Record of Decision

New England Wind Farm and New England Wind Project Construction and Operations Plan

April 1, 2024

U.S. Department of the Interior
Bureau of Ocean Energy Management
U.S. Department of the Army
U.S. Army Corps of Engineers
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

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Appendices

1 Introduction

This document constitutes the Bureau of Ocean Energy Management's (BOEM), the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service's (NMFS),[1] and the U.S. Army Corps of Engineers' (USACE) joint record of decision (ROD) for the Final Environmental Impact Statement (EIS) prepared for the New England Wind Project (the Project). The ROD addresses BOEM's action to approve the Project's Construction and Operations Plan (COP) under subsection 8(p)(4) of the Outer Continental Shelf Lands Act (OCSLA; 43 USC § 1337(p)), NMFS's action to issue a Letter of Authorization (LOA) to Park City Wind LLC (referred to herein as "Park City Wind," the "Lessee," or the "applicant") under section 101(a)(5)(A) of the Marine Mammal Protection Act, as amended (MMPA; 16 USC § 1371(a)(5)(A)), and USACE's action to issue a permit under section 10 of the Rivers and Harbors Act of 1899 (RHA; 33 USC § 403) and section 404 of the Clean Water Act (CWA; 33 USC § 1344). This ROD was prepared following the requirements of the National Environmental Policy Act (NEPA; 42 USC §§ 4321 *et seq.*) and 40 CFR §§ 1500–1508.[2]

BOEM prepared the New England Wind Final EIS with the assistance of a third-party contractor, Environmental Resources Management, Inc. (ERM). NMFS, USACE, the U.S. Coast Guard (USCG), the Bureau of Safety and Environmental Enforcement (BSEE), the U.S. Environmental Protection Agency (USEPA), and the U.S. Fish and Wildlife Service (USFWS) were cooperating agencies during the development and review of the document. The Massachusetts Office of Coastal Zone Management, Rhode Island Coastal Resources Management Council and New York Department of State supported the preparation of the EIS as state cooperating agencies. The Advisory Council on Historic Preservation (ACHP), Federal Aviation Administration (FAA), National Park Service, U.S. Navy, U.S. Air Force, and Department of Defense supported the environmental review as participating agencies.

NMFS received a request for authorization to take marine mammals incidental to construction activities related to the Project, which NMFS may authorize under the MMPA. NMFS's issuance of Incidental Take Regulations (ITR) and an associated LOA is a major Federal action and, in relation to BOEM's action, is considered a connected action (40 CFR § 1501.9(e)(1)). The purpose of the NMFS action—which is a direct outcome of Park City Wind's request for authorization to take marine mammals incidental to specified activities associated with the Project (i.e., pile driving, site assessment surveys, and unexploded ordnance (UXO) detonation)—is to evaluate Park City Wind's request pursuant to specific requirements of the MMPA and its implementing regulations administered by NMFS, considering impacts of the applicant's activities on relevant resources, and if appropriate, issue the authorization. NMFS needs to render a decision regarding the request for authorization due to NMFS's responsibilities under the MMPA (16 USC § 1371(a)(5)(A)) and its implementing regulations.

In addition to analyzing the potential impacts resulting from BOEM's approval of the COP pursuant to subsection 8(p)(4) of OCSLA, the Final EIS also analyzes potential impacts resulting

[1] For purposes of this ROD, NMFS, as an action agency, has been delegated authority to issue marine mammal incidental take authorizations.

[2] The associated Final EIS was prepared using the 2020 Council on Environmental Quality (CEQ) NEPA regulations; therefore, this ROD follows those regulations.

from the Proposed Action that are relevant to USACE permitting actions under Section 10 of the RHA, 33 U.S.C. § 403; Section 404 of the CWA, 33 U.S.C. § 1344; and NMFS's action of issuing a LOA for the incidental harassment of small numbers of marine mammals during construction to Park City Wind under the MMPA (16 USC § 1371(a)(5)(A); see also 40 CFR § 1501.9(e)(1)).

1.1 Background

In 2009, the U.S. Department of the Interior (DOI) announced final regulations for the Outer Continental Shelf (OCS) Renewable Energy Program, which was authorized by the Energy Policy Act of 2005. The Energy Policy Act provisions implemented by BOEM provide a framework for issuing renewable energy leases, easements, and rights-of-way for OCS activities (see Final EIS Section 1.3). BOEM's renewable energy program occurs in four distinct phases: (1) regional planning and analysis, (2) lease issuance, (3) site assessment, and (4) construction and operations. Table 1-1 summarizes the history of BOEM's planning and leasing activities offshore Rhode Island and Massachusetts.

Table 1-1: History of BOEM Planning and Leasing Offshore Rhode Island and Massachusetts Related to Lease OCS-A 0534

Year	Milestone
2009	BOEM began evaluating potential OCS wind energy leasing and development offshore Massachusetts in 2009 by establishing an intergovernmental renewable energy task force comprised of elected officials from state, local, and Tribal governments and other Federal agency representatives. After extensive consultation with the task force, BOEM removed areas within 12 nautical miles (nmi) of inhabited coastline from further consideration for offshore wind leasing to reduce visual impacts. In addition, areas beyond the 60-meter water depth contour were removed due to technological limitations.
2010	BOEM published a request for interest (RFI) in the *Federal Register* to determine whether commercial interest exists for wind energy development in an area offshore Massachusetts (75 Fed. Reg. 82,055 (December 29, 2010).
2012	• On February 6, 2012, BOEM published a Call for Information and Nominations (Call) in the *Federal Register* (77 Fed. Reg. 5820) to solicit industry interest in acquiring commercial leases for developing wind energy projects. In that same month, BOEM also published a Notice of Intent (NOI) to prepare an Environmental Assessment (EA) of the Call Area. • In May 2012, BOEM identified a wind energy area (WEA) offshore Massachusetts, excluding additional areas from commercial leasing, and addressed comments from the Call.[3] • On November 2, 2012, BOEM published a notice of availability (NOA) of an EA in accordance with NEPA for potential commercial wind lease issuance and site assessment activities on the OCS offshore Massachusetts for public review and comment (77 Fed. Reg. 66,185).

[3] BOEM works with its Federal, state, local, and Tribal partners to identify WEAs of the OCS that appear most suitable for commercial wind energy activities, while presenting the fewest apparent environmental and user conflicts (BOEM 2022). After WEAs are identified, BOEM prepares an Environmental Assessment (EA) under NEPA to determine potential impacts associated with activities reasonably expected to follow the issuance of one or more leases within a WEA. BOEM may then move forward with steps to hold a competitive lease sale for commercial wind development within the WEAs. The Project is located in BOEM Lease Area OCS-A 0534, which is located in the RI/MA WEA. The RI/MA WEA is adjacent to and west of the MA WEA. More information on BOEM WEAs, including maps, are found at https://www.boem.gov/renewable-energy/state-activities.

Year	Milestone
2014	• On June 18, 2014, BOEM published a proposed sale notice (PSN) in the *Federal Register* (79 Fed. Reg. 34,771) for approximately 742,978 acres offshore Massachusetts on the U.S. Outer Continental Shelf that would be available for commercial wind energy leasing. • The final sale notice was published in the *Federal Register* (79 Fed. Reg. 70,545) on November 26, 2016, and addressed the comments received on the PSN.
2015	On April 1, 2015, BOEM awarded Lease OCS-A 0501 to Vineyard Wind LLC through a competitive leasing process (30 CFR § 585.211).
2018	On May 10, 2018, BOEM approved the Site Assessment Plan (SAP) for Lease Area OCS-A 0501.[4]
2020	On July 2, 2020, a phased development COP was submitted to BOEM for construction, installation, operations, maintenance, and conceptual decommissioning activities for Lease Area OCS-A 0501.
2021	• On June 28, 2021, BOEM approved an assignment of the northernmost 65,296 acres of Lease OCS-A 0501 from Vineyard Wind LLC to Vineyard Wind 1 LLC. The assigned lease under Vineyard Wind 1 LLC continues to be designated Lease OCS-A 0501. Vineyard Wind LLC retained the remaining 101,590 acres, which are included in Lease OCS-A 0534, for the New England Wind Project. • On June 30, 2021, BOEM published in the *Federal Register* an NOI to prepare an EIS for Vineyard Wind South's proposed wind energy facility offshore Massachusetts (86 Fed. Reg. 34,782). On November 22, 2021, BOEM issued an updated NOI, reopening the public scoping period (86 Fed. Reg. 66,334). The updated NOI incorporated additional cable route options and formally announced that the Project's name had changed from Vineyard Wind South to New England Wind. BOEM received an updated COP in Fall 2021 to incorporate additional cable routing variants for the Phase 2 offshore export cables. BOEM issued a Notice of Additional Public Scoping and Name Change in the *Federal Register*, which opened a second public comment period on November 22, 2021. The 30-day public comment period ended on December 22, 2021. • On December 14, 2021, BOEM approved the assignment of Lease OCS-A 0534 from Vineyard Wind LLC to Park City Wind LLC. By doing so, BOEM gave Park City Wind LLC the exclusive right to submit a COP for activities within Lease OCS-A 0534. The majority of the New England Wind Project is proposed within Lease OCS-A 0534, with a small portion of the area within Lease OCS-A 0501 also identified for potential development. However, it should be noted that any development of the area within lease OCS-0501 would require an additional (future) lease assignment.
2022	On December 23, 2022, BOEM published a NOA in the *Federal Register* for the Draft EIS for public review and comment (87 Fed. Reg. 78,993). See Figure 1.1 for an overview of the Project area. The NOA included times and locations for public hearings (all virtual) and a comment period end date of February 21, 2023.
2023	• On August 9, 2023, Park City Wind submitted an updated COP. • On September 28, 2023, the USFWS issued a letter of concurrence and a Biological Opinion (BiOp) for Endangered Species Act (ESA)-listed species within its jurisdiction.
2024	• On February 16, 2024, NMFS issued a BiOp that considered all effects of the proposed actions on ESA-listed species and designated critical habitat under its jurisdiction. • On March 1, 2024, BOEM published a NOA of a Final EIS in the *Federal Register* (89 Fed. Reg. 15,216) initiating a minimum 30-day mandatory waiting period, during which BOEM is required to pause before issuing a ROD.

[4] At the time the SAP was approved, the acreage that was covered by the New England Wind SAP was part of Lease OCS-A-0501 but is now included in Lease OCS-A-0534.

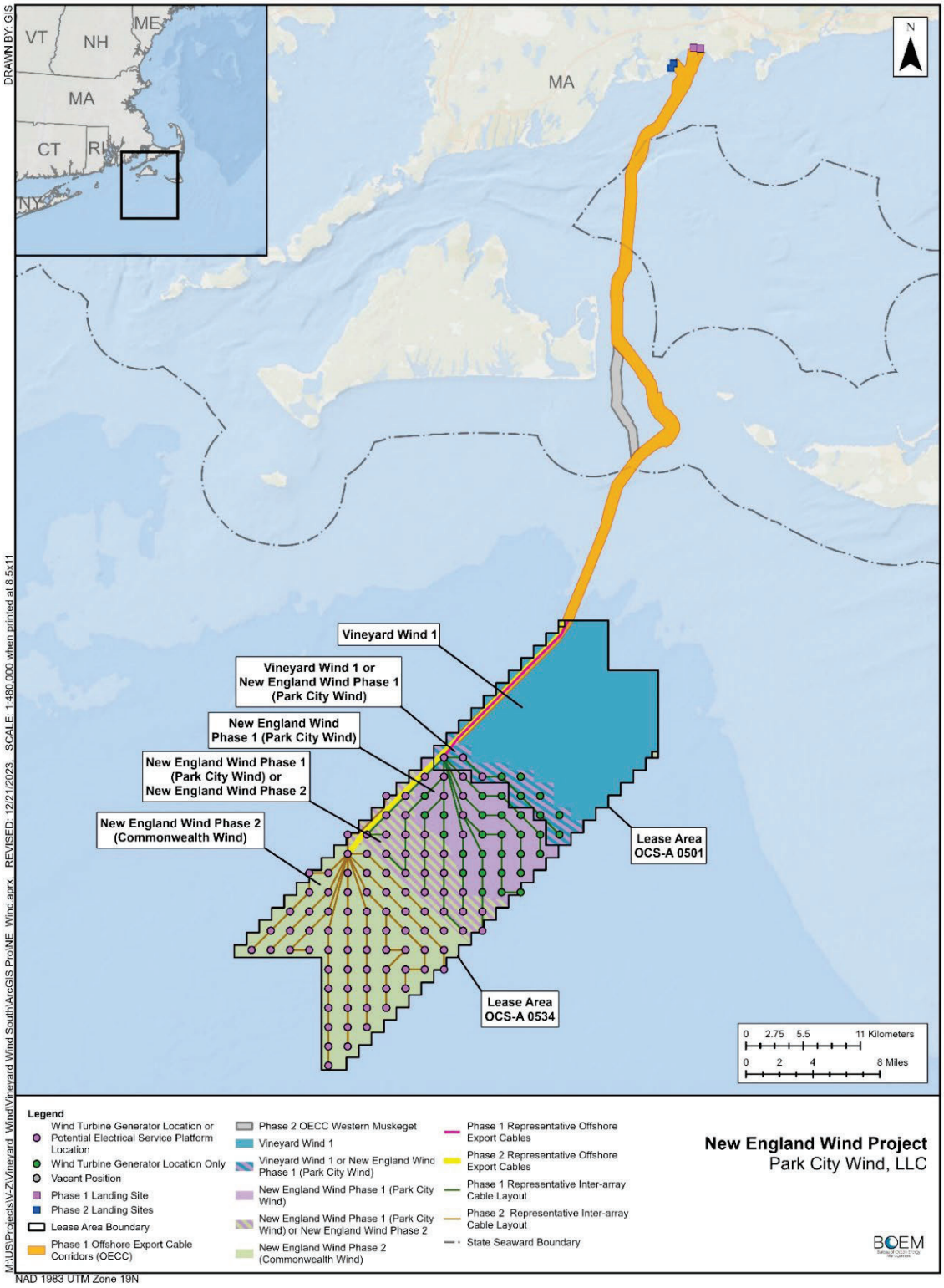

Figure 1-1: Project Area and Facilities

1.2 Authorities

The following summarizes BOEM's authority regarding the approval of the proposed Project; NMFS's authority to authorize the take, by harassment, of marine mammals incidental to the proposed Project; and USACE's authority under section 10 of the RHA, to authorize work and structures within navigable waters of the United States and structures affixed to the OCS,[5] and to authorize a permit under section 404 of the CWA to allow for the discharge of dredged or fill material into waters of the United States. The Final EIS includes a description of consultations, authorizations, and permits related to the Project in Appendix A, Table A-1. The agencies adopting the Final EIS are those agencies that have defined authorizations and permitting responsibilities for the Project itself or for effects related to the Project. The NMFS's MMPA LOA is briefly discussed here; its decision and supporting rationale are discussed in Section 5.2 of this ROD. NMFS is serving as a cooperating agency pursuant to 40 CFR § 1501.8 because the scope of the Proposed Action and alternatives involves activities that could affect marine resources and due to its jurisdiction by law and special expertise. Promulgation of an ITR and issuance of an LOA under the MMPA triggers independent NEPA compliance obligations, which may be satisfied by adopting the Final EIS prepared by BOEM. The USACE is serving as a cooperating agency pursuant to 40 CFR § 1501.8 because the scope of the Proposed Action and alternatives involves activities that could affect resources under its jurisdiction by law and due to its special expertise pursuant to section 10 of the RHA and section 404 of the CWA. Issuance of section 10 or section 404 permits requires NEPA compliance, which will be met via adoption of BOEM's Final EIS and issuance of the ROD. The USACE permitting action is briefly discussed here; its decision and supporting rationale are discussed in Section 5.3 of this ROD. Other agencies either are not required to authorize the Project or have completed any authorizations that are required of them; or their actions are exempt from NEPA (e.g., USEPA's Clean Air Act permitting) and are, therefore, reviewed separately.

1.2.1 BOEM Authority

The Energy Policy Act of 2005, Pub. L. No. 109-58, amended OCSLA (43 USC §§ 1331 *et seq.*) by adding a new subsection 8(p) to authorize the Secretary of the Interior (Secretary) to issue leases, easements, and rights-of-way on the OCS for renewable energy development, including wind energy projects.

The Secretary delegated to BOEM the authority to decide whether to approve COPs. Final regulations implementing this authority were promulgated by BOEM's predecessor agency, the Minerals Management Service, on April 29, 2009 (74 Fed. Reg. 19,637). These regulations prescribe BOEM's responsibility for determining whether to approve, approve with modifications, or disapprove the New England Wind COP. In accordance with Council on Environmental Quality's (CEQ) NEPA regulations (40 CFR Part 1501), BOEM served as the lead Federal agency for the preparation of the EIS.

The Secretary's authorization must comply with OCSLA subsection 8(p)(4) (43 USC § 1337(p)(4)), which "imposes a general duty on the Secretary to act in a manner providing for the

[5] Section 4(f) of the OCSLA of 1953, as amended, extended USACE's authority to prevent obstructions to navigation in navigable waters of the United States to artificial islands, installations, and other devices located on the seafloor to the seaward limit of the OCS. See 43 USC § 1333(e).

subsection's [various policy] goals."[6] According to M-Opinion 37067, "[t]he subsection does not require the Secretary to ensure that the goals are achieved to a particular degree, and she retains wide discretion to determine the appropriate balance between two or more goals that conflict or are otherwise in tension."[7]

1.2.2 National Marine Fisheries Service Authority

Sections 101(a)(5)(A) and (D) of the MMPA allow NMFS to authorize, upon request, the incidental (but not intentional) take of small numbers of marine mammals, including incidental take by harassment, provided certain determinations are made and statutory and regulatory procedures are met (16 USC § 1371(a)(5)(A), (D)). To authorize the incidental take of marine mammals, NMFS evaluates the best available scientific information to determine whether the take would have a negligible impact on affected species or stocks and whether the activity would have an unmitigable adverse impact on the availability of the species or stocks for subsistence use (if applicable). NMFS cannot issue an authorization if NMFS finds that the taking would result in more than a negligible impact on marine mammal species or stocks or would result in an unmitigable adverse impact on the species or stocks for subsistence uses. NMFS also must prescribe the permissible methods of take and other means of effecting the least practicable adverse impact on the species or stocks of marine mammals and their habitat, paying particular attention to rookeries, mating grounds, and other areas of similar significance. All incidental take authorizations include additional requirements pertaining to monitoring and reporting.

For those marine mammal species that are listed under the ESA, NMFS Office of Protected Resources (OPR) must also consult with NMFS Greater Atlantic Regional Fisheries Office (GARFO) Protected Resources Division to receive an exemption for the incidental take of those species and adhere to the requirements listed under Section 7 of the ESA to ensure that the MMPA-authorized incidental take is not likely to jeopardize the continued existence of those species. Pursuant to the ESA Section 7(a)(2), NMFS also must ensure that issuing the MMPA marine mammal incidental take authorization is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat (16 USC § 1536(a)(2)). The ESA Section 7 consultation for this action resulted in issuance of a Biological Opinion (BiOp) that concluded the proposed federal actions are not likely to jeopardize the continued existence of any ESA-listed species or result in the destruction or adverse modification of any critical habitat. The BiOp includes an Incidental Take Statement (ITS), which exempts an identified amount and extent of incidental take of ESA-listed species from the ESA prohibitions on take subject to specified reasonable and prudent measures and implementing terms and conditions considered necessary and appropriate by the action agencies, including NMFS Office of Protected Resources, to minimize the effects of take on ESA-listed marine mammals. The BiOp and ITS also identify measures, which may be specific to the regulatory authorities of each action agency, to ensure compliance with the MMPA ITA with respect to the incidental take of ESA-listed marine mammals (i.e., measures in the Proposed Action and those identified as reasonable and prudent measures and terms and conditions, respectively).

[6] Sol. Op. M-37067, "Secretary's Duties under Subsection 8(p)(4) of the Outer Continental Shelf Lands Act When Authorizing Activities on the Outer Continental Shelf" (Apr. 9, 2021).
[7] M-Opinion 37067 at 5.

