saying the wind turbine generators can create some levels of infrasound. Some of it can be transmitted via vibrations on the tower on the actual water. BOEM has taken measures of that through our science program. And that sound reaches background levels within 50 meters of the turbines, that it doesn't travel very far.

There has been reports periodically in the news about the dangers of infrasound on people in ear and there's really no scientific evidence that happens. And that does not occur. But we have considered the impacts of the wind turbines generating noise in the SEIS and we're taking a closer look at the comments and incorporating more information that there may be.

KYLE BAKER: Okay. Thank you. It looks like for Ian and Kyle, there's another follow up question that asks: All other offshore wind projects aside, specifically how many Vineyard Wind pile driving vessels are anticipated to be active during construction? How is this scenario addressed in the supplemental EIS? And if you need a moment, we do have a couple other questions that we could go back
to before coming back here.
KYLE BAKER: Yeah, $I$ think we can answer that now. There's no more than two piles or two foundations proposed to be solved today. There is a limit on the number of jack up vessels so it's unclear whether there'll be one or two jack up vessels available. But despite of whether there's one or two, there'll be no more than two monopiles installed per day or a jacket.

ISIS FARMER: Okay, thank you, Kyle.
Okay. And so we only have a few more questions left. I'll go back to Michelle for one, and I think this is somewhat similar to one of the questions you answered before, but the question is: Will the BOEM permit require cooperation with research projects that are approved by BOEM? If they do not violate warranties and are performed with appropriate safety measures?

MICHELLE MORIN: Yes, thank you, Isis. We have to consider this on a case by case basis. We will need more detail to answer this question. Are there but generally activities that don't conflict with the lessee's activities? Would it be prohibited? And we would consider the use of
offshore wind facilities to host research equipment. In that case, we'll work with the lessee and we strongly encourage research activities in these areas to be coordinated with the lessee.

ISIS FARMER: Thank you. And there's another question for you, Michelle, about decommissioning. And the question was: Will the decommissioning bond required be adjusted to match increasing costs over the years as costs will certainly rise as time passes?

MICHELLE MORIN: Thank you. The estimate for the bond is in today's dollars, but our regulations allow us to go back and increase the amount of financial assurance if we determine the decommissioning cost has increased. So basically, we reserve that right to update the estimate at any time during the lifetime of the project.

ISIS FARMER: Okay, thank you. Okay, just scanning our last remaining questions here. We appreciate your patience.

Okay. There is a question about what impact does ADLS offer with respect to cultural/new impacts? And this ADLS stands for aviation detected lighting systems. And so I'm assuming, Ben, would
you mind turning on your camera and unmuting your line?

BEN SUSSMAN: Sure. So the simple answer is that ADLS would reduce visual impacts, whether they are visual impacts on cultural resources or visual impacts on anything else. Basically, as opposed to a standard red flashing light that you might see on top of any kind of transmission tower now. ADLS would only activate if an aircraft got near enough to need the lights to be activated, and so they would remain dark the vast majority of the time and only luminate a very small percentage of the time.

ISIS FARMER: Thank you, Ben. Looks like the last question that we have is maybe a clarification on a previous question. And the question is repowering is accomplished after the wind farm is constructed. So if 10 years into the project they decide they want to upgrade to another wind turbine generator, will BOEM allow this to be planned for now? At the moment this construction and operations plan has already expanded to include the largest form turbine generators that may be available at the time of construction. But they are growing in size rapidly. It would be to the
developer's advantage to design for repowering midlife, as has been happening in terrestrial wind farms. Is this being considered as part of the construction and operations plan? And, Michelle, would you mind turning on your camera and unmuting your line?

MICHELLE MORIN: Hi, that's a very good question. That was not specifically proposed in the COP or considered in the supplemental EIS. But there has been nothing preventing a leasee to talk about that and their costs and us to analyze that in our environmental impact statement.

ISIS FARMER: Thank you, Michelle. And by going back through our questions, I believe those are the only ones that we have.

CHRISTINE DAVIS: All right. Good deal, Isis. Just a quick reminder to folks, if you want to try and ask a question yet, because it's in the last closing moments of the meeting, do go to the Zoom function on the bottom of the $Q$ \& $A$ box and enter them now. Otherwise, we can go to the next slide. We can show other ways to participate in the process, and you can click on that next slide. That would be great.

Here we go. So it's completed or just about to complete the second meeting. And he's got a meeting with one on Thursday and two next week. And you can see where we've got. And I've read this aloud on the record earlier, where you can submit comments electronically and in writing. Just doing a quick check on the $Q$ \& $A$ box before calling this meeting complete. I'm not seeing anything there.

So thank you everyone for participating today and getting used to new technology and ways of doing things. I want to thank you personally for the time and participation in this process, and when to turn it back over to Bill Brown for some closing remarks. So have a great week, stay safe and be well and I'll turn it over to Bill.

BILL BROWN: Yeah, I'll keep it brief.
Again, I'm Bill Brown, the chief environmental officer at BOEM, and $I$ receive environmental science assessment regularly for all of BOEM's activities on the OCS, including the wind energy development off the Atlantic coast.

I thank you for joining us today. I think it's been a great meeting with great questions. And we look forward to hearing more from you. BOEM is
committed to protecting our oceans and coasts and the communities that depend on them and to the future of offshore winds also. Please remember that public comment period on this supplement to the draft EIS is open through July 27 th. Thank you again and stay well, and Good evening.

OPERATOR: Thank you for your participation
in today's conference. You may disconnect at this time.
(The Meeting was adjourned at 3:40 p.m.)

Commonwealth of Massachusetts

County of Norfolk, $S S$

I, Darcy Lee Schramn, a Professional Court Reporter and Notary Public in and for the Commonwealth of Massachusetts, do hereby certify that the foregoing Public Information Meeting was taken before me on June 26, 2020. The said testimony was taken digitally and transcribed under my direction. To the best of my knowledge, the within transcript is a complete, true and accurate record of said Meeting.

I am not connected by blood or marriage with any of the said parties, nor interested directly or indirectly in the matter in controversy.

In witness whereof, $I$ have hereunto set my hand and Notary Seal this 8th day of July, 2020 .

Darcy Lee Schramn
My Commission Expires:
April 4, 2025


