Appendix L. Other Impacts

L.1. Unavoidable Adverse Impacts of the Proposed Action

CEQ's NEPA-implementing regulations (40 CFR 1502.16(a)(2)) require that an EIS evaluate the potential unavoidable adverse impacts associated with a Proposed Action. Adverse impacts that can be reduced by mitigation measures but not eliminated are considered unavoidable. Table L-1 provides a listing of such impacts. Most potential unavoidable adverse impacts associated with the Proposed Action would occur during the construction phase and would be temporary. Chapter 3 provides additional information on the potential impacts listed below.

All impacts from planned activities are still expected to occur as described in the No Action Alternative analysis in this EIS, regardless of whether the Proposed Action is approved.

Table L-1 Potential Unavoidable Adverse Impacts of the Proposed Action

Resource Area	Potential Unavoidable Adverse Impact of the Proposed Action
Air Quality	• Air quality impacts from emissions from engines associated with vessel traffic, vehicle traffic, construction activities, and equipment operation
Bats	• Displacement and avoidance behavior due to habitat loss/alteration, equipment noise, and vessel traffic
Benthic Resources	• Suspension and re-settling of sediments due to seafloor disturbance • Conversion of soft-bottom habitat to new hard-bottom habitat • Habitat quality impacts, including reduction in certain habitat types as a result of seafloor alterations • Disturbance, displacement, and avoidance behavior due to habitat loss/ alteration, equipment activity and noise, and vessel traffic • Individual mortality due to construction activities
Birds	• Displacement and avoidance behavior due to habitat loss/alteration, equipment noise, and vessel traffic
Coastal Habitat and Fauna	• Habitat alteration and removal of vegetation, including trees • Temporary avoidance behavior by fauna during construction activity and noise-producing activities • Individual fauna mortality due to collision with vehicles or equipment during clearing and grading activities, particularly species with limited mobility
Commercial Fisheries and For-Hire Recreational Fishing	• Disruption of access or temporary restriction in harvesting activities due to construction of offshore Project elements • Disruption of harvesting activities during operations of offshore wind facility • Changes in vessel transit and fishing operation patterns • Changes in risk of gear entanglement or availability of target species
Cultural Resources	• Visual impacts on viewsheds of historic properties • Physical impacts on known submerged archaeological resources • Physical impacts on known ancient submerged landforms with archaeological or TCP potential

Resource Area	Potential Unavoidable Adverse Impact of the Proposed Action
Demographics, Employment, and Economics	• Disruption of commercial fishing, for-hire recreational fishing, and marine recreational businesses during offshore construction and cable installation • Hindrances to ocean economy sectors due to the presence of the offshore wind facility, including commercial fishing, recreational fishing, sailing, sightseeing, and supporting businesses
Environmental Justice	• Compounded health issues of local environmental justice communities near ports resulting from increased air emissions and noise associated with vessel traffic, construction activities, and equipment operation • Loss of employment or income due to disruption to commercial fishing, for-hire recreational fishing, or marine recreation businesses • Hindrances to coastal visibility and subsistence fishing due to offshore construction and operation of the offshore wind facility
Finfish, Invertebrates, and Essential Fish Habitat	• Suspension and re-settling of sediments due to seafloor disturbance • Displacement, disturbance, and avoidance behavior due to construction-related impacts, including noise, vessel traffic, increased turbidity, sediment deposition, and EMF • Individual mortality due to construction activities • Habitat quality impacts, including reduction in certain habitat types as a result of seafloor surface alterations • Conversion of soft-bottom habitat to new hard-bottom habitat
Land Use and Coastal Infrastructure	• Conversion of undeveloped areas to utility right-of-way or easement • Land use disturbance due to construction as well as effects due to noise, vibration, and travel delays • Potential for accidental releases during construction
Marine Mammals	• Increased risk of injury (TTS or PTS) to individuals due to underwater noise from pile-driving activities during construction • Disturbance (behavioral effects) and acoustic masking due to underwater noise from pile driving, shipping and other vessel traffic, aircraft, geophysical surveys (HRG surveys), WTG operation, cable laying, and drilling during construction and operations • Increased risk of individual injury and mortality due to vessel strikes • Increased risk of individual injury and mortality associated with fisheries gear
Navigation and Vessel Traffic	• Congestion in port channels • Increased navigational complexity, vessel congestion, and allision risk within the offshore Wind Farm Development Area • Potential for disruption to marine radar on vessels operating within or near the Projects, increasing navigational complexity • Hindrances to SAR missions within the offshore Wind Farm Development Area • Submerged export cable risk to vessel anchors
Other Uses	• Disruption to offshore scientific research and surveys and species monitoring and assessment • Increased navigational complexity for military or national security vessels operating within the Wind Farm Development Area • Changes to aviation and air traffic navigational patterns