NMFS promulgated regulations to implement the MMPA (50 CFR Part 216), including application instructions for incidental take authorizations. Applicants for such authorizations must comply with these regulations, the application instructions, and the MMPA. The decision being made by NMFS, including its decision to adopt BOEM's Final EIS, is discussed in Section 5.2 of this ROD.

1.2.3 U.S. Army Corps of Engineers Authority

This permit action is being undertaken through authority delegated to the District Engineer by 33 CFR § 325.8 pursuant to section 10 of the RHA and section 404 of the CWA. Section 10 of the RHA prohibits the obstruction or alteration of navigable waters of the United States without a permit from USACE. The navigable waters of the United States include all coastal waters within a zone 3 nautical miles seaward of the baseline of the territorial seas. Jurisdiction extends shoreward to the line on the shore reached by the plane of the mean high water. Section 4(f) of the OCSLA of 1953, as amended, extended USACE's authority under section 10 to artificial islands, installations, and other devices located on the seafloor, to the seaward limit of the OCS. Section 404 of the CWA requires prior authorization by USACE of the discharge of dredged or fill material into waters of the United States. The limit of section 404 jurisdiction is measured from the baseline of the territorial seas in a seaward direction, a distance of 3 nautical miles. The landward limits of jurisdiction extend to the high tide line. The term high tide line means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The applicant proposes to discharge fill below the high tide line of waters of the United States out to the 3-mile limit and to perform work and place structures below the mean high water mark of navigable waters of the United States and on the OCS. These activities require authorization from USACE under section 10 of the RHA and section 404 of the CWA.

USACE participated in development of the New England Wind EIS as a cooperating agency under the CEQ NEPA regulations. USACE reviewed and evaluated the information in the Final EIS in accordance with 40 CFR § 1506.3 and 33 CFR Part 325, Appendix B. USACE finds that the New England Wind Final EIS adequately covers all proposed project actions regulated by USACE under section 10 of the RHA and section 404 of the CWA, and that USACE's cooperating agency comments and suggestions have been satisfied by BOEM. Therefore, USACE adopts the Final EIS, as appropriate, for the purposes of complying with NEPA and for the public interest review required by 33 CFR § 320.4, and the alternatives analysis required by 40 CFR Part 230. Issuance of section 10 and section 404 permits requires NEPA compliance, which USACE will meet via adoption of BOEM's Final EIS and issuance of the ROD. The permit decision being made by USACE is discussed in Section 5.3 of this ROD.

2 Proposed Project

2.1 Project Description

The Proposed Action would construct and install, operate, maintain, and eventually decommission a wind energy facility within the Project Design Envelope, including associated export cables, and would implement applicable environmental protection measures (EPM) as described in the New England Wind COP (Epsilon 2022). The Proposed Action would consist of two phases: Phase 1, which is also known as the Park City Wind Project, would be developed immediately southwest of Vineyard Wind 1 in Lease Area OCS-A 0534. Phase 1 would have a total generating capacity of up to 804 MW and consist of 41 to 62 Wind Turbine Generators (WTGs) and 2 Electrical Service Platforms (ESPs) and a maximum of 2 offshore export cables. Phase 2, which is also known as the Commonwealth Wind Project, would be developed immediately southwest of Phase 1 in the portion of Lease Area OCS-A 0534 that is not developed as part of Phase 1. Phase 2 would deliver at least 1,232 MW of power and consist of up to 88 WTGs and 3 ESPs and a maximum of 3 offshore export cables. Five offshore electrical transmission cables, including two for Phase 1 and three for Phase 2, would be installed in an offshore export cable corridor (OECC). The OECC routes and scenarios are described in the Alternatives in Section 3.1 and Tables 3.1 and 3.2. For Phase 1, two cables would be installed in the Eastern OECC in Muskeget Channel. For Phase 2, three cables would be installed in various proposed configurations in the Eastern OECC in Muskeget Channel, the Western Variant in Muskeget Channel and/or the South Coast Variant (SCV), which runs to the south and west of Martha's Vineyard, through Rhode Island Sound. Landing sites for Phase 1 cables would be in Barnstable County, Massachusetts. Intended landing sites for Phase 2 cables would also be in Barnstable County, with the possibility of a landing site in Bristol County as well. Onshore electrical cables, grid interconnection cables, and up to three new or upgraded substations would be installed in Barnstable County, Massachusetts.

Under BOEM's phased development regulation (30 CFR § 585.626(b)(3)), the Lessee would still need future approval of the SCV (a contingency export cable route).[8] The SCV could include up to three offshore electrical transmission cables for Phase 2 only (in lieu of or in addition to the proposed route through Muskeget Channel) with a cable landing site, onshore transmission cable, grid interconnection, and new or upgraded substations in Bristol County, Massachusetts.

In total, both phases combined would include up to 132 total foundations for 125 to 129 WTGs and 1 to 5 ESPs to be installed in 130 positions,[9] generating at least 2,036 MW and up to 2,600 MW of electricity to meet existing and potential future offtake demands for New England states. This equates to an approximate minimum nameplate capacity of 16 MW per WTG.

[8] If the SCV is necessary, the applicant would be required to file a COP revision under 30 CFR § 585.634 that describes the need for the SCV and provides the information necessary to complete a sufficient analysis. In response, BOEM would complete additional environmental analysis and relevant consultations required by NEPA, NHPA, and other applicable statutes to inform BOEM's decision to approve, approve with conditions, or disapprove the COP revision.

[9] The Action as proposed includes two positions that could co-locate two ESPs, as described in the COP and analyzed in the Final EIS.

The proposed Project would include WTGs connected by a network of inter-array cables, up to five offshore ESPs linked by offshore cables, up to five submarine export cables, two onshore underground electrical cables and grid interconnection cables, and up to three new or upgraded onshore substations. The Proposed Action includes the burial of offshore export cables below the seafloor in both the OCS and Massachusetts state waters and a uniform east-west and north-south grid of 1 × 1-nm spacing between WTGs.[10] The COP contains additional details on the Project and is located on the BOEM webpage at https://www.boem.gov/renewable-energy/state-activities/new-england-wind-ocs-0534-construction-and-operations-plan. The Proposed Action in the Final EIS (Alternative B) is to approve the Project as described in the COP.

2.2 Purpose and Need for the Proposed Action

Through a competitive leasing process under 30 CFR § 585.211, Vineyard Wind LLC was awarded commercial Renewable Energy Lease OCS-A 0501 (Lease) covering an area offshore Massachusetts. Subsequent to the award of the Lease, BOEM approved an application to assign a portion of the Lease to Park City Wind LLC, which resulted in the segregation of Lease OCS-A 0501 and a new lease number, OCS-A 0534, for the segregated portion. Under the terms of Lease OCS-A 0534, Park City Wind has the exclusive right to submit a proposed COP for activities within the Lease Area, and it has submitted a COP to BOEM proposing the construction and installation, operations and maintenance (O&M), and conceptual decommissioning of an offshore wind energy facility in the Lease Area (the New England Wind Project) in accordance with BOEM's COP regulations under 30 CFR §§ 585.626 *et seq.* Park City Wind's goal is to develop a commercial-scale offshore wind energy project in the Lease Area, with up to 132 total foundations for 125 to 129 WTGs and 1 to 5 ESPs to be installed in 130 positions, generating at least 2,036 MW and up to 2,600 MW of electricity to meet existing and potential future offtake demands for New England states.

The Project is intended to assist the States of Connecticut[11] and Massachusetts[12] to meet climate and renewable energy/offshore wind goals and the Biden Administration's target of 30 GW of offshore wind by 2030 (Section 1.2 of the COP [Epsilon 2022]).

The purpose of BOEM's action is to determine whether to approve, approve with modifications, or disapprove Park City Wind's COP based on BOEM's authority under the OCSLA to authorize renewable energy activities on the OCS, Executive Order 14008, the Administration's goal to deploy 30 GW of offshore wind energy capacity in the United States by 2030 while protecting biodiversity and promoting ocean co-use (The White House 2021), and in consideration of Park City Wind's goals. BOEM is making this determination after weighing the factors in subsection 8(p)(4) of the OCSLA that are applicable to plan decisions and in consideration of the above goals. BOEM's action is needed to fulfill its duties under the Lease, which require BOEM to

[10] In accordance with 30 CFR § 585.634(c)(6), micrositing of WTG foundations may occur within 500 feet from each proposed WTG location. WTG micrositing would be performed on a case-by-case basis to avoid significant seafloor hazards such as surface and subsurface boulders (see COP Section 2.2.1.1).
[11] In June 2019, Governor Ned Lamont signed Public Act 19-71, An Act Concerning the Procurement of Energy Derived from Offshore Wind, authorizing the Connecticut Department of Energy and Environmental Protection to procure up to 2,000 MW of offshore wind energy.
[12] On August 11, 2022, Governor Charlie Baker signed Bill H.5060, An Act Driving Clean Energy and Offshore Wind, codifying the goal of procuring 5,600 MW of offshore wind no later than June 30, 2027.

make a decision on the Lessee's plans to construct and operate a commercial-scale offshore wind energy facility within the Lease Area.

NMFS, which has MMPA authorization decision responsibilities in addition to serving as a cooperating agency, has reviewed BOEM's purpose and need statement above and has determined that it aligns with NMFS' purpose and need (more specific statements of the purpose and need for the actions by NMFS are found in Section 5.2). Section 5.3 describes the purpose and need in relation to USACE's permit action.

3 Alternatives

The Final EIS considers a reasonable range of alternatives to the Proposed Action.[13] BOEM considered a total of 15 action alternatives during the preparation of the Draft EIS. Three alternatives are carried forward (one of which includes sub-alternatives) for further analysis in the Final EIS (Table 3-1). These 3 alternatives include detailed analysis (including potential beneficial and adverse impacts) for 2 action alternatives and the No Action Alternative. Twelve action alternatives are not further analyzed because they did not meet the purpose and need or did not meet other screening criteria (see Final EIS, Section 2.1.8, *Alternatives Considered but Dismissed from Detailed*).

[13] DOI's implementing NEPA regulations state that the term "reasonable alternatives" "includes alternatives that are technically and economically practical or feasible and meet the purpose and need of the proposed action." 43 CFR § 46.420(b).

3.1 Alternatives Carried Forward for Detailed Analysis

Table 3-1: Description of Alternatives

Alternative	Description
A: No Action Alternative	Under the No Action Alternative, BOEM would not approve the COP; the Project construction, operations, and decommissioning would not occur; and no additional permits or authorizations for the Project would be required. Any potential environmental and socioeconomic impacts, including benefits, associated with the Project as described under the Proposed Action would not occur.[14] The current resource condition, trends, and impacts from ongoing activities under Alternative A serve as existing conditions against which the direct and indirect impacts of all action alternatives are evaluated and provided as Alternative Impacts in Table 3.3. Over the life of the proposed Project, other reasonably foreseeable future impact-producing offshore wind and non-offshore wind activities would be implemented, which would cause changes to existing conditions even in the absence of the Proposed Action. The continuation of all other existing and reasonably foreseeable future activities described in Appendix E, Planned Activities Scenario, without the Proposed Action, serves as the baseline for the evaluation of the Planned Activity Scenario and these activities' impacts are provided as Cumulative Impacts in Table 3.3.
B: Proposed Action Alternative (Proposed Action)	Under Alternative B, the construction, operations, and decommissioning of a wind energy facility in the Southern Wind Development Area (SWDA[15]) offshore Massachusetts would consist of the components described below: • Up to 132 total foundations for 125 to 129 WTGs and 1 to 5 ESPs would be installed in 130 positions, generating at least 2,036 MW and up to 2,600 MW of electricity to meet existing and potential future offtake demands for New England states. This equates to an approximate minimum nameplate capacity of 16 MW per WTG. • If two ESPs are used for Phase 1, the applicant states that each ESP could occupy one of the 130 positions in the SWDA, or the two ESPs could be co-located at a single position, with each ESP's monopile foundation located within 250 feet of that position (i.e., the monopiles would be separated by up to 500 feet). Similarly, if two or three ESPs are used for Phase 2, each ESP could occupy one of the 130 positions in the SWDA, or two of the ESPs could be co-located at a single position (COP Volume I, Sections 3.2.1.3 and 4.2.1.3; Epsilon 2022). As a result, Phase 1 could include 64 foundations at 63 positions, and Phase 2 could include 89 foundations at 88 positions—a total of 132 foundations at 130 positions.[16] • Inter-array cables would be installed, linking the individual WTGs to the ESPs, and inter-link cables would be installed between ESPs. • Five offshore electrical transmission cables, including two for Phase 1 and three for Phase 2, would be installed in an OECC through Muskeget Channel (including the Western Muskeget Variant; see Table 3-2). Landing sites for Phase 1 cables would be in Barnstable County, Massachusetts. Intended landing sites for Phase 2 cables would also be in Barnstable County, except if the SCV is implemented (see below). • Onshore electrical cables, grid interconnection cables, and up to three new or upgraded

[14] Under Alternative A, impacts on marine mammals incidental to construction activities would not occur. Therefore, NMFS would not issue the requested authorization under the MMPA to the applicant.
[15] The proposed Project described in the COP and the Final EIS would occupy all of the BOEM Lease Area OCS-A 0534 and potentially a portion of the area covered by Lease Area OCS-A 0501, hereafter referenced collectively as the Southern Wind Development Area (SWDA).
[16] BOEM has determined not to approve the co-location of ESPs due to navigation concerns. The consideration of co-locating ESPs will be maintained in the EIS to ensure consistency with the best available science and modeling used in the analysis.

Alternative	Description
	substations would be installed in Barnstable County, Massachusetts (including, but not limited to, the existing West Barnstable Substation). • Under BOEM's phased development regulation (30 CFR § 585.626(b)(3)), the Lessee would still need future approval of the SCV.[17] The SCV could include up to three offshore electrical transmission cables for Phase 2 only (in lieu of or in addition to the proposed route through Muskeget Channel) with a cable landing site, onshore transmission cable, grid interconnection, and new or upgraded substations in Bristol County, Massachusetts. The SCV is conceptual and a contingency route with limited details is included in the COP (Epsilon 2022) for review at this time. If the Lessee elects to use the SCV in the future, its approval would be subject to the submission of a revised COP, additional reviews under NEPA, National Historic Preservation Act (NHPA) and OCSLA, and subject to additional consultations. Selection of the SCV could also necessitate upgrades to existing substations in Bristol County not currently envisioned by substation operators or ISO-New England (ISO-NE). Development of the Project would occur within the range of design parameters outlined in the COP (Epsilon 2022), subject to applicable mitigation and monitoring measures.
C: Habitat Impact Minimization Alternative	Under Alternative C, the construction, operations, and decommissioning of a wind energy facility on the OCS offshore Massachusetts would occur within the range of the design parameters outlined in the Project COP (Epsilon 2022), subject to applicable mitigation and monitoring measures. However, as compared to Alternative B, this alternative would limit the available scenarios for the Phase 2 export cable routes and configurations to minimize impacts on complex fisheries habitats in Muskeget Channel. • **Alternative C-1: Western Muskeget Variant Avoidance.** This alternative would preclude use of the Western Muskeget Variant, limiting available scenarios to those that include only the Eastern Muskeget route and SCV (Scenarios 1, 3, 5, and 6 in Table 3-2, below). Avoiding use of the Western Muskeget Variant would avoid a crossing of a proposed export cable route for the SouthCoast Wind Energy Project (SouthCoast Wind) within the Western Muskeget Channel and limit the total number of potential crossings of the SouthCoast Wind cable to a single crossing south of Muskeget Channel. This area of the proposed cable crossing south of Muskeget Channel has potentially less biogenic structure than the additional crossing that would occur within the channel if the Western Muskeget Variant route were used. The approximate location of the Project with relation to the SouthCoast Wind export cable routes is depicted in Figure 2.1-1 of Chapter 2 in the Final EIS. • **Alternative C-2: Eastern Muskeget Route Minimization.** This alternative would minimize, to the degree practicable, the use of the Eastern Muskeget route and maximize the use of the Western Muskeget Variant and/or the SCV (Scenarios 4, 5, and 6 in Table 3-2) for all Phase 2 export cables. Under this alternative, the two Phase 1 cables would be installed in the Eastern Muskeget route, along with a maximum of one Phase 2 cable. This eliminates the option for a total of two to three Phase 2 cables to be installed in the Eastern Muskeget route; instead two to three Phase 2 cables would be installed in the Western Muskeget variant and/or in the SCV. This alternative could potentially reduce impacts on productive complex habitats along the Eastern Muskeget route compared to Alternative B. The applicant states that Scenarios 5 and 6 would require significant delays to Phase 2 due to the need to upgrade substations connected to ISO-NE that are not currently planned for upgrade (Avangrid 2022).
Preferred Alternative	The Preferred Alternative aligns with the Proposed Action but adopts aspects of Alternative B and Alternative C-1 (Phase 1 cable route; Phase 2 cable route scenarios 1, 3, 5, and 6; See Table 3-2 below). All other Project components, including construction, operations, and decommissioning, would align with those of Alternative B, except as described below. The

[17] See Footnote 9 regarding the SCV

Alternative	Description
	Preferred Alternative would identify the use of the Eastern Muskeget route as the preferred OECC through the Muskeget Channel for both Phase 1 and Phase 2 with the export cables making landfall in the Town of Barnstable, MA. If necessary, a Contingency Option for the use of the Western Muskeget Variant is also provided in the Preferred Alternative to maintain technical and economic viability of the Project (Phase 2 cable route scenario 2). Use of the Contingency Option would require written justification from the lessee to BOEM that use of the Western Muskeget Variant is necessary to preserve Project viability, as described in Appendix H of the Final EIS, Mitigation and Monitoring. As described in this mitigation measure, use of the Contingency Option would then require review and approval from BOEM that it is essential to maintain Project viability. The Preferred Alternative would also disallow the co-location of ESPs or WTGs resulting in 130 WTG or ESP foundations as opposed to 132 foundations in Alternative B. This would, however, still result in the installation of 125 to 129 WTGs and 1 to 5 ESPs installed within Lease Area OCS-A 0534 and potentially a portion of OCS-A 0501.

Table 3-2: Export Cable Scenarios

Alternative	Phase	Scenario[a]	Cable Layout (Number of Cables)		
			Eastern Muskeget OECC	Western Muskeget Variant OECC	SCV OECC[c]
Alternative B: Proposed Action	1	NA	2	—	—
	2	1	3	—	—
		2	2	1	—
		3	2	—	1
		4	1	2	—
		5[b]	1	—	2
		6[b]	—	—	3
Alternative C-1: Western Muskeget Variant Avoidance	1	NA	2	—	—
	2	1	3	—	—
		3	2	—	1
		5[b]	1	—	2
		6[b]	—	—	3
Alternative C-2: Eastern Muskeget Route Minimization	1	NA	2	—	—
	2	4	1	2	—
		5[b]	1	—	2
		6[b]	—	—	3
Preferred Alternative	1	NA	2	—	—
	2	1 (C-1)	3	—	—
		2 (Contingency Option)	2	1	—
		3 (C-1)	2	—	1
		w5[b] (C-1)	1	—	2
		6[b] (C-1)	—	—	3

Source: COP Volume I, Table 4.1-2; Epsilon 2022

[a] The cable route scenarios are presented in the approximate order of likelihood.

[b] The applicant states that Scenarios 5 and 6 are theoretically possible but unlikely and would require significant delays to Phase 2 due to the need to upgrade substations connected to ISO-NE that are not currently planned for upgrade (Avangrid 2022).

[c] If the SCV is necessary, the applicant would be required to file a COP revision under 30 CFR § 585.634 that describes the need for the SCV and provides the information necessary to complete a sufficient analysis. In response, BOEM would complete additional environmental analyses and relevant consultations required by NEPA, NHPA, and other applicable statutes to inform BOEM's decision to approve, approve with conditions, or disapprove the COP revision.

3.2 Environmental Consequences of Alternatives

Table 3-3 summarizes and compares the potential impacts under the No Action Alternative and the impacts of each action alternative assessed in Chapter 3 of the Final EIS. Under the No Action Alternative, BOEM would not approve the COP, and NMFS would not issue to the applicant the requested authorization under the MMPA. Therefore, any potential environmental and socioeconomic impacts, including benefits, associated with the Project would not occur; however, impacts could occur from other ongoing and planned activities.

The impacts of each action alternative, exclusive of baseline conditions and ongoing activities, are summarized in Table 3-3. This table also provides a summary of the overall cumulative impacts by environmental resource and alternative. Each resource has two rows: one for the comparison of impacts and one for the overall cumulative impacts.[18] The overall cumulative impacts for each resource include the alternative's impacts combined with all planned activities (including other offshore wind activities). Where impacts are reported as multiple levels in the Final EIS, the table color and description represent the most adverse level of impact. Each resource section in Chapter 3 of the Final EIS includes descriptions and details for impact-producing factors (IPF); specific impact determinations differ because they could be less or more than the overall impact determination summary shown in Table 3-3.

More detailed comparisons of impacts by environmental resource and alternative, as well as evaluation of impacts across alternatives, are provided in Chapter 3 of the Final EIS.

[18] The Marine Mammals row is an exception to this in that there is an additional third resource category that analyzes only the incremental impacts of the Alternatives and does not include baseline and ongoing activities.

Table 3-3: Comparison of Alternatives and Overall Cumulative Impacts by Alternative

Resource	Alternative A	Alternative B	Alternative C	Preferred Alternative
Benthic Resources: Alternative Impacts*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*
Benthic Resources: Cumulative Impacts*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*
Coastal Habitats and Fauna: Alternative Impacts*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*
Coastal Habitats and Fauna: Cumulative Impacts*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*
Finfish, Invertebrates, and Essential Fish Habitat: Alternative Impacts*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*
Finfish, Invertebrates, and Essential Fish Habitat: Cumulative Impacts*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*
Marine Mammals: Alternative Impacts (Without Baseline and Ongoing Activities)	No Impact	Minor for NARW, Moderate for all other mysticetes (except NARW), harbor porpoise, and pinnipeds; Minor for all other odontocetes (except harbor porpoise).	Minor for NARW, Moderate for all other mysticetes (except NARW), harbor porpoise, and pinnipeds; Minor for all other odontocetes (except harbor porpoise).	Minor for NARW, Moderate for all other mysticetes (except NARW), harbor porpoise, and pinnipeds; Minor for all other odontocetes (except harbor porpoise).
Marine Mammals: Alternative Impacts (With Baseline and Ongoing Activities) *	Major for NARW; Moderate for all other mysticetes, odontocetes, and pinnipeds; Minor beneficial*	Major for NARW; Moderate for all other mysticetes, odontocetes, and pinnipeds; Minor beneficial*	Major for NARW; Moderate for all other mysticetes, odontocetes, and pinnipeds; Minor beneficial*	Major for NARW; Moderate for all other mysticetes, odontocetes, and pinnipeds; Minor beneficial*
Marine Mammals: Cumulative Impacts (With Baseline, Ongoing and Planned Activities) *	Major for NARW; Moderate for all other mysticetes, odontocetes, and pinnipeds; Minor beneficial*	Major for NARW; Moderate for all other mysticetes, odontocetes, and pinnipeds; Minor beneficial*	Major for NARW; Moderate for all other mysticetes, odontocetes, and pinnipeds; Minor beneficial*	Major for NARW; Moderate for all other mysticetes, odontocetes, and pinnipeds; Minor beneficial*
Sea Turtles: Alternative Impacts*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*
Sea Turtles: Cumulative Impacts*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*
Commercial Fisheries and For-Hire Recreational Fishing: Alternative Impacts*	Major adverse, Minor beneficial*	Major adverse, Minor beneficial*	Major adverse, Minor beneficial*	Major adverse, Minor beneficial*
Commercial Fisheries and For-Hire Recreational Fishing: Cumulative Impacts*	Major adverse, Minor beneficial*	Major adverse, Minor beneficial*	Major adverse, Minor beneficial*	Major adverse, Minor beneficial*
Cultural Resources: Alternative Impacts	Major adverse	Major adverse	Major adverse	Major adverse
Cultural Resources: Cumulative Impacts	Major adverse	Major adverse	Major adverse	Major adverse
Demographics, Employment, and Economics: Alternative Impacts*	Minor adverse, Minor beneficial*	Moderate adverse, Minor beneficial*	Moderate adverse, Minor beneficial*	Moderate adverse, Minor beneficial*
Demographics, Employment, and Economics: Cumulative Impacts*	Minor adverse, Moderate beneficial*	Moderate adverse, Moderate beneficial*	Moderate adverse, Moderate beneficial*	Moderate adverse, Moderate beneficial*
Environmental Justice: Alternative Impacts*	Minor adverse, Minor beneficial*	Moderate adverse, Minor beneficial*	Moderate adverse, Minor beneficial*	Moderate adverse, Minor beneficial*
Environmental Justice: Cumulative Impacts*	Minor adverse, Minor beneficial*	Moderate adverse, Minor beneficial*	Moderate adverse, Minor beneficial*	Moderate adverse, Minor beneficial*
Navigation and Vessel Traffic: Alternative Impacts	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse
Navigation and Vessel Traffic: Cumulative Impacts	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse
Other Uses: Marine Minerals: Alternative Impacts	Negligible adverse	Negligible adverse	Negligible adverse	Negligible adverse
Other Uses: Marine Minerals: Cumulative Impacts	Negligible adverse	Negligible adverse	Negligible adverse	Negligible adverse
Other Uses: Aviation and Air Traffic: Alternative Impacts	Negligible adverse	Minor adverse	Minor adverse	Minor adverse
Other Uses: Aviation and Air Traffic: Cumulative Impacts	Negligible adverse	Minor adverse	Minor adverse	Minor adverse
Other Uses: Offshore Cables and Pipelines: Alternative Impacts	Negligible adverse	Negligible adverse	Negligible adverse	Negligible adverse
Other Uses: Offshore Cables and Pipelines: Cumulative Impacts	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Other Uses: National Security and Military: Alternative Impacts	Negligible adverse	Moderate adverse	Moderate adverse	Moderate adverse

Resource	Alternative A	Alternative B	Alternative C	Preferred Alternative
Other Uses: National Security and Military: Cumulative Impacts	Major adverse	Major adverse	Major adverse	Major adverse
Other Uses: Radar Systems: Alternative Impacts	Negligible adverse	Moderate adverse	Moderate adverse	Moderate adverse
Other Uses: Radar Systems: Cumulative Impacts	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse
Other Uses: Scientific Research and Surveys: Alternative Impacts	Major adverse	Major adverse	Major adverse	Major adverse
Other Uses: Scientific Research and Surveys: Cumulative Impacts	Major adverse	Major adverse	Major adverse	Major adverse
Recreation and Tourism: Alternative Impacts*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*
Recreation and Tourism: Cumulative Impacts*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*	Moderate adverse; Minor beneficial*
Scenic and Visual Resources: Alternative Impacts	Major adverse	Major adverse	Major adverse	Major adverse
Scenic and Visual Resources: Cumulative Impacts	Major adverse	Major adverse	Major adverse	Major adverse
Air Quality: Alternative Impacts*	Minor adverse, Moderate beneficial*	Minor adverse, Moderate beneficial*	Minor adverse, Moderate beneficial*	Minor adverse, Moderate beneficial*
Air Quality: Cumulative Impacts*	Moderate adverse, Moderate beneficial*	Moderate adverse, Moderate beneficial*	Moderate adverse, Moderate beneficial*	Moderate adverse, Moderate beneficial*
Water Quality: Alternative Impacts	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Water Quality: Cumulative Impacts	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Bats: Alternative Impacts	Negligible adverse	Negligible adverse	Negligible adverse	Negligible adverse
Bats: Cumulative Impacts	Negligible adverse	Negligible adverse	Negligible adverse	Negligible adverse
Birds: Alternative Impacts*	Minor adverse; Minor beneficial*	Minor adverse; Minor beneficial*	Minor adverse; Minor beneficial*	Minor adverse; Minor beneficial*
Birds: Cumulative Impacts*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*	Moderate adverse; Moderate beneficial*
Terrestrial Habitats and Fauna: Alternative Impacts	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse
Terrestrial Habitats and Fauna: Alternative Impacts	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse
Wetlands and Other Waters of the United States: Alternative Impacts	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Wetlands and Other Waters of the United States: Cumulative Impacts	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Land Use and Coastal Infrastructure: Alternative Impacts*	Minor adverse, Minor beneficial*	Minor adverse, Minor beneficial*	Minor adverse, Minor beneficial*	Minor adverse, Minor beneficial*
Land Use and Coastal Infrastructure: Cumulative Impacts*	Minor adverse, Minor beneficial*	Minor adverse, Minor beneficial*	Minor adverse, Minor beneficial*	Minor adverse, Minor beneficial*

Notes:
Green cell color represents negligible to minor adverse overall impact.
Yellow cell color represents moderate adverse overall impact.
Orange cell color represents major adverse overall impact.
Clear cell color represents No Impact (see Footnote 19 for explanation)

Resources with beneficial incremental impacts are denoted by an asterisk (*), and alternatives within those resource rows with beneficial incremental impacts are denoted by a bolded blue outline and an asterisk (*).

3.3 Environmentally Preferable Alternatives

BOEM is required by CEQ regulations to identify the *environmentally preferable alternative(s)* in the ROD (40 CFR § 1505.2). Upon consideration and weighing of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources (43 CFR § 46.30), the DOI's responsible official, who is approving this ROD, has determined that the environmentally preferable alternatives are Alternative A (No Action), Alternative C (Habitat Impact Minimization, both sub-alternatives), and the Preferred Alternative.

Adverse environmental impacts in the Project area would generally be less under Alternative A (No Action) because construction and installation, O&M, and decommissioning activities and disturbances related to the Project would not occur and, hence, impacts on physical, biological, or cultural resources from the Proposed Action would be avoided. Nonetheless, the No Action Alternative would probably result in moderate, long-term, adverse impacts on regional air quality because other energy generation facilities would be needed to meet future power demands. These facilities might be fueled with natural gas, oil, or coal, all of which would emit more pollutants than WTGs and would have more adverse impacts on air quality and contribute greenhouse gases that cause climatic change. Adverse impacts on air quality also tend to disproportionally impact environmental justice communities, which often include low-income and minority populations. These air quality impacts might be compounded by other impacts because selection of the No Action Alternative could negatively impact future investment in U.S. offshore wind energy facilities, potentially resulting in the loss of beneficial cumulative impacts such as increased employment, improvements in air quality, and reductions in greenhouse gas emissions. Comments received on the DEIS from representatives of the offshore wind industry have noted that public and private investors have committed substantial amounts of new funding to offshore wind development, including commitments to develop manufacturing facilities, and that advancement of the Project is critical to continue to attract investment in the U.S. offshore wind market.[19]

Alternative C (Habitat Impact Minimization) would reduce impacts on complex fisheries habitats[20] found along the export cable route. To minimize impacts on complex fisheries habitat, BOEM would limit the potential OECC construction scenarios described in Table 3-2 through the implementation of one of the following sub-alternatives:

- Alternative C-1 would preclude the use of the Western Muskeget Variant, limiting available scenarios to those that include only the Eastern Muskeget route and SCV. Scenarios 1, 3, 5, and 6 in Table 3-2 would be considered under Alternative C-1. Avoiding use of the Western Muskeget Variant would minimize impacts to complex seafloor habitat and avoid a crossing of a proposed OECC route for the SouthCoast Wind Energy Project (Lease Area OCS-A 0521) within the Western Muskeget Variant. By avoiding a cable crossing within the Muskeget Channel, Alternative C-1 would limit the total number of potential crossings of the

[19] See, e.g., Business Network for Offshore Wind, Comments on New England Wind Draft Environmental Impact Statement, December 23, 2022, available at https://www.regulations.gov/comment/BOEM-2022-0070-0067.
[20] Complex habitat is defined as coarse unconsolidated mineral substrates (i.e. substrates containing 5 percent or greater gravels), rock substrates (e.g. bedrock), and shell substrates (e.g. mussel reef) consistent with CMECS definitions as well as vegetated habitats (e.g. SAV).

SouthCoast Wind cable to a single crossing south of Muskeget Channel. Under Alternative C-1, dredging for Phase 2 cable installation could impact up to 67 acres and 235,400 cubic yards of dredged material. As described in Table 3-2, Alternative C-1 includes cable route scenarios that could utilize the SCV. Dredging impacts associated with the use of the SCV are currently unknown at this time but could potentially be greater than or less than presented here.

- Alternative C-2 would minimize, to the degree practicable, the use of the Eastern Muskeget route and maximize the use of the Western Muskeget Variant and/or the SCV (Scenarios 4, 5, and 6 in Table 3-2) for all Phase 2 export cables. This Alternative could potentially reduce impacts on complex habitats along the Eastern Muskeget route when compared to Alternative B. Scenarios 5 and 6 under this Alternative would require significant delays to Phase 2 due to the need to upgrade substations. Under Alternative C-2, dredging for Phase 2 cable installation could impact up to 73 acres and could include up to 274,800 cubic yards of dredged material (compared to 67 acres and 235,400 cubic yards for Alternative B and Alternative C-1). As described in Table 3-2, Alternative C-2 includes cable route scenarios that could utilize the SCV. Dredging impacts associated with the use of the SCV are currently unknown at this time but could potentially be greater than or less than presented here.

The Preferred Alternative would adopt aspects of both Alternative B and Alternative C-1 (Phase 1 cable route; Phase 2 cable route scenarios 1, 3, 5, and 6; See Table 3-2) with the intent of limiting the installation of export cables to only the Eastern Muskeget route. The Preferred Alternative includes a Contingency Option, which would allow the use of the Western Muskeget Variant only if the lessee provided adequate justification to BOEM that its use is necessary for the Project's viability (Phase 2 cable route scenario 2; Table 3-2). Although preliminary designs indicate that all three Phase 2 cables could be installed within the Eastern Muskeget route, if the final design and engineering phase determines there are technical issues with installing the third Phase 2 cable in the Eastern Muskeget route, the economic and technical viability of the Project could be jeopardized as the Project would not be able to proceed without the availability of the Western Muskeget Variant. The Preferred Alternative would also not allow the co-location of ESPs and WTGs at the same location in order to maintain a uniform east-west and north-south grid pattern of 1 x 1 nautical mile (NM) spacing between WTGs and alignment with proposed adjacent wind farms, limiting the Project to 130 foundations. The Preferred Alternative cable alignment would be identical to Alternative C-1 if the Western Muskeget Contingency Option is not exercised (cable scenarios 1, 3, 5, and 6 for Phase 2 cables; Table 3-2). If such Contingency Option is exercised, cable alignment in the Preferred Alternative would include cable scenario 2 for Phase 2 cables (Table 3-2).

Offshore wind has been identified as a key factor for Atlantic states to reach their greenhouse gas emission reduction goals. It is presently an irreplaceable component in state, federal, and international strategies to reduce and reverse global climate change over the coming decades. In comparison to the No Action Alternative, the Preferred Alternative allows for the generation of electricity from sources that do not adversely affect the air quality in the region. Selection of the Preferred Alternative could encourage investment in U.S. offshore wind energy facilities, which could in turn result in beneficial cumulative impacts such as increased employment, improvements in air quality, and reductions in greenhouse gas emissions.

4 Mitigation, Monitoring, and Reporting

Appendix H of the Final EIS[21] identifies measures to avoid, minimize, and mitigate adverse environmental impacts that could result from the proposed activities and identifies the anticipated enforcing agency. BOEM is adopting all the measures identified in Table H-1, of Appendix H of the Final EIS, except for those that are identified as outside of the authority of BOEM or BSEE to enforce.[22]

The mitigation, monitoring, and reporting measures that BOEM intends to include as conditions of COP approval are identified in this ROD in Appendix A. BOEM has modified some measures identified in the Final EIS as an outcome of consultation under Section 106 of NHPA, documented in the final Memorandum of Agreement (MOA), which concluded concurrently with the publication of the Final EIS. Appendix A clarifies the language of certain measures that were identified in the Final EIS to ensure that they are enforceable. This Appendix also reflects other updates to and additions of measures resulting from the completion of the Essential Fish Habitat (EFH) consultation under the Magnuson-Stevens Fishery Conservation and Management Act with NMFS (completed March 8, 2024), those required by the BO issued by NMFS under Section 7 of the ESA (issued February 16, 2024), and those being considered by NMFS for the final ITR and associated LOA.

5 Final Agency Decisions

5.1 Department of the Interior Decision

After carefully considering the Final EIS alternatives, as well as comments on the Draft EIS from Tribal Nations, the public, cooperating agencies, key stakeholder groups (such as commercial fishermen), and the applicant, DOI has decided to approve, with modifications, the COP for New England Wind, adopting the Preferred Alternative, referred to as the Selected Alternative in section (5.1) of the decision. The Selected Alternative is a hybrid alternative combining elements of Alternatives B (Proposed Action Alternative) and C-1 (Habitat Impact Minimization Alternative). By selecting the Selected Alternative, DOI will allow for up to 130[23] foundations for the installation of 125 to 129 WTGs and 1 to 5 ESPs within Lease Area OCS-A 0534 and potentially a portion of OCS-A 0501 (collectively the Southern Wind Development Area [SWDA]) offshore Massachusetts. The Selected Alternative would identify the use of the Eastern Muskeget route as the preferred OECC through the Muskeget Channel for both Phase 1 and Phase 2 with the export cables making landfall in the Town of Barnstable, MA. If necessary, a Western Muskeget Contingency Option for the use of the Western Muskeget Variant is also

[21] Appendix H of the Final EIS separately identifies measures proposed by the Lessee as a part of its COP. The Lessee is required as a condition of BOEM's approval to conduct activities as proposed in its approved COP, which includes all applicant-proposed mitigation measures identified in Appendix H.

[22] Final EIS Table H-2, Other Potential Mitigation Measures and Monitoring Efforts Analyzed, inadvertently identified BOEM and BSEE as the anticipated enforcing agencies for measure #91. BOEM supports the use of measure #91 to reduce impacts to onshore scenic and visual resources. However, neither BOEM nor BSEE have the authority to enforce the onshore measure. The state or a local municipality would be the appropriate enforcement entity.

[23] BOEM has determined not to approve the co-location of ESPs due to navigation concerns.

provided in the Selected Alternative in order to maintain technical and economic viability of the Project.

BOEM considered all action alternatives to determine which would result in fewer environmental impacts and use conflicts. After evaluation, it was determined that limiting the installation of export cables to the Eastern Muskeget route would reduce the total amount of impacts to complex benthic habitat and would limit the total number of potential crossings of the New England Wind offshore export cables with the proposed SouthCoast Wind export cables to a single crossing south of the Muskeget Channel where complex benthic habitat is rarer than within the Western Muskeget Channel. Limiting all export cable scenarios to the Eastern Muskeget route is identical to cable Scenario 1 of Phase 2 under Alternatives B and C-1 (Table 3-2); however, as previously mentioned, feasibility issues may arise during final engineering showing that at least one of the Phase 2 cables may need to be installed in the Western Muskeget Variant. If technical feasibility issues were to arise with installing all cables in the Eastern Muskeget, the economic and technical viability of the Project could be jeopardized. The Project would not be able to proceed without the ability to install cable along the planned Western Muskeget Variant route. For this reason, a Western Muskeget Contingency Option has been included in the Selected Alternative to allow for the use of the Western Muskeget Variant only if the lessee provides adequate justification to BOEM that its use is necessary for the Project's viability. In the event that the Lessee believes there is technical or economic infeasibility preventing consolidation of cables within the Eastern Muskeget Channel corridor, the Lessee must submit a technical or economic feasibility analysis, as appropriate, for distribution to NMFS and for review and concurrence by BOEM and BSEE. The Lessee must wait for BOEM/BSEE concurrence before installation of a cable in the Western Muskeget OECC. If the Contingency Option is used, the Selected Alternative would no longer be consistent with Alternative C-1.