Resource Area	Potential Unavoidable Adverse Impact of the Proposed Action
Recreation and Tourism	• Disruption of coastal recreation activities during onshore construction, such as beach access • Viewshed effects from the WTGs altering enjoyment of marine and coastal recreation and tourism activities • Disruption to access or temporary restriction of in-water recreational activities from construction of offshore Project elements • Temporary disruption to the marine environment and marine species important to fishing and sightseeing due to turbidity and noise • Hindrances to some types of recreational fishing, sailing, and boating within the area occupied by WTGs during operation
Sea Turtles	• Increased risk of for individual injury and mortality due to vessel strikes during construction, O&M, and decommissioning • Increased risk for individual injury and mortality associated with fisheries gear • Disturbance, displacement, and avoidance behavior due to habitat disturbance and underwater noise during construction • Migratory impacts on navigation associated with EMF from transmission cables
Scenic and Visual Resources	• Alterations to the seascape, open ocean, and landscape character units' character and effects on viewer experience due to construction, O&M, and decommissioning of the wind farm, onshore landing sites, onshore export cable routes, onshore substations, and electrical connections with the power grid
Water Quality	• Increase in suspended sediments due to seafloor disturbance during construction, O&M, and decommissioning
Wetlands	• Temporary wetland alterations, including increased sedimentation deposition and removal of vegetation

L.2. Irreversible and Irretrievable Commitment of Resources

CEQ's NEPA-implementing regulations (40 CFR 1502.16(a)(4)) require that an EIS review the potential impacts on irreversible or irretrievable commitments of resources resulting from implementation of a Proposed Action. CEQ considers a commitment of a resource irreversible when the primary or secondary impacts from its use limit the future options for its use. Irreversible commitment of resources typically applies to impacts on nonrenewable resources such as marine minerals or cultural resources. The irreversible commitment of resources occurs due to the use or destruction of a specific resource. An irretrievable commitment refers to the use, loss, or consumption of a resource, particularly a renewable resource, for a period of time.

Table L-2 provides a listing of potential irreversible and irretrievable impacts by resource area. EIS Chapter 3 provides additional information on the impacts summarized below.

Table L-2 Irreversible and Irretrievable Commitment of Resources by Resource Area for the Proposed Action

Resource Area	Irreversible Impacts	Irretrievable Impacts	Explanation
Air Quality	No	No	BOEM expects air pollutant emissions to comply with permits regulating compliance with air quality standards. Emissions would be temporary during construction activities and would be limited to the Project lifetime for O&M activities. To the extent that the Proposed Action displaces fossil-fuel energy generation, overall regional improvement of air quality would be expected.
Bats	Yes	No	Irreversible impacts on bats could occur if one or more individuals were injured or killed; however, implementation of mitigation measures developed in consultation with USFWS would reduce or eliminate the potential for such impacts. Decommissioning of the Projects would reverse the impacts of bat displacement from foraging habitat.
Benthic Resources	No	No	Although local mortality of benthic fauna and habitat alteration is likely to occur, BOEM does not anticipate population-level impacts on benthic organisms; habitat could recover after decommissioning activities.
Birds	Yes	No	Irreversible impacts on birds could occur if one or more individuals were injured or killed; however, implementation of mitigation measures developed in consultation with USFWS would reduce or eliminate the potential for such impacts. Decommissioning of the Projects would reverse the impacts of bird displacement from foraging habitat.
Coastal Habitat and Fauna	No	No	Although limited removal of natural habitat associated with clearing and grading for construction of the onshore export cable and substation are likely to occur, BOEM does not anticipate population-level impacts on flora or fauna; coastal habitat could recover after construction in some areas, and after decommissioning activities in other areas.
Commercial Fisheries and For-Hire Recreational Fishing	No	Yes	Based on the anticipated duration of construction and O&M activities, BOEM does not anticipate irreversible impacts on commercial fisheries. The Projects could alter habitat during construction and operations, limit access to fishing areas during construction, or reduce vessel maneuverability during operations. However, the conceptual decommissioning of the Projects would reverse those impacts. Irretrievable impacts (lost revenue) could occur due to the loss of use of fishing areas at an individual level.

Resource Area	Irreversible Impacts	Irretrievable Impacts	Explanation
Cultural Resources	Yes	Yes	Although unlikely, unanticipated removal or disturbance of previously unidentified cultural resources onshore and offshore could result in irreversible and irretrievable impacts. Physical impacts on cultural resources that would be irreversible include impacts caused by activities that result in ground disturbance, which has the potential to disturb or destroy terrestrial archaeological resources; seafloor disturbance, which has the potential to damage or destroy marine archaeological resources or ancient submerged landforms; and construction activities that could damage, destroy, or diminish the integrity of buildings, structures, objects, and historic districts onshore.
Demographics, Employment, and Economics	No	Yes	Construction activities could temporarily increase contractor needs, housing needs, supply requirements, and demand for local businesses, leading to an irretrievable loss of workers for other projects. These factors could lead to increased housing and supply costs.
Environmental Justice	No	Yes	Impacts on environmental justice communities could occur due to loss of income or employment for low-income workers in marine industries; this could be reversed by Project decommissioning or by other employment, but income lost during Project operations would be irretrievable.
Finfish, Invertebrates, and Essential Fish Habitat	No	No	Although local mortality of finfish and invertebrates and habitat alteration and loss of SAV habitat could occur, BOEM does not anticipate population-level impacts on finfish, invertebrates, and essential fish habitat. It is expected that the aquatic habitat for finfish and invertebrates would recover following decommissioning activities.
Land Use and Coastal Infrastructure	No	Yes	Land use for construction and operation of the Projects could result in a minor irreversible impact due to the temporary or long-term loss of use of the land for otherwise typical activities. Other land uses could be restored upon Project decommissioning.