Alternative C-2 could potentially reduce impacts on productive complex habitats along the Eastern Muskeget route compared to Alternative B. However, under Alternative C-2, dredging for Phase 2 cable installation could impact up to 73 acres and could include up to 274,800 cubic yards of dredged material (compared to 67 acres and 235,400 cubic yards for Alternative B and Alternative C-1). Additionally, a cable crossing of the SouthCoast Wind export cable within the Muskeget Channel would increase impacts to complex fisheries habitat within Muskeget Channel relative to Alternatives B and C-1 as described.

As discussed in the EIS and above in Table 3-1, Alternatives B and C-1 allow the co-location of two ESPs or WTGs at a single position for both Phase 1 and 2, which would result in two monopile foundations located within 250 feet of each other at a single position. BOEM has reviewed the co-located foundation concept and has determined that it is not consistent with the uniform grid pattern that developers in other Lease Areas are implementing per the USCG's May 2020 Final Massachusetts and Rhode Island Port Access Route Study (USCG 2020). The allowance of the co-located ESP was deemed a continuous vessel navigational safety hazard concern in the EIS and such co-location is not part of the Selected Alternative. Like the other action alternatives analyzed in the EIS, the Selected Alternative would occur within the range of design parameters outlined in the COP and is subject to applicant-committed EPMs as well as possible additional agency-proposed mitigation measures to avoid or reduce impacts, including those listed in Appendix A to the ROD. The Selected Alternative would reduce the maximum

number of foundations from 132 to 130, which would reduce the continuous long-term impacts, such as to benthic resources, associated with Alternatives B, C-1 and C- 2 as analyzed in the EIS.

Under Alternative A (the No Action Alternative), DOI would not approve the Project. In addition, no other permits or authorizations for this Project would be issued. The No Action Alternative is one of the three environmentally preferable alternatives identified in this ROD because adverse environmental impacts across resources would generally be less under the No Action Alternative (i.e., no construction, installation, operation, or decommissioning activities will occur on the OCS) than under the action alternatives. Hence, impacts on physical, biological, or cultural resources from the Selected Alternative would be avoided. However, the No Action Alternative would still be expected to result in moderate, long-term, adverse impacts on regional air quality because other energy generation facilities would be needed to meet future power demands. These facilities might be fueled with natural gas, oil, or coal, which would emit more pollutants than WTGs and would have more adverse impacts on air quality and contribute greenhouse gases that cause climate change. The No Action Alternative was not selected in this ROD because it would not allow for the development of DOI-managed resources and would not meet the purpose and need.

In summary, DOI considered which of the action alternatives would result in fewer environmental impacts and use conflicts. The Selected Alternative as defined by BOEM would include the construction, O&M, and eventual decommissioning of up to 130 foundations for 125 to 129 WTGs and up to 5 ESPs on the OCS offshore Massachusetts within Lease Area OCS-A 0534 and potentially a portion of Lease Area OCS-A 0501. The Selected Alternative, with export cables, would extend from Lease Area OCS-A 0534 to the mainland, making landfall at the Town of Barnstable, MA. The Final EIS found that the Selected Alternative would result in fewer impacts to complex benthic habitat than other action alternatives considered (B and C-2) due to limiting the number of cables installed in the Western Muskeget Channel, and is consistent with the purpose and need, while still providing a contingency option for the use of the Western Muskeget Variant if needed to preserve Project feasibility. Accordingly, DOI has selected the Selected Alternative in this ROD.

DOI coordinated with NMFS and USACE and weighed all concerns in making decisions regarding this Project and has determined that all practicable means within its authority have been adopted to avoid or minimize environmental and socioeconomic harm associated with the Selected Alternative and the approval of the COP. Appendix A of this ROD identifies the mitigation, monitoring, and reporting requirements that will be adopted as terms and conditions of COP approval. The mitigation and monitoring measures identified in Appendix A are the anticipated terms and conditions of BOEM's approval of the COP and representative of those included in Appendix H of the Final EIS. BOEM conducted a thorough NHPA Section 106 review of the Project with federally recognized Tribes, the Massachusetts State Historic Preservation Office, the ACHP, and consulting parties concurrent with the NEPA process and, through the Section 106 review, identified historic properties and assessed potential effects to historic properties, and identified measures to resolve adverse effects. Draft measures to resolve adverse effects were described and analyzed in the Draft EIS and Final EIS. After the Final EIS was made available to the public, BOEM addressed consulting party comments on the MOA and distributed the MOA for signature by the consulting parties. The Section 106 review concluded with the execution of the MOA on March 1, 2024, which was signed by BOEM, the

Massachusetts State Historic Preservation Office, the ACHP, and the Lessee. The MOA memorializes measures that will resolve the Selected Alternative's adverse effects to historic properties including avoidance, minimization, and mitigation measures.

Moreover, BOEM consulted with federally recognized Tribes regarding renewable energy leasing and development on the OCS. The following federally recognized Tribes were invited to consult: Delaware Nation, Delaware Tribe of Indians, Mashantucket (Western) Pequot Tribal Nation, Mashpee Wampanoag Tribe, Mohegan Tribe of Indians of Connecticut, the Narragansett Indian Tribe, the Shinnecock Indian Nation, and Wampanoag Tribe of Gay Head (Aquinnah). Of the federally recognized Tribes, the Mashpee Wampanoag Tribe, Mashantucket (Western) Pequot Tribal Nation, and Wampanoag Tribe of Gay Head (Aquinnah) accepted BOEM's invitation to consult under Section 106. BOEM held government-to-government meetings with federally recognized Tribes on August 13, 2021; November 4, 2021; May 2, 2022; May 26, 2022; and June 2, 2022. As set forth in the Final EIS, all alternatives, including the Selected Alternative, are anticipated to have major adverse impacts to the following resource areas:

Commercial Fisheries and For-Hire Recreational Fishing: Major adverse impacts are anticipated to occur under all Alternatives due to the presence of structures (cable protection measures and foundations), increased risk of vessel and structure strikes and gear loss, changes to available fishing locations, changes to fish distribution/availability due to ongoing climate change, and reduced stock levels due to ongoing fishing pressure (see Final EIS section 3.9). Adverse impacts from the Project will be mitigated through a requirement for Park City Wind to establish and implement a direct compensation program to provide monetary compensation to commercial and for-hire recreational fishermen impacted by the Project and through a requirement for New England Wind to maintain a fisheries gear loss claims procedure throughout the life of the Project. BOEM is including terms and conditions 6.1 and 6.2 (see ROD Appendix A) to address this issue.

Cultural Resources: Mitigation was developed with consulting parties through the Section 106 consultation process to resolve adverse effects on historic properties pursuant to 36 CFR 800.6 and is executed in the MOA. Mitigation is also described throughout section 3.10 and in Appendices H and J of the Final EIS. Mitigation that would reduce major impacts on onshore and offshore cultural resources is New England Wind's compliance with stipulations outlined in the MOA, such as compliance with horizontal protective buffers for all identified marine archaeological resources and siting the Onshore Export Cable Route and grid interconnection cable routes within existing roadway and/or public utility rights-of-way. Other terms and conditions to reduce impacts include implementation of actions that are consistent with the Post Review Discovery Plan for marine archaeology (enforcement of this measure would be under the jurisdiction of the Massachusetts Bureau of Underwater Archaeology and the Massachusetts Historical Commission if in state waters, and BOEM/BSEE if on the OCS), implementation and compliance with minimization and mitigation plans to avoid historic properties in the terrestrial area of potential effect, and implementation of and compliance with archaeology monitoring to avoid resources.

Marine Mammals: Under all alternatives, including the No Action alternative, when considering ongoing and planned activities, major adverse impacts to NARWs could occur due to the risk of vessel strikes and fishing gear entanglement posed by those activities. However, the incremental

impacts of the Project alone are not expected to result in entanglements or vessel strikes of marine mammals. Mitigation measures, such as vessels maintaining a safe distance from marine mammals and reduced vessel speeds, are designed to avoid interactions with marine mammals. The incremental impacts of all action alternatives to NARWs would be minor due to implementation of several mitigation measures, e.g., clearance and shutdown zones, use of sound attenuation measures, numerous vessel strike avoidance measures, and use of Protected Species Observers (PSO) and Passive Acoustic Monitoring (PAM).

National Security and Military: The installation of up to 1,033 WTGs within the RI/MA Lease Areas would introduce long-term navigational complexity in the region and could pose navigational hazards. This would increase allision risks for vessels and collision risks for aircraft and could increase the complexity of USCG search and rescue (SAR) operations across a larger area. The main drivers for these impact ratings are the installation of structures, primarily WTGs, within the RI/MA Lease Areas that would hinder USCG SAR operations, potentially leading to increased loss of life. FAA review, coordination with military and national security interests, and other mitigation actions may improve safety of SAR operations, but these mitigation measures would not remove the navigational hazard associated with installing WTGs over a large area in the open ocean.

Scientific Research and Surveys: NMFS and BOEM have developed the *NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy – Northeast U.S. Region* (Hare et al. 2022) that describes the impacts of development on NMFS Northeast Fisheries Science Center (NEFSC) scientific surveys (hereinafter "NMFS surveys"), and the actions that can be implemented to address the adverse impacts. BOEM and NMFS are of the view that the solution is a collaborative effort among both agencies and the offshore wind industry to establish Project-specific monitoring programs. These programs would follow specific guidelines, as well as survey mitigation activities, that allow information to be combined regionally into a programmatic approach and to implement regional programmatic survey mitigation actions to address the cumulative impacts from offshore wind development in the region (see Final EIS 3.14.1.6). There are 14 NMFS surveys that are impacted by wind energy development in the northeast region, and ten of these surveys overlap with the Project. BOEM is including term and condition 6.3 (see ROD Appendix A) to address this issue. That term and condition, consistent with NMFS and BOEM Survey Mitigation strategy actions 1.3.1, 1.3.2, 2.1.1, and 2.1.2 in the *NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region*, requires the Lessee to submit to BOEM a survey mitigation agreement between NMFS and the Lessee. The survey mitigation agreement must describe how the Lessee will mitigate the Project impacts on the ten NMFS surveys. The Lessee must conduct activities in accordance with such agreement. If the Lessee and NMFS fail to reach a survey mitigation agreement, then the Lessee must submit a survey mitigation plan to BOEM and NMFS.

Scenic and Visual Resources: Populations affected by the offshore and onshore actions include tourists visiting and residents living in coastal communities, including low income and minority neighborhoods; recreational users of the seascape, including those using ocean beaches and tidal areas; recreational users of the open ocean, including those involved in yachting, fishing, boating, and passage on ships; recreational users of the landscape, including those using landward beaches, golf courses, cycle routes, and footpaths; tourists, workers, visitors, or local people using transport routes; people working in the countryside, commerce, or dwellings; and

people working in the marine environment, such as those on fishing vessels and crews of ships (see Final EIS section 3.16). In coordination with BOEM, the Lessee must prepare and implement a scenic and visual resource monitoring plan (see Appendix A 7.2.2) that monitors and compares the visual effects of the Project during construction and O&M (daytime and nighttime) to the findings in the COP Visual Impact Assessment and verifies the accuracy of the visual simulations (photo and video). The monitoring plan must include monitoring and documenting the meteorological influences on actual WTG visibility over a duration of time from selected onshore key observation points, as determined by BOEM and the Lessee. In addition, the Lessee must include monitoring of the operation of aircraft detection lighting systems (ADLS) in the monitoring plan. The Lessee must monitor the frequency that the ADLS is operative, documenting the dates and times when the aviation warning lights are in the on position and the duration of each event. Details for monitoring and reporting procedures must be included in the plan.

Additional engineering and technical terms and conditions that will be required with COP approval are included in Appendix A of this ROD.[24] However, it should be noted that terms and conditions could be amended during the time period between ROD approval and COP approval. The Lessee will be required to certify annually that the Lessee is in compliance with the terms and conditions of its approved COP (30 CFR § 285.633(b)). The Lessee must also comply with all other applicable requirements of 30 CFR parts 285 and 585, including, but not limited to, the submission of a Facility Design Report and a Fabrication and Installation Report, before beginning construction activities.

Today's decision balances the orderly development of OCS renewable energy with the prevention of interference with other uses of the OCS and the protection of the human, marine, and coastal environments. A decision that balances these goals where they conflict and does not hold one as controlling over all others is consistent with the duties required under subsection 8(p)(4) of OCSLA, which requires the Secretary to ensure that approved activity is carried out in a manner that provides for Congress's enumerated goals.

My approval of this decision constitutes the final decision of DOI. I take this action pursuant to an existing delegation of authority.

STEVEN FELDGUS

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Steven Feldgus
Principal Deputy Assistant Secretary
Land and Minerals Management

Date

5.2 National Marine Fisheries Service Decision

This section documents NMFS' intent to promulgate ITR and issue an incidental take authorization in the form of an LOA to Park City Wind pursuant to its authorities under the MMPA, if specific findings are made. It also references NMFS' decision to adopt the BOEM Final EIS to support NMFS' anticipated decision to promulgate the ITR and issue the associated

[24] All mitigation measures and terms and conditions adopted by BOEM as part of this ROD will be included in the COP authorization letter to be issued to Park City Wind LLC.

LOA. NMFS prepared and signed a separate memorandum independently evaluating the sufficiency and adequacy of the BOEM Final EIS. That memorandum provides NMFS' rationale to adopt the Final EIS to satisfy its independent NEPA obligations related to the potential ITR and LOA. In that memorandum, NMFS concluded the following: (1) the action analyzed in the Final EIS covers NMFS's proposed decision to issue an LOA to Park City Wind and meets all NEPA requirements under 40 CFR § 1506.3 (adopting an EIS); (2) the analysis includes the appropriate scope and level of environmental impact evaluation for NMFS' proposed action and alternatives; and (3) NMFS' comments and suggestions related to primary environmental effects of concern from the proposed action (i.e., effects to marine mammals), submitted in its role as a cooperating agency, have been satisfied.

On December 1, 2021, NMFS received an application from Park City Wind pursuant to MMPA section 101(a)(5)(A) for an authorization to take small numbers of marine mammals, by harassment, incidental to the construction of an offshore wind energy project on the OCS off of Massachusetts in OCS-A 0534 and potentially OCS-A 0501, for a period of 5 years. NMFS reviews applications and, if specific findings are made, promulgates regulations and issues incidental take authorizations pursuant to the MMPA. Incidental take authorizations may be issued as either (1) regulations and associated LOAs under section 101(a)(5)(A) of the MMPA or (2) Incidental Harassment Authorizations under section 101(a)(5)(D) of the MMPA. In addition, 40 CFR Parts 1500–1508 and NOAA policy and procedures require all proposals for major federal actions to be reviewed with respect to their effects on the human environment.

Issuance of an incidental take authorization to Park City Wind is a major federal action, triggering NMFS' independent NEPA compliance obligation. When serving as a cooperating agency, NMFS may satisfy its independent NEPA obligations by either preparing a separate NEPA analysis for its issuance of an incidental take authorization or, if appropriate, by adopting the NEPA analysis prepared by the lead agency. On July 20, 2022, after NMFS determined Park City Wind's application was adequate and complete, it had a corresponding duty to determine whether and how to authorize take of marine mammals incidental to the activities described in the application in accordance with standards and determinations set forth in the statute and its implementing regulations. Thus, the purpose of NMFS' action—which is a direct outcome of Park City Wind's request for authorization to take marine mammals incidental to specified activities associated with the Project (e.g., pile driving, drilling and acoustic surveys)—is to evaluate Park City Wind's request under requirements of the MMPA (16 USC § 1371(a)(5)(A)) and its implementing regulations (50 CFR Part 216) and to determine whether the findings necessary to promulgate the ITR and issue the LOA can be made, based on the best available scientific information. NMFS must render a decision regarding the request for authorization under its MMPA responsibilities (16 USC § 1371(a)(5)(A)) and its implementing regulations. In addition to its opportunity to comment on the DEIS, the public was also involved in the MMPA decision-making process through its opportunity to comment on NMFS' Notice of Receipt of Park City Wind's take request, which was published in the *Federal Register* (87 Fed. Reg. 51,345 [August 22, 2022]). NMFS' final action takes into account those comments, as well as the corresponding formal consultation process under Section 7 of the ESA for the promulgations of the final ITR and issuance of the associated LOA.

5.2.1 National Marine Fisheries Service Decision (40 CFR § 1505.2(a)(1))

Pending completion of all statutory processes, NMFS intends to promulgate ITR and issue an LOA to Park City Wind, if specific findings are made, which would authorize take of marine mammals incidental to construction activities associated with the Project, specifically pile driving, drilling, unexploded ordnances/munitions of concern [(Unexploded Ordnance (UXOs)/Munitions and Explosives of Concern (MECs)] detonation, and marine site assessment surveys, for 5 years. NMFS's final decision to promulgate the ITR and issue the requested LOA will be documented in a separate Decision Memorandum prepared in accordance with internal NMFS policy and procedures. The LOA would authorize the incidental take of marine mammals while prescribing the number and means of incidental take, as well as mitigation, monitoring, and reporting requirements, including those in the BiOp's ITS, as relevant. The BiOp completes the formal Section 7 consultation process under the ESA. A final rule promulgating the regulations would describe NMFS's final determinations. Separately, NMFS would publish a notice in the *Federal Register* announcing a LOA has been issued within 30 days of the action, in accordance with the MMPA.

5.2.2 Alternatives National Marine Fisheries Service Considered (40 CFR § 1505.2(a)(2))

NMFS is required to consider a reasonable range of alternatives to a proposed action in accordance with NEPA and 40 CFR § 1502.10(a)(5) and § 1502.14. NMFS considered two alternatives, the No Action Alternative, in which NMFS would deny Park City Wind's request for an authorization, and an action alternative, in which it would issue an LOA to Park City Wind with mitigation, monitoring, and reporting requirements.

Consistent with BOEM's No Action Alternative, NMFS, under its No Action Alternative, would not issue the requested authorization to Park City Wind, in which case NMFS assumes Park City Wind would not proceed with the Project as described in the application because it would be likely to cause harassment of marine mammals prohibited under the MMPA. Since NMFS is also required by 40 CFR § 1505.2(a)(2) to identify an environmentally preferable alternative, NMFS considers the No Action Alternative to be the environmentally preferable alternative as the incidental take of marine mammals would be avoided since no construction activities resulting in harassment would occur.

The other alternative NMFS considered was its Proposed Action, the promulgation of regulations and issuance of the LOA to Park City Wind, which would authorize take of marine mammals incidental to 5 years of construction activities as noted above, subject to specified mitigation, monitoring, and reporting measures. As part of that alternative, and through the public and agency review process, NMFS considered a range of mitigation measures to carry out its duty to identify other means of effecting the least practicable adverse impact on the species or stocks. These measures were initially identified in the proposed rule (88 Fed. Reg. 37,606, June 8, 2023) and may be modified in the final, and LOA, if issued, in response to public comment, agency review, and ESA Section 7 consultation. The Proposed Action alternative evaluated by NMFS (i.e., the promulgation of regulations and issuance of the LOA to Park City Wind) will provide the incidental take authorization necessary to undertake the activities identified in the Preferred Alternative that BOEM evaluated in the Final EIS and selected in this ROD.

5.2.3 Primary Factors National Marine Fisheries Service Considers Favoring Selection of the Proposed Action (40 CFR § 1505.2(a)(2))

As noted earlier, NMFS must promulgate regulations and issue an LOA to Park City Wind in response to its request for an incidental take authorization, if specific findings are made after consideration of public comments. NMFS's Proposed Action to issue an LOA for BOEM's Selected Alternative effectively meets NMFS' stated purpose and need.

5.2.4 Mitigation, Monitoring and Reporting Considered by National Marine Fisheries Service (40 CFR § 1505.2(a)(3))

NMFS has a statutory requirement to prescribe the permissible methods of take and other means of effecting the least practicable adverse impact on the species or stocks of marine mammals and their habitat, paying particular attention to rookeries, mating grounds, and other areas of similar significance. All incidental take authorizations must also include requirements pertaining to monitoring and reporting. Mitigation, monitoring, and reporting requirements related to marine mammals were preliminarily identified in the proposed ITR and LOA (88 Fed. Reg. 37,606, June 8, 2023). These measures may be modified in the final ITR and LOA in consideration of public comments, additional analysis, and based on the outcome of the formal ESA Section 7 consultation. If NMFS promulgates regulations and issues the LOA to the applicant, the regulations and LOA will include the necessary mitigation to have the least practicable adverse impact on marine mammals, as well as monitoring and reporting requirements to be implemented by Park City Wind. In summary, the mitigation, monitoring, and reporting measures include, but are not limited to, the following: vessel strike avoidance measures; seasonal moratorium on pile driving, drilling, and detonations of UXOs/MECs; usage of protected species observers (PSOs) and passive acoustic monitoring (PAM) operators; establishment of clearance and shutdown zones; use of sound attenuation measures and passive acoustic monitoring during pile driving, drilling, and UXO/MEC detonations; requirements to conduct sound field verification (SFV) during pile driving and UXO/MEC detonations; fishery survey mitigation to avoid interactions and entanglements; numerous vessel strike avoidance measures; and various situational and incremental (i.e., weekly, monthly, annual) reporting requirements. Appendix A includes a listing of mitigation, monitoring, and reporting measures that have been considered by BOEM in formulating its NEPA analysis. Many of these measures align with those included in the proposed ITR; however, if issued, the final LOA may contain modified or additional measures that are more protective than those listed in Appendix A.

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Samuel D. Rauch, III
Deputy Assistant Administrator for Regulatory Programs

Date

5.3 U.S. Army Corps of Engineers Decision

In accordance with 40 C.F.R. § 1505.2, this section constitutes the Record of Decision (ROD) of the United States Army Corps of Engineers (USACE) New England District to issue Department of the Army (DA) permits pursuant to Section 10 of the Rivers and Harbors Act of 1899 (RHA; 33 U.S.C. §403) and section 404 of the Clean Water Act (CWA; 33 U.S.C. §1344) for the

construction and maintenance of the New England Offshore Wind Energy Facility (Phase I and Phase II) proposed by Park City Wind LLC. This document is prepared in accordance with the Council on Environmental Quality's (CEQ) regulations implementing the National Environmental Policy Act (NEPA) (42 USC §§ 4321 *et seq.* and 40 C.F.R. Parts 1500-1508).[25] This section also constitutes the USACE's CWA Section 404(b)(1) Guidelines Evaluation (40 C.F.R. Part 230), and the Public Interest Review (33 C.F.R. § 320.4) under the authority delegated to the District Engineer by 33 C.F.R. § 325.8.

This ROD incorporates by reference the U.S. Department of Interior, Bureau of Ocean Energy Management (BOEM) 2022 Draft Environmental Impact Statement (DEIS), and the 2024 Final EIS for the New England Wind Project. USACE has been a cooperating agency under 40 C.F.R. § 1501.8, with BOEM as lead agency under 40 C.F.R. § 1501.7, for purposes of complying with NEPA. Additionally, BOEM has been the lead agency for the purposes of complying with Section 7 of the Endangered Species Act (ESA), Section 106 of the National Historic Preservation Act (NHPA), and Section 305 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

USACE concurs with BOEM that this project constitutes a major federal action significantly affecting the quality of the human environment, and that therefore an EIS was required. As a cooperating agency in accordance with NEPA, USACE provided appropriate input and review comments during the EIS process. USACE has independently reviewed the EIS and concludes that its comments and suggestions have been satisfied. USACE has reviewed and evaluated the information in the Final EIS in accordance with 40 CFR § 1506.3, and 33 CFR Part 325, Appendix B, and finds that the actions covered by the Final EIS and those regulated by USACE under Section 10 of the RHA and section 404 of the CWA are substantially the same. The Final EIS and associated NEPA documents prepared by BOEM, with referenced materials, and comments received in response to them, are hereby adopted in full and in accordance with 40 C.F.R. §1506.3, for purposes of NEPA, the public interest review required by 33 CFR § 320.4, and the 404(b)(1) Guidelines analysis required by 40 CFR Part 230.

This section documents the decision of USACE to issue DA permits pursuant to Section 404 of the CWA and Section 10 of the RHA to Michael Clayton, representing Park City Wind LLC. The DA permits will authorize the construction and maintenance of two phases of the offshore wind energy project within BOEM's Renewable Energy Lease Area OCS-A 0534 and potentially a portion of the area covered by Lease Area OCS-A 0501[26] in the Atlantic Ocean that would provide up to 2,600 megawatts (MW) of clean energy to the New England power grid (ISO NE). Lease Area OCS-A 0534 and the southwest portion of Lease Area OCS-A 0501 are referred to as the Southern Wind Development Area (SWDA). Phase I of the project, also known as Park City Wind, includes up to 62 wind turbine generators (WTGs) connected by inter-array cables, up to two electrical service platforms (ESPs) connected by an Offshore Sub-Station (OSS)-link cable, and two export cables totaling 90 nautical miles (NM) within a single 42-NM offshore export cable corridor (OECC) with landfall at Craigville Public Beach in Barnstable, Massachusetts. An

[25] The associated FEIS was prepared using the 2020 Council on Environmental Quality (CEQ) NEPA regulations; therefore, this ROD follows those regulations.

[26] The developer of the Vineyard Wind 1 Project (Vineyard Wind 1, LLC) would assign spare or extra positions in the southwestern portion of OCS-A 0501 to Park City Wind for the New England Wind Project if those positions are not developed as part of the Vineyard Wind 1 Project.

approximately 10 NM length of the OECC will be located within the Vineyard Wind 1 lease area in order to reach the Phase I ESPs. In total, the maximum length of the two Phase I offshore export cables between the landfall site and the ESPs is approximately 110 NM. Phase I of the project will also include the installation of the transmission cable under the Centerville River via horizontal directional drilling (HDD).

Phase II of the project, also known as the Commonwealth Wind Project, includes up to 88 WTGs connected by inter-array cables, up to three ESPs connected by an OSS-link cable, and up to three export cables totaling 132 NM within a single 41 NM OECC with landfall at Dowses Beach in Barnstable, Massachusetts. An additional length of offshore export cable within the SWDA (up to 23 NM per cable) will be needed to reach the Phase II ESPs. The maximum length of each Phase II offshore export cable between the landfall site and the ESPs is approximately 67 NM. The maximum total length of the Phase II offshore export cables (assuming three cables) is 201 NM.

For both Phases, the WTGs and ESPs will require scour protection and the cables will require secondary cable protection in areas where burial cannot occur, where burial is not achieved to a sufficient depth, or where the cables cross existing submarine assets such as cables or pipelines. Scour and cable protection could take the form of rock berms, concrete mattresses, fronded mattresses, and/or rock bags. Cable landfall transition from jetplow to HDD will require dredging to create HDD exit pits with the HDD pits excavated in waters backfilled upon HDD completion. Additional work considered as part of this decision, but outside of USACE jurisdiction, includes upland work associated with the HDD cable installation (upland trenching, road work, HDD work site), construction of two new substations, and modifications to an existing substation.

5.3.1 USACE Authorities and Jurisdictional Activities

5.3.1.1 USACE Authority and Jurisdiction under Section 404 of the CWA

Under section 404 of the CWA, USACE regulates the discharge of dredged or fill material into the waters of the United States. The USACE's section 404 jurisdiction in tidal waters extends from the high tide line to the seaward limits of the territorial seas. The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three NM (see 33 CFR § 328.4(a) & (b)). The baseline from which the three NM limit of the territorial seas is measured is generally the line on the shore reached by the ordinary low tides but may also lie across the mouth of bays or elsewhere when the coast is not in direct contact with the open sea. For this project, the USACE's section 404 jurisdiction in tidal waters coincides with the limits of Massachusetts state waters.

The limit of section 404 jurisdiction in non-tidal waters (33 CFR § 328.4(c)) is as follows: (1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or (2) When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands. When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

Up to 19 NM for Phase I and 19 NM for Phase II of the Project's OECC would be located in waters of the United States regulated by USACE under Section 404 of the CWA. Within Section 404 waters, the applicant is proposing to install up to two export cables associated with Phase I and three export cables with Phase II within this OECC using simultaneous lay and burial technology. In terms of seafloor preparation, the applicant is proposing to perform sand wave dredging/relocation within the limits of Section 404 waters.

Therefore, for this project, USACE has determined that the discharges of dredged or fill material subject to Section 404 jurisdiction and their associated impacts include the following:

Placement of secondary cable protection over approximately 6 percent of the export cables for each phase of the project. Cable protection will consist of a rock berm, concrete mattresses, fronded mattresses, and/or rock bags.

Placement of sand material within the OECC associated with sand wave dredging/relocation activities.

Total combined impacts from the relocation of sand wave material and cable protection will result in 21.5 acres of subtidal impacts associated with Phase I and 29.4 acres of subtidal impacts associated with Phase II.

The refilling of the five HDD exit pits to be excavated for the HDD work associated with the shore to landfall transition resulting in up to 1.14 acres of temporary subtidal impacts. Each exit pit will be approximately 100 ft by 100 ft. in area. Therefore, each HDD exit put will be approximately 10,000 sq. ft. in size with approximately 20,000 sq. ft. of impacts associated with Phase I and 30,000 sq. ft. associated with Phase II.

Neither phase of the project will involve conversion of aquatic habitat to uplands, nor will they involve impacts to wetlands.

USACE has determined that the onshore work, which includes the installation of onshore cables, construction of a new onshore substation off Shootflying Hill Road (Phase I), construction of a new substation off of Clay Hill or Old Falmouth Road (Phase II), and modifications to the existing West Barnstable Substation (Phase I and Phase II), does not involve a discharge of dredged or fill material into waters of the United States. Therefore, the onshore work does not require a permit under Section 404 of the CWA.

5.3.1.2 USACE Authority and Jurisdiction under Section 10 of the RHA

5.3.1.2.1 USACE Section 10 Jurisdiction in Navigable Waters of the U.S.

Under Section 10 of the RHA, USACE regulates construction of any structures and work that are located in or that affect "navigable waters of the U.S." In tidal waters, the shoreward limit of navigable waters extends to the mean high water mark while the seaward limit coincides with the limit of the territorial seas.

For this project, USACE has determined that the proposed structures and work within navigable waters subject to Section 10 jurisdiction will occur within a 19 NM long section (Phase I) and a

19 NM long section (Phase II) of the OECC located within navigable waters of the U.S. Work and structures within navigable waters and their associated impacts include the following:

Excavation and refilling of the HDD pits and HDD installation of transmission cable for the landfall cable resulting in up to 1.14 acres of temporary subtidal waters impacts. Each HDD exit pit will be approximately 10,000 sq. ft. in size with two exit pits (20,000 sq. ft. total) associated with Phase I and three exit pits (30,000 sq. ft. total) associated with Phase II.

Boulder relocation, cable lay and burial trials, the pre-lay grapnel run, the installation of the five cables and cable joints, and the placement of secondary cable protection as needed. This work will occur within the overall OECC that is 5,500 feet wide. Each of the five cables will have a 12 ft. wide disturbance zone associated with installation and would be estimated to result in a disturbance area involving up to 185 acres (75 acres associated with Phase I, 110 acres associated with Phase II) of subtidal waters. The applicant is planning to avoid any unexploded ordnances (UXOs) but should any unexpected UXOs be found and need to be dealt with, this work would also be regulated under Section 10 of the RHA.

The HDD installation of the transmission cable under the Centerville River during Phase I installation activities. Phase II cable routes will not cross the Centerville River or other waterways.

5.3.1.2.2 USACE Section 10 Jurisdiction on the Outer Continental Shelf

The USACE's authority to prevent obstructions to navigation in navigable waters of the United States was extended to artificial islands, installations, and other devices located on the seafloor, to the seaward limit of the outer continental shelf (OCS), by section 4(f) of the Outer Continental Shelf Lands Act of 1953 as amended (43 U.S.C. 1333 and 33 CFR 320.2). Structures that would be located on the seafloor of the OCS and therefore regulated under Section 10 of the RHA and their estimated impacts include the following for Phase I and Phase II of the project:

130 Foundations (consisting of 125-129 WTGs and up to five ESPs) resulting in 273 acres of subtidal seafloor impacts associated with the placement of scour protection for WTGs and ESPs.

- Phase I proposes a maximum of 62 WTGs, two ESPs, and 74 acres of subtidal seafloor impacts associated with scour protection for WTGs and ESPs.

- Phase II proposes a maximum of 88 WTGs, three ESPs, and 199 acres of subtidal seafloor impacts associated with scour protection for WTGs and ESPs.

Inter-array cables and the OSS-link cable resulting in 340 NM of cables attached to the seafloor. Approximately 133 NM of inter-array and inter-link cable will be associated with Phase I, and 207 NM of inter-array and inter-link cable will be associated with Phase II.

Secondary cable protection over the inter-array cables and the inter-link cables resulting in 28 acres of subtidal seafloor impacts. Inter-array cable protection for Phase I will consist of 11 acres of cable protection, and Phase II will consist of 17 acres of cable protection.

Up to five export cables within the 23NM (Phase I) and 22 NM long (Phase II) OECC on the OCS resulting in 48 NM (Phase I) and 72 NM (Phase II) of cables attached to the seafloor. Export cables within the SWDA will total 20 NM (10 NM per cable) for Phase I and 69 NM (a maximum of 23 NM per cable) for Phase II.

Secondary cable protection over the five export cables on the OCS, resulting in 9.7 acres of subtidal seafloor impacts. Approximately 2.5 acres of cable protection will be associated with Phase I, and 7.2 acres of cable protection will be associated with Phase II.

The applicant is planning to avoid any unexploded ordnances (UXOs), but if any unexpected UXOs are found and need to be relocated, this relocation would be regulated under Section 10 of the RHA on the OCS.

5.3.2 USACE Public Notice and Comments

USACE published a 60-day public notice for each phase of this project on December 23, 2022, and the comment period ended on February 21, 2023. The public notices were posted on the New England district website. The public notices were also sent out electronically and/or mailed to all interested parties/stakeholders listed in the New England Public Notice Worksheet, including adjacent property owners. In addition, USACE sent an email to the recipients on the public notice mailing list notifying them that USACE posted the public notices on the New England District website.

USACE did not receive comments in response to the public notices for Phase I or Phase II of the New England Wind Project. No public hearings were requested.

5.3.3 Alternatives Considered by USACE Under the National Environmental Policy Act (NEPA)

5.3.3.1 Determination of USACE scope of analysis for NEPA

The scope of analysis for USACE's NEPA review is described in 33 C.F.R. Part 325 Appendix B § 7.b. For this action, USACE's NEPA scope includes the specific activities requiring a DA permit. The scope of analysis also includes other aspects of the overall projects because USACE and BOEM have sufficient control and responsibility to warrant federal review. Accordingly, the USACE scope of analysis under NEPA includes up to 111,939 acres in the SWDA that will be impacted by WTG, ESP, and transmission cable installation, the 41 and 42-mile OECCs, the onshore transmission cable route, the new onshore substation off Shootflying Hill Road (Phase I), construction of a new substation off of Clay Hill or Old Falmouth Road (Phase II), and modifications to the existing West Barnstable Substation (Phase I and Phase II). In addition, under NEPA, reasonably foreseeable activities within the larger overall wind energy area were considered to account for potential cumulative effects.

5.3.3.2 Determination of Purpose and Need for USACE NEPA Review

For purposes of USACE NEPA review, the purpose of the proposed Project is to provide a commercially viable offshore wind energy project within the SWDA to help meet Connecticut's

and Massachusetts' need for clean energy. For purposes of USACE NEPA review, the project need is to help New England meet its need for renewable energy.

5.3.3.3 USACE Identification of Alternatives Under NEPA

USACE has determined that the following criteria apply to any proposed NEPA alternative:

1. Any proposed alternative must provide renewable energy via the use of offshore WTGs as BOEM designated the lease areas specifically for renewable wind energy.

2. Any alternative must tie in with the ISO-New England power grid and deliver a minimum of 2,600 MW of electrical energy from the overall project to meet expected contractual obligations.[27]

3. USACE did not consider any alternatives that included the SCV cable route. The SCV was not included in application materials to USACE for Phase II.

One no action alternative (Alternative A) and three action alternatives (Alternatives B, C-1, C-2) were analyzed in-depth in the Final EIS. For a full description of each alternative, see Table 2.1-1 within the Final EIS. [28] For cable route alternatives, see Table 2.1-2 within the Final EIS. Because each action alternative (Alternatives B, C-1, C-2) had differing phases and scenarios, USACE has further listed the alternatives by phase and scenario below.

Alternative A is the no action alternative. Under this alternative, USACE would not issue permits under Section 10 of the RHA and Section 404 of the CWA.

Alternative B is the applicant's proposed alternative. Under Alternative B, both phases would include a maximum of 132 total foundations for 125 to 129 WTGs and 1 to 5 ESPs to be installed in 130 positions.

Alternative B (Phase I) would include installation of a maximum of 62 WTGs within the SWDA connected by inter-array cables, up to two ESPs connected by OSS-link cable, and two export cables within a 42 NM OECC routing through the Eastern Muskeget Channel with landfall in Barnstable, Massachusetts either at Covell's Beach or Craigville Beach, onshore cables, a new onshore substation, and modifications to the existing West Barnstable onshore substation. Alternative B (Phase I) proposes the option of co-locating two ESPs at a single position or co-

[27] Massachusetts, Connecticut, and Rhode Island all issued solicitations for additional offshore wind generated electricity and signed a memorandum of understanding in October 2023 to allow developers to submit multi-state bids and states to collaborate on their procurement decisions. New England Wind has indicated its intent to bid on these solicitations.
In June 2019, Governor Ned Lamont signed Public Act 19-71, An Act Concerning the Procurement of Energy Derived from Offshore Wind, authorizing the Connecticut Department of Energy and Environmental Protection to procure up to 2,000 MW of offshore wind energy.
On August 11, 2022, Massachusetts Governor Charlie Baker signed Bill H.5060, An Act Driving Clean Energy and Offshore Wind, codifying the goal of procuring 5,600 MW of offshore wind no later than June 30, 2027.
On July 6, 2022, Governor Dan McKee signed Rhode Island Senate Bill 2583, An Act Relating to Public Utilities and Carriers – Affordable Clean Energy Security Act, requiring market-competitive procurement of 600 to 1,000 MW of newly developed offshore wind capacity.
[28] See Table 2.2-1 of the FEIS for alternatives considered but not analyzed in detail.

locating ESPs and WTGs. For Phase I, ESPs could potentially be co-located within a single position, resulting in a maximum of 64 structure foundations at 63 positions.

Alternative B – Phase II, Cable Scenario 1 – Alternative B (Phase II – Scenario 1) would include the installation of a maximum of 88 WTGs within the SWDA connected by inter-array cables, up to three ESPs connected by OSS-link cable, and three export cables within a 41 NM OECC routing through the Eastern Muskeget Channel with landfall in Barnstable, Massachusetts either at Dowses Beach or off Wianno Avenue, onshore cables, a new onshore substation, and modifications to the existing West Barnstable substation. Alternative B (Phase II – Scenario 1) proposes the option of co-locating two ESPs at a single position or co-locating ESPs and WTGs. For Phase II, ESPs could potentially be co-located within a single position, resulting in a maximum of 89 structure foundations at 88 positions.

Alternative B – Phase II, Cable Scenario 2 – Alternative B (Phase II – Scenario 2) would include two export cables in a 41 NM OECC routing through the Eastern Muskeget Channel and one export cable in a 40 NM OECC routing through the Western Muskeget Channel. Alternative B (Phase II – Scenario 2) includes the same WTGs, ESPs, and inter-array and inter-link cables amounts and the same landing and onshore work as Alternative B (Phase II – Scenario 1).

Alternative B – Phase II, Cable Scenario 4 – Alternative B (Phase II – Scenario 4) would include one export cable in a 41 NM OECC routing through the Eastern Muskeget Channel and two export cables in a 40 NM OECC routing through the Western Muskeget Channel. Alternative B (Phase II – Scenario 4) includes the same WTGs, ESPs, and inter-array and inter-link cables amounts and the same landing and onshore work as Alternative B (Phase II – Scenario 1).