Resource Area	Irreversible Impacts	Irretrievable Impacts	Explanation
Marine Mammals	No	Yes	Irreversible impacts on marine mammal populations could occur if one or more individuals of an ESA-listed species were injured or killed or if those populations experienced behavioral effects of high severity. With implementation of mitigation measures, developed in consultation with NMFS (e.g., timing windows, vessel speed restrictions, safety zones), the potential for an ESA-listed species to experience high-severity behavioral effects or be injured or killed would be reduced or eliminated. No irreversible high-severity behavioral effects from Project activities are anticipated, as described in Section 3.15; however, due to the uncertainties from lack of information that are outlined in Appendix D, these effects are still possible. Irretrievable impacts could occur if individuals or populations grow more slowly as a result of injury or mortality due to vessel strikes or entanglement with fisheries gear, or due to displacement from the Project area.
Navigation and Vessel Traffic	No	No	Based on the anticipated duration of construction and operations, BOEM does not anticipate impacts on vessel traffic to result in irreversible or irretrievable impacts.
Other Uses	No	Yes	Disruption of offshore scientific research and surveys would occur during proposed Project construction, operations, and decommissioning activities.
Recreation and Tourism	No	No	Construction activities near the shore could result in a minor, temporary loss of use of the land for recreation and tourism purposes.
Sea Turtles	No	Yes	Irreversible impacts on sea turtles could occur if one or more individuals of species listed under the ESA were injured or killed; however, the implementation of mitigation measures, developed in consultation with NMFS, would reduce or eliminate the potential for impacts on listed species. Irreversible impacts could occur if individuals or populations grow more slowly as a result of injury or mortality due to vessel strikes or entanglement with fisheries gear caught on the structures, or due to displacement from the Project area.
Scenic and Visual Resources	No	Yes	Long-term (until post-decommissioning) alterations to the seascape, open ocean, and landscape character units' character and effects on viewer experience due to construction, O&M, and decommissioning of the wind farm, onshore landing sites, onshore export cable routes, onshore substations, and electrical connections with the power grid.
Water Quality	No	No	BOEM does not expect activities to cause loss of, or major impacts on, existing inland waterbodies or wetlands. Turbidity impacts in marine and coastal environments would be temporary.

Resource Area	Irreversible Impacts	Irretrievable Impacts	Explanation
Wetlands	No	No	BOEM does not expect activities to cause loss of, or major impacts on, existing inland wetlands.

L.3. Relationship Between the Short-Term Use of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

CEQ's NEPA-implementing regulations (40 CFR 502.16(a)(3)) require that an EIS address the relationship between short-term use of the environment and the potential impacts of such use on the maintenance and enhancement of long-term productivity. Such impacts could occur as a result of a reduction in the flexibility to pursue other options in the future, or assignment of a specific area (land or marine) or resource to a certain use that would not allow other uses, particularly beneficial uses, to occur at a later date. An important consideration when analyzing such effects is whether the short-term environmental effects of the action will result in detrimental effects on long-term productivity of the affected areas or resources.

As assessed in EIS Chapter 3, BOEM anticipates that the majority of the potential adverse effects associated with the Proposed Action would occur during construction activities and would be short term in nature and minor to moderate in severity/intensity. These effects would cease after decommissioning activities. In assessing the relationships between short-term use of the environment and the maintenance and enhancement of long-term productivity, it is important to consider the long-term benefits of the Proposed Action, which include:

- Promotion of clean and safe development of domestic energy sources and clean energy job creation;
- Promotion of renewable energy to help ensure geopolitical security, combat climate change, and provide electricity that is affordable, reliable, safe, secure, and clean;
- Delivery of power to the electric grid to contribute to New York State's renewable energy goals; and
- Increased habitat for certain fish species.

Based on the anticipated potential impacts evaluated in this document and the Draft EIS that could occur during Proposed Action construction, O&M, and decommissioning, and with the exception of some potential impacts associated with onshore components, BOEM anticipates that the Proposed Action would not result in impacts that would significantly narrow the range of future uses of the environment. For purposes of this analysis, BOEM assumes that the irreversible impacts presented in Table L-2 would be long term. After completion of the Proposed Action's operations and decommissioning phases, however, BOEM expects the majority of marine and onshore environments to return to normal long-term productivity levels.

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