Alternative B – Phase II, Cable Scenario 3, Alternative B – Phase II, Cable Scenario 5, and Alternative B – Phase II, Cable Scenario 6 propose placement of export cables in the SVC and, therefore, these Alternatives were not considered by USACE.

Alternative C-1 is the habitat minimization alternative that avoids the Western Muskeget route. Alternative C-1 (Phase I) proposes the same scope of work as Alternative B (Phase I).

Alternative C-1 – Phase II, Cable Scenario 1 – Alternative C-1 (Phase II – Scenario 1) proposes the same scope of work as Alternative B – Phase II, Cable Scenario 1.

Alternatives C-1 – Phase II, Cable Scenario 3, Alternative C-1 – Phase II, Cable Scenario 5, and Alternative C-1 – Phase II, Cable Scenario 6 propose placement of export cables in the SVC and, therefore, these Alternatives were not considered by USACE.

Alternative C-2 is the habitat minimization alternative that minimizes use of the Eastern Muskeget route. Alternative C-2 (Phase I) proposes the same scope of work as Alternative B (Phase I).

Alternative C-2 (Phase II – Scenario 4) proposes the same scope of work as Alternative B (Phase 2, Cable Scenario 4).

Alternative C-2 – Phase II, Cable Scenario 5 and Alternative C-2 – Phase II, Cable Scenario 6 propose placement of export cables in the SVC and, therefore, these Alternatives were not considered by USACE.

The Preferred Alternative in the Final EIS adopts aspects of Alternative B and Alternative C-1. Under the Preferred Alternative, no co-location of ESPs would be allowed and there would be a maximum of 130 WTG or ESP positions for both phases combined (125 to 129 WTGs and 1 to 5 ESPs). The Selected Alternative limits all export cables to the Eastern Muskeget Channel.

For Phase I, the Preferred Alternative proposes the same scope of work as Alternative C-1 (Phase I),[29] except for the allowance of co-locating ESPs at a single position. The Preferred Alternative (Phase I) would not allow for co-location of ESPs, and there would be a maximum of 63 structure foundations at 63 positions.

The Preferred Alternative (Phase II) proposes the same scope of work as Alternative C-1 – Phase II, Cable Scenario 1,[30] except for the allowance of co-locating ESPs at a single position. The Preferred Alternative (Phase II) would not allow for co-location of ESPs, and there would be a maximum of 88 structure foundations at 88 positions. The Final EIS Preferred Alternative also retains the Western Muskeget Variant Contingency Option, which is Alternative B, Phase II, Cable Scenario 2. The Preferred Alternative includes the Western Muskeget Variant Contingency Option if all export cables cannot be co-located within the Eastern Muskeget Channel and use of the Western Muskeget Channel is necessary to maintain technical and economic viability of the project. Any proposed use of the Western Muskeget Variant Contingency Option would require further review and approval by BOEM. USACE is not considering the Western Muskeget Variant Contingency Option for the Preferred Alternative. Any proposed use of the Western Muskeget Variant Contingency Option would require additional review and analysis by USACE.

Preferred Alternative Phase II – Cable Scenario 3, Preferred Alternative Phase II – Cable Scenario 5, and Preferred Alternative Phase II – Cable Scenario 6 propose placement of export cables in the SCV and, therefore, these alternatives were not considered by USACE.

5.3.3.4 USACE Specification of Environmentally Preferable Alternatives

USACE is required by CEQ regulations, 40 C.F.R. § 1505.2(a)(2), to specify the alternative or alternatives considered environmentally preferable. USACE may discuss preferences among alternatives based on relevant factors, including economic and technical considerations. USACE will identify and discuss all such factors that it balanced in making its decision and state how those considerations entered its decision.

USACE identified four environmentally preferable alternatives: (1) Alternative A, the no action alternative; (2) Alternative C-1, the Western Muskeget Variant avoidance alternative; (3) Alternative C-2, the Eastern Muskeget route minimization alternative; and (4) the Preferred Alternative. The Preferred Alternative within the Final EIS is a combination of aspects of

[29] This is also the same scope of work as Alternative B, Phase I.
[30] This is also the same scope of work as Alternative B, Phase II, Cable Scenario 1.

Alternative B and Alternative C-1, but also eliminates the potential for co-location of structures at a single position.

Under the No Action Alternative, USACE would not issue any permits under Section 404 of the CWA or Section 10 of the RHA regarding the proposed projects. Therefore, no WTGs, ESPs, inter-array, or inter-link cables would be installed in the SWDA. No export cables would be installed within the Atlantic Ocean to carry electricity from the SWDA to a grid interconnection points onshore. There would be no aquatic impacts from the proposed work. However, this alternative would not meet the project purpose of providing clean offshore wind energy to the ISO NE power grid. As the very nature of an offshore wind project involves siting in a waterbody, there is no way for the applicant to shift the project location to get outside of USACE jurisdiction. In addition, even in the absence of the proposed action, other reasonably foreseeable future impact-producing offshore wind and non-offshore wind activities would be implemented, which would cause changes to the affected environment. Therefore, USACE did not choose the no action alternative.

Alternative C-1[31] is an environmentally preferable alternative because it avoids impacts to complex habitats in the Western Muskeget Channel by eliminating cable routes through the Western Muskeget Channel. Alternative C-1 considers the co-location of ESPs, allowing the maximum number of positions within the SWDA to be the applicant's proposed 132 positions. Limiting the OECCs to the Eastern Muskeget Channel also limits potential cable crossings with the proposed SouthCoast Wind Project. A reduction in cable crossings reduces the need for use of cable protection, which would modify complex habitat found in the Muskeget Channel area. Complex habitat is more vulnerable to long-term and permanent impacts and has been identified by the National Oceanic and Atmospheric Administration (NOAA) as essential fish habitat for some life stages of several federally managed species, including Atlantic cod.

Alternative C-2[32] is an environmentally preferable alternative because it could reduce impacts to complex habitats within the Eastern Muskeget Channel by locating some of the Phase II cables in the Western Muskeget Channel. Alternative C-2 considers the co-location of ESPs, allowing the maximum number of positions within the SWDA to be the applicant's proposed 132 positions. Complex habitat is more vulnerable to long-term and permanent impacts and has been identified by NOAA as essential fish habitat for several federally managed species, including Atlantic cod. Phase II of Alternative C-2 would result in greater dredging for cable installation (up to 73 acres compared to 67 acres associated with Alternatives B and C-1) and require greater cable protection (up to 43 acres compared to 37 acres for Alternatives B and C-1). Due to higher impacts associated with Phase II, Alternative C-2 was not selected.

The Final EIS Preferred Alternative is an environmentally preferable alternative. Under the Preferred Alternative, no co-location of ESPs would be allowed, and it proposes a maximum of 130 WTG or ESP positions for both phases combined (125 to 129 WTGs and 1 to 5 ESPs). The

[31] USACE's reference to Alternative C-1 refers to Alternative C-1, Phase 1 and Alternative C-1, Phase 2, Cable Scenario 1. As Alternative C-1, Phase 2, Cable Scenarios 3, 5 and 6 include the SVC, they were not considered by USACE. See FEIS Table 2.1-2.

[32] USACE's reference to Alternative C-2 refers to Alternative C-2, Phase 1 and Alternative C-2, Phase 2, Cable Scenario 4. As Alternative C-2, Phase 2, Cable Scenarios 5 and 6 include the SVC, they were not considered by USACE. See FEIS Table 2.1-2.

Preferred Alternative limits all export cables to the Eastern Muskeget Channel. The Preferred Alternative proposes the same scope of work as Alternative C-1 (for both Phase I and Phase II), except for allowing the co-locations of ESPs at a single position. The Preferred Alternative proposes a maximum of 63 structure foundations at 63 positions for Phase I and a maximum of 88 structure foundations at 88 positions for Phase II. USACE has selected the Preferred Alternative as the NEPA preferred alternative.[33]

5.3.3.5 Mitigation, Monitoring, and Reporting (40 C.F.R. § 1505.2(a)(3))

USACE is required by CEQ regulations to state whether it has adopted all practicable means to avoid or minimize environmental harm from the alternative selected, and if not, why the agency did not. The agency will adopt and summarize, where applicable, a monitoring and enforcement program for any enforceable mitigation requirements or commitments.

USACE has adopted all practicable means to avoid or minimize environmental harm from the Preferred Alternative. These practicable means include:

- Appendix H of the Final EIS identifies environmental protection measures committed to by the applicant to avoid, minimize, and mitigate adverse environmental impacts that could result from the proposed activities. USACE has adopted these measures as part of the proposed action, which will be subject to the USACE permit authorizations.

- USACE has adopted certain conservation recommendations (CRs) for the Essential Fish Habitat (EFH) consultation under the Magnuson-Stevens Act.

- Under Section 7 of the ESA, USACE has adopted the reasonable and prudent measures and the terms and conditions found in the biological opinion issued by U.S. Fish and Wildlife Service (USFWS) for terrestrial species in the action area and in the biological opinion issued by National Marine Fisheries Service (NMFS) for marine species within the action area.

- USACE has adopted conservation recommendations received from NMFS in accordance with the Fish and Wildlife Coordination Act (FWCA).

- USACE has adopted all mitigation measures identified in the Memorandum of Agreement (MOA) resulting from the Section 106 consultation process under the NHPA.

5.3.4 Alternatives Evaluation Under the Section 404(b)(1) Guidelines:

Any discharge of dredged or fill material into waters of the United States authorized under Section 404 of the CWA must comply with guidelines established by the Administrator of the US Environmental Protection Agency (EPA) under Section 404(b)(1) of the CWA in 40 CFR Part 230 (the 404(b)(1) Guidelines). For the proposed project, USACE has determined that the activities in waters of the United States regulated under Section 404 of the CWA include the following: 1) The discharge of fill for secondary cable protection over the five export cables along the 19 NM (Phase I) and 19 NM (Phase II) OECC located within the 3 NM limit of the

[33] USACE is not considering the Western Muskeget Variant Contingency Option as part of the Preferred Alternative.

territorial seas, 2) The discharge of dredged material to refill the five HDD exit pits associated with the cable landing work at Craigville Beach (Phase I) and Dowses Beach (Phase II) in Barnstable, Massachusetts, and 3) The discharge of dredged or fill material associated with sand wave dredging/relocation.

"Except as provided under section 404(b)(2) of the CWA, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

For the New England Wind project, USACE has determined that the overall project purpose is the construction of a commercial-scale offshore wind energy project, including all associated export cables, for renewable energy generation and distribution to the ISO-NE energy grid.

According to the 404(b)(1) Guidelines, when the activity associated with a discharge, which is proposed for a special aquatic site (as defined in 40 CFR Part 230 subpart E), does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not ''water dependent''), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise. As the applicant's proposed activity does not involve a discharge into a special aquatic site, this part of the Guidelines is not applicable to the USACE's evaluation of the applicant's proposed discharge of dredged or fill material into waters of the United States.

This 404(b)(1) Guidelines alternatives analysis is not identical to the NEPA alternatives analysis discussed elsewhere in this ROD. The 404(b)(1) Guidelines only look at alternatives to a discharge of dredged or fill material in waters of the United States regulated by USACE under Section 404 of the CWA. Alternative placements or co-locations of ESPs or WTGs on the OCS analyzed under NEPA are not subject to the 404(b)(1) Guidelines analysis because activities on the OCS do not involve a discharge of dredged or fill material into waters of the United States, which only extend to the 3 NM limit of the territorial seas.

5.3.4.1 Site Selection/Screening Criteria

The proposed discharges of dredged and/or fill material are directly related to the OECC route as the route determines how much of the cable will require discharges of dredged material associated with sand wave relocation to prepare the route for cable installation, fill material for cable protection, and the location of the HDD exit pits. USACE has determined that any alternative regarding the OECC route and/or HDD exit pits must meet the following criteria:

- Within tidal waters, any alternative must have geological substrate characteristics that would allow for adequate burial of the cable (5-8 ft. below the substrate). However, it is anticipated that there will be a small percentage of the route that may not allow for adequate cable burial.

- Any alternative must allow the transmission cables coming from the lease area to tie into the ISO-NE power grid and deliver 2,600 MW of power.

5.3.4.2 Description of Section 404 Alternatives and Their Impacts

This alternatives analysis considered ten export cable alternatives and associated onshore work as well as a "no action alternative." The ten export cable corridor routes plus the No Action Alternative are analyzed below. Additional information can be found in Final EIS Table 2.1-7.

This alternatives analysis assumes the following of the ten proposed OECC routes and associated onshore work within Section 404 waters:

1. Up to five cables, each approximately 12 inches in diameter, would be installed in the OECC. Within Section 404 waters, the applicant is proposing to use simultaneous cable lay and burial technology to a target depth of 5 to 8 feet below the substrate. USACE has determined that this cable installation method does not involve a discharge of dredged or fill material regulated under Section 404 of the CWA (see 33 CFR §323.2(d)(3)(i)).

2. Fill impacts regulated under Section 404 of the CWA are associated with secondary cable protection. In areas where burial could not occur or where sufficient burial depth could not be achieved due to seafloor conditions and location specific factors warrant the use of cable protection, cable protection in the form of hard armoring would be installed. This armoring would consist of rock berms, concrete mattresses, fronded mattresses, or rock bags. It is estimated that 6 percent of each export cable would require cable protection based on failure to achieve adequate burial depths. In addition, secondary cable protection would be installed where the export cables cross another cable or pipeline. As the applicant is planning to install the cable in soft sediments and to avoid complex habitat to the extent practicable, it is assumed that the subtidal impacts from secondary cable protection would be similar in nature across all alternatives.

3. Dredged or fill material discharge impacts regulated under Section 404 of the CWA are associated with sand wave relocation or dredging. In areas where sand waves are present, the applicant proposes to move sand waves out of the cable installation path to allow for adequate cable burial depths to occur.

4. Fill impacts regulated under Section 404 of the CWA associated with the cable landfall. Alternatives considered use of HDD cable installation at landfall for both Phase I and Phase II, which would result in a discharge of fill associated with the backfilling of the HDD exit pits. HDD cable installation at landfall would result in 1.14 acres of temporary fill impacts. Cable landfall for Phase II could also consider trenching for landfall for some alternatives. Fill impacts associated with trenching for Phase II would consist of trench material side casting, trench re-filling, and the removal and replacement of an existing revetment in the proposed landfall cable path.

5. For some of the alternatives, the onshore work would also involve impacts to waters of the United States associated with the Centerville River crossing regulated under Section 404 of the CWA. If so, those impacts are referenced below.

No Action Alternative: Under this alternative, USACE would not issue permits under Section 404 of the CWA and the applicant would not discharge any dredged or fill material into waters of the United States associated with Phase I or Phase II of the New England Wind Project. Therefore, no secondary cable protection would be placed over the offshore export cables in waters of the United States, sand waves would not be dredged/relocated, and no HDD work would occur that would require refilling of the HDD pits. Without secondary cable protection and the relocation of sand waves, portions of the cables, approximately 6 percent of each export cable, within waters of the United States would either lie directly on the substrate or would be buried to an insufficient depth. This would subject the cables to damage by tidal forces and scour. The cables would also be subject to damage by fishing gear and boat anchors. Without the discharge of dredged material associated with the HDD work, the export cables would have to lie directly on the substrate in the nearshore environment and in the intertidal zone. The cables would be subject to damage by tidal forces, people, and animals and could pose a safety hazard to people walking along the shoreline. Therefore, it is infeasible to install the export cables without the addition of secondary cable protection, sand wave relocation, and the HDD work. Because the export cable work could not be performed without any discharge of dredged or fill material into waters of the United States, the No Action Alternative is not practicable under the 404(b)(1) Guidelines because it is inconsistent with the overall project purpose.

Alternative 1: Phase I – Covell's Beach Landfall with Centerville River HDD Crossing: This OECC route would run from the SWDA with landfall at Covell's Beach in Barnstable, Massachusetts. The Phase I OECC route would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The two cables associated with Phase I would be located within the Eastern Muskeget Channel. HDD would be utilized from approximately 300 meters from the mean low water line and impacts to the intertidal zone would be avoided as a result.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 21.5 acres of fill in subtidal waters for cable protection and sand wave relocation. This alternative does not include any impacts to wetlands or other special aquatic sites. The Vineyard Wind 1 project used the Covell's Beach site for its cable landfall. Due to Vineyard Wind 1's presence at Covell's Beach, engineering constraints and construction feasibility challenges would occur as part of New England Wind Phase I cable installation.

Landfall at Covell's Beach would require that the project cables cross the Centerville River to reach the proposed substation. This alternative proposes crossing the cables under the river using HDD. HDD entry/exit pits would be located at least approximately 61 meters from the riverbank in upland areas and would not result in 404 discharges within waters or wetlands.

Additionally, landfall at Covell's Beach (110,186 cubic yards (CY) of dredging) will have greater environmental impacts than landing at Craigsville Beach (109,800 CY of dredging).

This alternative is not practicable due to the construction feasibility challenges associated with the presence of Vineyard Wind 1 cables.

Alternative 2: Phase I – Covell's Beach Landfall with Centerville River Utility Bridge Crossing: This OECC route would run from the SWDA with landfall at Covell's Beach in Barnstable,

Massachusetts. The Phase I OECC route would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The two cables associated with Phase I would be located within the Eastern Muskeget Channel. HDD would be utilized from approximately 300 meters from the mean low water line and impacts to the intertidal zone would be avoided as a result.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 21.5 acres of fill in subtidal waters for cable protection and sand wave relocation. The Vineyard Wind 1 project used the Covell's Beach site for its cable landfall. Due to Vineyard Wind 1's presence at Covell's Beach, engineering constraints and construction feasibility challenges would occur as part of New England Wind Phase I cable installation.

Landfall at Covell's Beach would require that the project cables cross the Centerville River to reach the proposed substation. This alternative proposes crossing the cables over the river by constructing a utility bridge. The construction of the utility bridge would result in 48 sq. ft. of temporary impacts to wetlands and 42 sq. ft. of permanent impacts to wetlands.

This alternative is not practicable due to the construction feasibility challenges associated with the presence of the Vineyard Wind 1 cables.

Alternative 3: Phase I – Craigville Beach landfall with Centerville River HDD Crossing: This OECC route would run from the SWDA with landfall at Craigville Beach in Barnstable, Massachusetts. The Phase I OECC route would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The two cables associated with Phase I would be located in the Eastern Muskeget Channel. HDD would be utilized from approximately 300 meters from the mean low water line and impacts to the intertidal zone would be avoided as a result.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 21.5 acres of fill in subtidal waters for cable protection and sand wave relocation. This alternative does not include any impacts to wetlands or other special aquatic sites.

Landfall at Craigville Beach would require that the project cables cross the Centerville River to reach the proposed substation. This alternative proposes crossing the cables under the river using HDD. HDD entry/exit pits would be located at least approximately 61 meters from the riverbank in upland areas and would not result in 404 discharges within waters or wetlands.

Additionally, landfall at Craigsville Beach (109,800 CY of dredging) will have less environmental impact than landing at Covell's Beach (110,186 CY of dredging).

This alternative is practicable.

Alternative 4: Phase I – Craigville Beach landfall with Centerville River Utility Bridge Crossing: This OECC route would run from the SWDA with landfall at Craigville Beach in Barnstable, Massachusetts. The Phase I OECC route would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The two cables associated with Phase I would be located in the Eastern Muskeget Channel. HDD would be used from

approximately 300 meters from the mean low water line and impacts to the intertidal zone would be avoided as a result.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 21.5 acres of fill in subtidal waters for cable protection and sand wave relocation. Landfall at Craigville Beach would require that the project cables cross the Centerville River to reach the proposed substation. This alternative proposes crossing the cables over the river by constructing a utility bridge. The construction of the utility bridge would result in 48 sq. ft. of temporary impacts to wetlands and 42 sq. ft. of permanent impacts to wetlands.

This alternative is practicable.

Alternative 5: Phase II – Dowses Beach landfall with Cable Scenario 1:[34] This OECC route would run from the SWDA with landfall at Dowses Beach in Barnstable, Massachusetts. The Phase II OECC route would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The three export cables associated with Phase II would be in the Eastern Muskeget Channel. HDD would be utilized from approximately 510 meters from the mean low water line and impacts to the intertidal zone would be avoided as a result.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 29.4 acres of fill in subtidal waters for cable protection and sand wave relocation. This alternative does not include any impacts to wetlands or other special aquatic sites.

This alternative is practicable.

Alternative 6: Phase II – Dowses Beach landfall with Cable Scenario 2: This OECC route would run from the SWDA with landfall at Dowses Beach in Barnstable, Massachusetts. Two Phase II export cables would be in the Eastern Muskeget Channel and one Phase II export cable would be in the Western Muskeget Channel. The Phase II OECC route in the Eastern Muskeget Channel would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The OECC route in the Western Muskeget Channel would run approximately 17 NM through waters of the United States from the 3 NM seaward limit to the landfall site. In total, the Eastern and Western Muskeget Channel OECCs would run 36 NM through waters of the United States from the 3 NM seaward limit to the landfall site. HDD would be utilized from approximately 510 meters from the mean low water line and impacts to the intertidal zone would be avoided as a result.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 32.5 acres of fill in subtidal waters for cable protection and sand wave relocation. This alternative does not include any impacts to wetlands or other special aquatic sites.

This alternative is practicable.

[34] See FEIS Table 2.1-2 for additional details on the cable scenarios for Phase II. USACE is only considering Cable Scenarios 1, 2, and 4 within the 404(b)(1) analysis as Cable Scenarios 3, 5, and 6 contain SVC cable routes. USACE is not reviewing the SCV for authorization as part of this ROD.

Alternative 7: Phase II – Dowses Beach landfall with Cable Scenario 4: This OECC route would run from the SWDA with landfall at Dowses Beach in Barnstable, Massachusetts. One Phase II export cable would be in the Eastern Muskeget Channel and two Phase II export cables would be in the Western Muskeget Channel. The Phase II OECC route in the Eastern Muskeget Channel would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The OECC route in the Western Muskeget Channel would run approximately 17 NM through waters of the United States from the 3 NM seaward limit to the landfall site. In total, the Eastern and Western Muskeget Channel OECCs would run 36 NM through waters of the United States from the 3 NM seaward limit to the landfall site. HDD would be utilized from approximately 510 meters from the mean low water line and impacts to the intertidal zone would be avoided as a result.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 35.6 acres of fill in subtidal waters for cable protection and sand wave relocation. This alternative does not include any impacts to wetlands or other special aquatic sites.

This alternative is practicable.

Alternative 8: Phase II – Wianno Avenue landfall with Cable Scenario 1: This OECC route would run from the SWDA with landfall at Wianno Avenue in Barnstable, Massachusetts. The three Phase II export cables would be in the Eastern Muskeget Channel. The OECC route in the Eastern Muskeget Channel would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. Open trench cable installation is anticipated to be required for landfall at Wianno Avenue. While the trenching is not proposed to occur within mapped eelgrass beds, an eelgrass bed has been mapped adjacent to the proposed trenching area and may be impacted by the proposed action through turbidity associated with the trenching.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 29.4 acres of fill in subtidal waters for cable protection and sand wave relocation. Fill impacts associated with trench material side casting, trench material replacement, and the replacement of a revetment in the potential trench path are not included in the 29.4-acre impact area detailed above, and additional fill impacts would be anticipated to occur associated with trenching. This alternative does not include any direct impacts to wetlands or other special aquatic sites.

This alternative is practicable.

Alternative 9: Phase II – Wianno Avenue landfall with Cable Scenario 2: This OECC route would run from the SWDA with landfall at Wianno Avenue in Barnstable, Massachusetts. Two Phase II export cables would be in the Eastern Muskeget Channel and one Phase II export cable would be in the Western Muskeget Channel. The Phase II OECC route in the Eastern Muskeget Channel would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The OECC route in the Western Muskeget Channel would run approximately 17 NM through waters of the United States from the 3 NM seaward limit to the landfall site. In total, the Eastern and Western Muskeget Channel OECCs would run 36 NM through waters of the United States from the 3 NM seaward limit to the landfall site. Open trench cable installation is anticipated to be required for landfall at Wianno Avenue. While the trenching is not proposed to occur within mapped eelgrass beds, an eelgrass bed has been

mapped adjacent to the proposed trenching area and may be impacted by the proposed action through turbidity associated with the trenching.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 32.5 acres of fill in subtidal waters for cable protection and sand wave relocation. Fill impacts associated with trench material side casting, trench material replacement, and the replacement of a revetment in the potential trench path are not included in the 32.5-acre impact area described above, and additional fill impacts would be anticipated to occur associated with trenching. This alternative does not include any direct impacts to wetlands or other special aquatic sites.

This alternative is practicable.

Alternative 10: Phase II – Wianno Avenue landfall with Cable Scenario 4: This OECC route would run from the SWDA with landfall at Wianno Avenue in Barnstable, Massachusetts. One Phase II export cable would be in the Eastern Muskeget Channel and two Phase II export cables would be in the Western Muskeget Channel. The Phase II OECC route in the Eastern Muskeget Channel would run approximately 19 NM through waters of the United States from the 3 NM seaward limit to the landfall site. The OECC route in the Western Muskeget Channel would run approximately 17 NM through waters of the United States from the 3 NM seaward limit to the landfall site. In total, the Eastern and Western Muskeget Channel OECCs would run 36 NM through waters of the United States from the 3 NM seaward limit to the landfall site. Open trench cable installation is anticipated to be required for landfall at Wianno Avenue. While the trenching is not proposed to occur within mapped eelgrass beds, an eelgrass bed has been mapped adjacent to the proposed trenching area and may be impacted by the proposed action through turbidity associated with the trenching.

Impacts associated with this alternative regulated under Section 404 of the CWA consist of 35.6 acres of fill in subtidal waters for cable protection and sand wave relocation. Fill impacts associated with trench material side casting, trench material replacement, and the replacement of a revetment in the potential trench path are not included in the 35.6-acre impact area described above, and additional fill impacts would be anticipated to occur associated with trenching. This alternative does not include any direct impacts to wetlands or other special aquatic sites.

This alternative is practicable.

5.3.4.3 Determination of the Least Environmentally Damaging Practicable Alternative under the 404(b)(1) Guidelines:

Of the Alternatives considered above, the No Action Alternative, as well as the Alternatives 1 and 2, which propose landfall at Covell's Beach, are not practicable. The Covell's Beach landing site is not practicable due to engineering and construction constraints. Therefore, the No Action Alternative, Alternative 1, and Alternative 2 are not considered further.

Of the eight practicable alternatives the following impacts would occur:

Alternative	Amount of Fill Material (Acres)	Amount of Wetland Fill (Square Feet)	Factors for Consideration
Alternative 3: Phase I -	**21.5**	**0**	LEDPA – Phase I

Alternative	Amount of Fill Material (Acres)	Amount of Wetland Fill (Square Feet)	Factors for Consideration
Craigville Beach with HDD			
Alternative 4: Phase I – Craigville Beach with Utility Bridge	**21.5**	**90**	Wetland impacts compared to Alternative 3.
Alternative 5: Phase II – Dowses Beach – CS 1	**29.4**	**0**	LEDPA – Phase II
Alternative 6- Phase II – Dowses Beach – CS 2	**32.5**	**0**	Greater fill/dredge material discharge compared to Alternative 5
Alternative 7: Phase II – Dowses Beach – CS 4	**35.6**	**0**	Greater fill/dredge material discharge compared to Alternative 5
Alternative 8: Phase II – Wianno Ave – CS 1	**29.4**	**0**	Open trenching for landfall, no HDD. Proximity of trenching to eelgrass.
Alternative 9: Phase II – Wianno Ave – CS 2	**32.5**	**0**	Open trenching for landfall, no HDD. Proximity of trenching to eelgrass. Greater fill/dredge material discharge compared to Alternative 5.
Alternative 10: Phase II – Wianno Ave – CS 4	**35.6**	**0**	Open trenching for landfall, no HDD. Proximity of trenching to eelgrass. Greater fill/dredge material discharge compared to Alternative 5.

HDD = Horizontal Directional Drilling; LEDPA = Least Environmentally Damaging Practicable Alternative; CS = Cable Scenario

Of these alternatives, Alternative 3 (Phase I- Craigville Beach landfall with Centerville River HDD Crossing) and Alternative 5 (Phase II- Dowses Beach landfall with Cable Scenario 1) would result in the least aquatic impacts and have no other significant adverse environmental consequences. The subtidal areas where cable protection would be placed consist primarily of soft substrates, limiting potential impacts to complex habitats. The backfill of HDD exit pits consists of the replacement of material back into the excavated pits and are considered temporary impacts. The relocation of sand wave material is also considered to be a temporary impact and sand will be relocated to areas with similar substrate to avoid conversion of habitats from complex, hard bottom to soft substrate. In addition, there would be no permanent loss of waters of the United States from the fill placement. Therefore, Alternative 3 (Phase I) and Alternative 5 (Phase II) have been determined to be the least environmentally damaging practicable alternatives (LEDPA) for their respective phases. All environmental impacts of the Alternatives 3 and 5 were addressed in the NEPA process by BOEM in the Final EIS, which USACE has adopted.

5.3.5 Evaluation of the Discharge of Dredged and Fill Material Under the 404(B)(1) Guidelines (40 CFR Part 230, Subparts B through H)

The following sequence of evaluation is consistent with 40 CFR § 230.5. The impact assessment below may differ from the impact assessment in the Final EIS in that the NEPA analysis assessed impacts from the Projects as a whole, whereas this analysis deals with a subset of the Projects,

specifically the impacts from the discharge of dredged and fill material into waters of the United States. As noted above, waters of the United States subject to the CWA only extend to the 3 NM limit of the territorial seas. It has been determined that there are no practicable alternatives to the proposed discharges that would be less environmentally damaging (40 CFR § 230.10(a)). There is no practicable alternative to the proposed discharges that would have less adverse impact on the aquatic ecosystem, and the proposed discharges do not have other significant environmental consequences. Therefore, this section evaluates the discharges proposed in Alternative 3 (Phase I) and Alternative 5 (Phase II).

5.3.5.1 Candidate disposal site delineation (Subpart B, 40 CFR § 230.11(f))

Each disposal site will be specified through the application of these Guidelines. The general disposal site is within the proposed 5,500 wide cable corridor that is within 404 waters and in areas 300-510 meters off the shoreline of Barnstable, Massachusetts where the HDD pits are proposed within the Atlantic Ocean.

The disposal sites consist of coastal waters in nearshore areas with depths ranging from approximately 0 ft. to 245 ft. Water temperature within the disposal site range from 47° F to 73° F depending on the season. Average salinity within the disposal site is 31.75 practical salinity units. Dissolved oxygen levels average 8.0 milligrams per liter. Turbidity averages 0.66 nephelometric turbidity units. Habitats within the cable transmission route vary, but medium to coarse grain sand bottom with limited features make up a majority of the route. Other habitats within the cable transmission corridor consist of hard bottom/complex seafloor consisting of cobble or exposed bedrock.

There are no special aquatic sites as defined in 40 CFR Part 230 Subpart E (wetlands, mud flats, vegetated shallows, sanctuaries and refuges, coral reefs, or riffle and pool complexes) located within the OECC, and there is no proposed discharge of dredged or fill material into a special aquatic site.

5.3.5.2 Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C 40 CFR § 230.20-230.25)

Substrate: USACE anticipates that the proposed discharges of fill material within the 3 NM limit would have a minor long-term effect on the substrate. USACE anticipates that the proposed discharge of dredged material associated with HDD exit pit backfilling will have minor, short term effects on the substrate. A maximum of 21.5 acres (Phase I) and 29.4 acres (Phase II) of substrate in waters of the United States would be modified due to the installation of secondary cable protection within the Atlantic Ocean. The majority of the substrate to be impacted is soft bottom sediment consisting of sand. Some of this substrate will be converted to hard bottom by the placement of the rock or concrete mattresses. Although there will be a conversion of habitat type, this fill placement will not result in a loss of waters of the United States. Other areas will see impacts associated with the placement of sand wave material. Sand wave fills will not be placed on hard bottom habitats and will be relocated to matching soft bottom sediment areas. No conversion of habitats is expected as a result of sand wave relocation/dredging. The overall size of this geographic area that was analyzed within the Final EIS is approximately 1,164,963 acres, the fill impact area of 50.9 acres for both phases represents less than 0.001 percent of the total geographic area, which is a minor impact overall. In addition, the applicant has proposed the

cables for both phases to be located within the existing Vineyard Wind 1 OECC. This co-siting within a single 5,500-foot OECC consolidates project impacts from three projects to a single area that has already experienced disturbance. Use of the same corridor as Vineyard Wind 1 also allows the applicant to utilize existing knowledge and surveys from Vineyard Wind 1 to better microsite the proposed cables in areas of soft substrate, which will reduce the need for cable protection due to inadequate burial depths in harder substrates. Up to 1.14 acres of substrate will be impacted by the refilling of the five HDD exit pits once the landfall work has been completed. However, as this work will just be refilling of the pits with the material excavated from the pits, no habitat conversion will occur, and impacts are anticipated to be temporary, with the backfilled areas rapidly returning to pre-impact conditions.

Suspended particulates/turbidity: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would have a minor short-term effect on suspended particulates and turbidity. The placement of secondary cable protection over the export cables in the form of rock or concrete mattresses and the relocation/dredging of sand waves could cause localized, short-term turbidity. The refilling of the HDD exit pits when the landfall work has been completed would also cause localized, short-term turbidity.

Water: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would have no effect on the surrounding water as there would be no addition of contaminants that would cause changes to the water that would reduce its suitability for populations of aquatic organisms, recreation, or aesthetics.

Current patterns and water circulation: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would have no effect on current patterns or water circulation. The fill to be discharged for secondary cable protection would be the minimum required to protect the cables and would not be of an amount or height to cause changes in current patterns or water circulation within the Atlantic Ocean. The discharges of dredged or fill material associated with the sand wave relocation/dredging would be the minimum required to prepare the OECC for cable installation and impacts are anticipated to be temporary with no impacts to current patterns or water circulation. Fills associated with HDD work will be temporary and are not anticipated to impact current patterns and water circulation.

Normal water fluctuations: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would have no effect on tidal fluctuations in the project area as the fill to be discharged for secondary cable protection would be the minimum required to protect the cables. Likewise, discharges of dredged or fill material associated with sand wave relocation/dredging are the minimum required to prepare the OECC for cable installation and are not anticipated to impact normal water fluctuations. Fills associated with the HDD exit pit backfills are not anticipated to have any impact on normal water fluctuations.

Salinity gradients: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would have no effect on salinity gradients. The fill to be discharged for secondary cable protection would be the minimum required to protect the cables and should not impact salinity gradients. The discharge of dredged or fill material associated with sand wave relocation/dredging would be the minimum required to prepare the site for cable installation and

will not impact salinity gradients. The HDD exit pit backfills are also not anticipated to result in changes to salinity gradients and impacts associated with the HDD work will be temporary.

5.3.5.3 Potential Impacts on the Biological Characteristics of the Aquatic Ecosystem (Subpart D 40 CFR § 230.30-230.32)

Threatened and endangered species: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would result in minor impacts to threatened and endangered species. Threatened and endangered terrestrial species that could occur in the vicinity of the proposed discharges of dredged and fill material include the piping plover (*Charadrius melodus*), the rufa red knot (*Calidris canutus rufa*), and the roseate tern (*Sterna dougallii dougallii*). USACE anticipates that there would be negligible impacts to these species from the proposed discharges. Threatened and endangered marine species that could occur in this area of the Atlantic Ocean include Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), Kemps ridley sea turtles (*Lepidochelys kempii*), loggerhead sea turtles (*Caretta caretta*), green sea turtles (*Chelonia mydas*), leatherback sea turtles (*Dermochelys coriacea*), North Atlantic right whales (*Eubalaena glacialis*), fin whales (*Balaenoptera physalus*), and sei whales (*Balaenoptera borealis*). Discharges of fill associated with cable protection, sand wave dredging/relocation, and HDD pit backfilling are not anticipated to have effects on whale species. USACE does not anticipate that the discharge of fill for the secondary cable placement or the refilling of the HDD pits would bury or kill sturgeon or sea turtles. However, the modification of bottom habitat through the discharge of fill for secondary cable protection and the subsequent habitat conversion could displace some foraging habitat. Disposal of sand wave material and HDD pit backfill is also anticipated to temporarily impact benthic communities that species could utilize for foraging. It is anticipated that a maximum of 50.9 acres of primarily soft bottom would be impacted as a result of the secondary cable protection placement and sand wave disposal. HDD exit pit backfill is anticipated to impact 1.14 acres of ocean bottom. When considering the overall size of the geographic area of analysis, this habitat conversion represents impacts to less than 0.001percet of the total available area. It should also be noted that a majority of these foraging areas have been previously impacted as they are located within the existing Vineyard Wind OECC. Consultation with the USFWS and NMFS on the overall project was performed under Section 7 of the ESA and is referenced below. See Sections 3.6, 3.7. and 3.8 of the Final EIS for an analysis of impacts to threatened and endangered species from the overall project.

Fish, crustaceans, mollusks, and other aquatic organisms: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would result in moderate impacts to mollusks, fish, and crustaceans in the project area. The discharge of fill in the form of rock, concrete mattresses, fronded mattresses, or rock bags for secondary cable protection, relocation of sand waves, and HDD pit backfill would result in the smothering of any sessile species present on the substrate. The placement of fill material has the potential to have adverse effects on egg and larval stages of fish and crustaceans that may be present in the area but are unable to avoid smothering due to their inability to relocate. However, the USACE authorization will include seasonal restrictions on the discharges of dredged and fill material from April 1 to June 30 to protect longfin squid. This time of year (TOY) restriction occurs during a time of year when fisheries spawning and sensitive life stage activity is highest in Massachusetts waters and while the TOY is intended to protect longfin squid, it will also protect the sensitive life stages of

other fisheries resources. See Sections 3.5 and 3.6 of the Final EIS for analysis of impacts to fish, crustaceans, mollusks, and other aquatic organisms from the overall project.

Other wildlife: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would have minor long-term impacts to other wildlife that have not been considered above. The placement of cable protection, relocation of sand waves, and backfill of HDD pits could have minor secondary effects on seals and sea birds, as direct impacts to fish, crustaceans, mollusks, and other benthic fauna from the discharge of fill could result in an impact to available forage for these species.

5.3.5.4 Potential impacts on special aquatic sites (Subpart E 40 C.F.R. § 230.40-230.45)

Sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, riffle and pool complexes: USACE anticipates that the proposed discharges of dredged and fill material within the 3 NM limit would have no direct effect on sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs or riffle and pool complexes as the proposed discharges would not occur within any of these special aquatic sites. The distance of the proposed HDD pits and nearshore cable installation in relation to identified eelgrass beds along the shoreline should minimize the likelihood of any indirect impacts from turbidity.

5.3.5.5 Potential impacts on human use characteristics (Subpart F 40 C.F.R. § 230.50-230.54)

Municipal and private water supplies: USACE anticipates that the proposed discharges of dredged or fill material within the 3 NM limit would have no effect on municipal or private water supplies as they will occur in the Atlantic Ocean, a tidal waterbody. No water supply is being sourced from this area of the Atlantic Ocean.

Recreational and commercial fisheries: USACE anticipates that the proposed discharges of dredged or fill material within the 3 NM limit would have minor long-term effects on recreational and commercial fisheries. Local fish stocks will likely be negatively affected by the discharge of fill and turbidity, as non-mobile larvae and eggs cannot disperse to avoid smothering. However, it is anticipated that the project will adhere to TOY restrictions to lessen impacts to fisheries in the area. The proposed discharge of fill to protect the cable could pose a navigation hazard to bottom trawling fishing vessels. To offset potential losses, the applicant has committed to establishing a compensation program for impacted fishermen for potential gear loss and for lost income. The applicant has also committed to designing cable protection to avoid introducing new hangs for mobile fishing gear. It is anticipated that the cable protection may be minorly beneficial to recreational fisheries, as additional structure on featureless bottom tends to serve as an artificial reef that attracts higher concentrations of fish. See Section 3.9 of the Final EIS for additional analysis of impacts to commercial and recreational fisheries.

The applicant's proposed activities in the SWDA would occur on the OCS and are thus outside of the waters of the United States regulated by USACE under section 404 of the CWA. USACE-regulated waters of the United States only extend seaward to the 3 NM limit of the territorial seas. As a result, although regulated by USACE under Section 10 of the RHA, the applicant's proposed activities in the SWDA do not involve any discharge of dredged or fill material into waters of the United States and are not subject to the requirements of the 404(b)(1) Guidelines. This 404(b)(1) Guidelines Subpart F analysis of potential impacts to recreational and

commercial fisheries thus only considers the potential impacts of the discharge of dredged or fill material regulated under section 404 of the CWA, i.e., the 50.9 acres (21.5 acres for Phase I and 29.4 acres for Phase II) of secondary cable protection and sand wave relocation, along the OECC within the waters of the United States, and the 1.14 acres of dredged material used to backfill the HDD pits.

Water-related recreation: USACE anticipates that the proposed discharges of dredged or fill material within the 3 NM limit would have negligible impacts on water-related recreation. USACE estimates that water-related recreation within the 3 NM limit would consist of recreational fishing and boating. The placement of fill over the cables for secondary cable protection, the relocation of sand waves, and the HDD pit backfilling would only have a short-term effect on the navigation of recreational boaters while the work vessel was performing the fill. There would be no change in the ability of vessels to use the waters above the fill once it has been placed. The proposed discharge of fill could provide structure to the substrate in areas currently consisting of soft sediments which could have a minor, positive effect on recreational fishing.

Aesthetics: USACE anticipates that the proposed discharges of dredged or fill material within the 3 NM limit would have minimal effects on aesthetics. Any turbidity impacts are anticipated to be minor and short in duration. A barge would be visible from the shore while the HDD pit material was temporarily stored prior to refilling the pits but that would be a short-term minor impact. Sand wave relocation is anticipated to occur far enough offshore that vessels associated with the sand wave relocation discharges will not be visible. Once the secondary cable protection is installed, it would be located at sufficient depths such that it would not be visible from the water surface.

Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves: No effect. The proposed discharge of dredged and fill material should have no effect on parks, national and historical monuments, national seashores, wilderness areas, research sites, or similar preserves as no proposed discharges will occur within or directly adjacent to these areas.

5.3.5.6 Evaluation and Testing (Subpart G, 40 CFR § 230.60-230.61)

The discharges being evaluated in this section consist of the refilling of the five HDD exit pits after the cable landfall work is complete, relocation of sand waves, and the placement of secondary cable protection over sections of the cable that do not achieve burial or adequate burial or that cross existing submarine assets such as cables or pipelines. The HDD pit material would be excavated, placed temporarily on a barge, and then backfilled into the exit pits once the HDD work was complete. Testing is not required for the HDD pit material as it is going back into its original location. Although the discharge material could be a carrier of contaminants, it is not likely to degrade the disposal site as the material originated at the disposal site. The sand wave material will be relocated to areas adjacent to the sand wave with similar substrate. As the material is going back into the same waterway in the same general location, testing is not required. In addition, naturally occurring sand within the OECC is unlikely to be a carrier of contaminants as it is an inert material. The secondary cable protection would consist primarily of

rock berms and/or concrete mattresses. It has been determined that testing is not required for these materials because they will be comprised of clean inert material.

5.3.5.7 Actions to Minimize Adverse Impacts (Subpart H, 40 CFR §§ 230.70 – 230.77)

- Actions concerning the location of the discharge: The applicant is siting the cable, and therefore the cable protection, in soft bottom sediments to the greatest degree practicable, which will limit impacts to complex habitat. Discharges associated with sand wave dredging/relocation will occur in areas with similar substrate characteristics to avoid conversion of hard bottom/complex habitat to soft bottom habitat. HDD exit pits and cables have been sited to avoid special aquatic sites. The Centerville River crossing for Phase I has been designed to avoid wetland impacts.

- Actions concerning the material to be discharged: The cable protection material will consist of clean rock, concrete mattresses, half shell pipe, sands found within the OECC, or other clean fill material. The dredged material utilized to refill the HDD exit pits will have been sourced from the HDD exit pits and will consist of replaced of material. Fills associated with the sand wave dredging/relocation will consist of medium to coarse grain sands that are anticipated to have a low probability of contaminant presence. The sands will be relocated into immediate adjacent areas with the same sediment characteristics.

- Actions controlling the material after discharge: Annual surveys will be performed on portions of the export cable including cable protection with the entire length of the cable surveyed over 5-years to ensure cable protection remains in place and is not damaged. Relocated/dredged sand waves are mobile in nature and are anticipated to continue to move across the seafloor as they currently do. No actions controlling the discharge after construction is completed is required for the HDD exit pits as the area is anticipated to return to pre-impact conditions.

- Actions affecting the method of dispersion: Dredged material from the HDD exit pits will be stored on a barge until being replaced back into the HDD pits. This should limit movement of the sediment compared to side-casting the HDD pit material.

- Actions related to technology: HDD technology will be utilized for the five cable landfall transitions instead of open trenches with backfill. Use of HDD will limit impacts in the nearshore area and avoid impacts to sensitive areas such as the intertidal zone. HDD technology will also be used for the Centerville River crossing, which will avoid all impacts the river and wetlands associated with the river.

- Actions affecting plant and animal populations: The export cables, and therefore the cable protection, have been sited to avoid special aquatic sites and minimizes impacts to complex habitat to the greatest extent practicable. TOY restrictions will limit impacts to fisheries resources by prohibiting work during times of year when sensitive life stages of aquatic organisms are most vulnerable to impacts associated with the placement of fill.

- Actions affecting human use: The applicant has proposed to perform the HDD exit pit work in the nearshore area during the winter months when the beach areas are less frequently utilized.

- Other actions: N/A

5.3.5.8 Factual Determinations (Subpart B, 40 CFR § 230.11)

Physical substrate determination: Based on the evaluation in section 5.3.5.2 above, USACE anticipates that the proposed discharges of fill material within the 3 NM limit would have a minor, long term effect on the physical substrate. USACE anticipates that the discharge of dredged material associated with the backfill of the HDD exit pits will have a temporary, short-term impact on the physical substrate.

Water circulation, fluctuation, and salinity determination: Based on the evaluation in section 5.3.5.2 above, USACE anticipates that the discharges of dredged and fill material within the 3 NM limit will have no effect on water circulation, fluctuation, and salinity.

Suspended particulate/turbidity determination: Based on the evaluation in section 5.3.5.2 above, USACE anticipates that the discharges of dredged and fill material associated with cable protection, sand wave dredging/relocation, and HDD pit backfill within the 3 NM limit would have a minor, short-term effect on suspended particulates and turbidity.

Contaminant determination: The proposed discharge of dredged material consists of backfill of HDD exit pits with the same material that was excavated from the pits. Therefore, the composition of the sediment will be the same as the sediment surrounding the exit pit. Relocated sand wave material consists of medium to coarse grain sand material that is unlikely to contain contaminants due to the nature of the material. Even if contaminants were to be present, the sand will be relocated to adjacent areas with similar physical and chemical characteristics (i.e., contaminants are anticipated to be similar across the two locations). Cable protection fills will consist of rock, concrete mattresses, or half-shell pipe that are not anticipated to contain contaminants. Therefore, USACE anticipates that the proposed discharges will have no effect on contaminants.

Aquatic ecosystem and organism determination: Based on the evaluation in section 5.3.5.3 above, USACE anticipates that the discharges of dredged or fill material within the 3 NM limit would have a minor long-term effect on the aquatic ecosystem.

Proposed disposal site determination: Based on the evaluations in sections 5.3.5.2 through 5.3.5.6 above, USACE anticipates that the discharges of dredged and fill material within the 3 NM limit would have a minor, long term effect on the disposal sites.

Determination of cumulative effects on the aquatic ecosystem: USACE has authorized numerous authorizations for discharges of fill associated with cable installation, such as secondary cable protection and HDD work. Authorizations for sand wave relocation in Nantucket Sound have been limited to Vineyard Wind 1. The proposed cables associated with the New England Wind Project (Phase I and Phase II) are co-located within the same OECC that contains the cables and associated cable protection fills or relocated sand waves for the Vineyard Wind I project. The

New England Wind OECC also potentially crosses the proposed SouthCoast Wind OECC and discharges of dredged and/or fill material are also expected to occur with this project, if authorized. A review of NOAA navigation charts indicates that there are at least five submarine cables present in the immediate area surrounding Martha's Vineyard, two submarine cables in the immediate area surrounding Nantucket, and the cables associated with Vineyard Wind 1. The extent of cable protection associated with these cables is unknown, except for Vineyard Wind 1, which was authorized under USACE permit number NAE-2017-01206. USACE is aware of two additional submarine cables proposed and under review for authorization with USACE between Martha's Vineyard and Falmouth, Massachusetts. However, these cables are proposed to be located in soft substrates with no cable protection proposed. HDD work associated with these cable proposals is anticipated to be similar to the HDD work proposed for the New England Wind Project. Typically, when feasible, cables are proposed in areas of soft sediment to allow for adequate burial depths to occur and limit the need for cable protection. Typically, cables are not sited within special aquatic sites as the 404(b)(1) guidelines would require evaluating alternative routes that avoid impacts to special aquatic sites. This avoidance of special aquatic sites is anticipated to occur for future projects in line with USACE regulations. If cable protection is necessary for a project, the material proposed usually consists of clean fill materials such as rock, concrete mattresses, half shell pipe, and other similar material. As this is the industry standard, it is anticipated cable protection would consist of similar materials for future projects. Impacts associated with cable protection may be long term, but do not cause a loss of waters of the U.S. Impacts associated with cable protection will primarily consist of conversion of habitats. USACE anticipates that impacts associated with placement of cable protection would cumulatively result in long-term, minor impacts to the aquatic ecosystem. Discharges of fill or dredge material associated with sand wave relocation or dredging are anticipated to occur within the 3 NM limit in association with offshore wind projects. Sand waves do not appear to be a factor in cable installation in the nearshore area between Martha's Vineyard or Nantucket and mainland Cape Cod. Sand waves are present in waters within the 3 NM limit of surrounding New England states, but the lack of features, such as inhabited islands that would require submarine cables for infrastructure, indicates that the need for cables not associated with wind are low. Therefore, USACE does not anticipate that sand wave dredging or relocation will occur with much frequency in non-offshore wind projects. USACE anticipates that impacts associated with the discharges of dredged or fill material associated with sand wave relocation/dredging within the 3 NM limit will cumulatively result in short-term, minor impacts to the aquatic ecosystem as the relocated sand is anticipated to settle and resume normal movement within a short period of time after impacts occur.

Determination of secondary effects to the aquatic ecosystem: Secondary effects from the placement of scour protection, refilling the HDD pits, and the sand wave relocation/dredging are anticipated to consist of short-term elevated turbidity levels in the nearby water column. Additionally, placement of scour protection is anticipated to have the secondary effect of changes to the aquatic organism composition of the area where the scour protection was placed from organisms that utilize soft sediment to organisms that utilize structure on the seafloor. These changes are not anticipated in association with the HDD exit pit backfills and sand wave discharges as these discharges are placing sediment into the same or similar habitat types with no habitat conversion. USACE anticipates that there would be minor, long-term secondary effects to the aquatic ecosystem.

5.3.5.9 Findings of Compliance or Non-compliance with the Restrictions on Discharges (40 CFR § 230.10(a-d) and 230.12)

Based on the information above, including the factual determinations, the proposed discharges of dredged and fill material have been evaluated to determine whether any restrictions on discharge would occur:

Is there a practicable alternative to the proposed discharge that would be less damaging to the environment (any alternative with less aquatic resource effects, or an alternative with more aquatic resource effects that avoids other significant adverse environmental consequences)?

No, as evaluated above, there is no practicable alternative that would be less damaging to the environment.

Will the discharge cause or contribute to violations of any applicable water quality standards?

No. The proposed discharge will not cause or contribute to violations of any applicable water quality standards. the Massachusetts Department of Environmental Protection (MA DEP) issued an individual 401 Water Quality Certification (WQC) for the proposed discharges of dredged and fill material associated with Phase I of the project on May 12, 2023, indicating that the project meets the state's water quality standards. The application for a 401 WQC for Phase II of the Project is under review with MA DEP, and USACE will not issue a permit decision for Phase II of the Project until a 401 WQC has been issued to ensure that Phase II meets all applicable state water quality standards.

Will the discharge violate any toxic effluent standards (under Section 307 of the CWA)?

No, the proposed discharge will not violate any toxic effluent standards under Section 307 of the CWA.

Will the discharge jeopardize the continued existence of endangered or threatened species or their critical habitat?

No. BOEM, as the lead Federal agency, completed Section 7 consultation under the ESA for the overall project. USFWS issued a biological opinion on September 28, 2023, for terrestrial species, and NMFS issued a biological opinion on February 16, 2024, for marine species. Both biological opinions indicated that the overall project would not jeopardize the continued existence of threatened and endangered species and/or their critical habitat, and BOEM and USACE agreed with these opinions. The proposed discharges of dredged or fill material within the 3 NM limit are a subset of the overall project and were, therefore, considered within the biological opinions.

Will the discharge violate standards set by the Department of Commerce to protect marine sanctuaries designated under title III of the Marine Protection, Research, and Sanctuaries Act of 1972?

No. The proposed discharge will not occur within any marine sanctuaries and will not violate any standards set by the Department of Commerce.

Will the discharge cause or contribute to significant degradation of waters of the United States?

No. The proposed discharge should not cause or contribute to significant degradation of waters of the United States.

Have all appropriate and practicable steps (Subpart H, 40 CFR § 230.70-230.77) been taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?

Yes. All appropriate and practicable steps have been taken to minimize the potential adverse impacts of the proposed discharge on the aquatic ecosystem. There will be seasonal restrictions on the work to limit impacts to aquatic organisms. In addition, the cable location has been sited to be installed in soft sediments and to avoid impacting complex habitats to the greatest degree practicable. The cable work has also been designed to avoid impacts to special aquatic sites. Sand wave relocation/dredging will be limited to the minimum necessary required to lay cable, and all sand wave material will be relocated to adjacent areas within the OECC and onto similar soft bottom habitat. The Phase I cable crossing at the Centerville River has been designed to avoid wetland impacts by locating HDD entrance and exit pits in uplands and utilizing HDD to cross under the river with no disturbances to aquatic resources. HDD is additionally being utilized for the five cable landfalls to avoid impacts to intertidal areas in the nearshore.

Is compensatory mitigation required to offset environmental losses resulting from proposed unavoidable impacts to waters of the United States?

No compensatory mitigation is required. The proposed discharge of fill material associated with the placement of cable scour protection would be a long-term impact, but no loss of waters of the U.S. would occur as a result of the discharge of fill. The discharge of dredged or fill material associated with HDD pit backfill and sand wave relocation/dredging are considered temporary impacts and will not result in a loss of waters of the U.S. Additionally, all proposed discharges of dredged and fill material are not located within special aquatic sites.

5.3.6 USACE Public Interest Review (33 CFR § 320.4)

In accordance with 33 CFR Part 320, USACE's decision whether to issue a permit is based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the proposed activity might have on the public interest required a careful weighing of all those factors which were relevant to this project. The benefits, which reasonably may be expected to accrue from this project, have been balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur, was therefore determined using this general balancing process. The decision reflects the national concern for both protection and utilization of important resources. All factors which may be relevant to the proposal have been considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. These public interest factors are addressed below.

Unless a distinction is made between phases, the public interest factor review detailed below applies to both phases of the Final EIS Preferred.[35]

5.3.6.1 USACE Review of Public Interest Factors (33 CFR § 320.4(a)(1))

Conservation: USACE anticipates that the projects would have no effect on conservation. Broadly defined, conservation is the planned management of natural resources in order to prevent or minimize exploitation, destruction, or neglect. The proposed projects will not result in conservation of land to prevent or minimize exploitation destruction. The projects will also not impact any currently conserved land. It is anticipated that applicants on other offshore wind projects will also try to avoid conservation land when looking for a landing site and an over land cable route to connect to existing power grids because it can be a challenge to obtain an easement to disturb these areas. Therefore, when considering past, present, and reasonably foreseeable future offshore wind projects, it is anticipated that these projects will have no effect on conservation cumulatively.

Economics: USACE anticipates that the projects would have a minor beneficial impact on economics due to job creation, expenditures on local businesses, tax revenue and grant funds provided by the applicant, and the support for additional regional offshore wind development that would result from construction of the New England Wind Project. USACE anticipates that the projects would have moderate adverse impacts on the commercial/for-hire fishing industry. When also considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that the cumulative impacts to economics would be moderate beneficial, due to impacts associated with investment in offshore wind, job creation and workforce development, and port utilization and moderate adverse due to impacts on commercial and for-hire recreational fishing and cable emplacement and maintenance, the presence of structures, vessel traffic, and land disturbance. Final EIS Section 3.9 includes an in-depth analysis of the impact for commercial fisheries and for-hire recreational fishing.

The applicant has proposed the follow economic benefits for Phase I, in addition to job creation, growth of local business, and tax revenues:

1. Contribution of $3 million to the Nantucket Offshore Wind Community Fund to support projects related to protecting and preserving cultural and historic resources, climate adaptation, coastal resiliency, and other initiatives.

2. Entering a Host community agreement (HCA) with the Town of Barnstable, similar to the HCA approved for the Vineyard Wind 1 project.

3. Investment of $9 million for projects and initiatives to accelerate the development of offshore wind supply chain and businesses focused in Connecticut.

Phase II economic benefits proposed by the applicant include the same benefits listed in 1 (Nantucket Offshore Wind Community Fund) and 2 (HCA) in the above list. Economic impacts may also occur in the recreation, tourism, and commercial fishing sectors as a result of both

[35] USACE is not considering the Western Muskeget Variant Contingency Option as part of the Preferred Alternative.

phases. See Final EIS Table 2.4-1 and a summary and Final EIS Section 3.11 for an in-depth analysis of all relevant factors.

Aesthetics: USACE anticipates that the projects would result in long term major adverse impacts to aesthetics. When considered cumulatively with past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates major cumulative impacts on the viewer's visual experience and moderate impacts on the seascape, open ocean, and landscape character. The visual impacts would be present for the life of the project (up to 35 years), but the resources would be expected to recover completely after decommissioning. Primary impacts to aesthetics are anticipated to consist of lighting associated with construction, hazard lighting on the WTGs, security lighting on the substation facilities, presence of the WTG and ESP structures, changes to the existing conditions of the area where the new substation is proposed, and changes to vessel presence. Some applicant-proposed mitigation measures include the following:

1. Use of a paint color on the WTGs that is no lighter than RAL 9010 pure white and no darker than RAL 7035 light gray to help reduce potential visibility of the WTGs during daylight hours.

2. Installation of aircraft detection lighting systems (ADLS) to reduce the duration of nighttime lighting. The lighting will comply with FAA and U.S. Coast Guard standards and be consistent with BOEM best practices.

3. Minimizing visual effects by primarily siting the onshore export cable route and grid intersection routes within existing right of ways and below existing roadways.

See Section 3.16 of the Final EIS for an in-depth analysis of all relevant factors.

General Environmental Concerns: USACE anticipates that the projects would result in beneficial impacts to general environmental concerns. At full operation, New England Wind Phase I and Phase II would produce up to 2,600 MW of renewable energy for the ISO New England power grid. The addition of this energy would reduce emissions produced by current energy production methods and contribute towards Connecticut, Massachusetts, and Rhode Island's goals for clean energy procurement. In October 2023, the three states all issued solicitations for additional offshore wind generated electricity and signed a memorandum of understanding to allow developers to submit multi-state bids and for states to collaborate on their clean energy procurement decisions. Connecticut Public Act 19-71 mandates the procurement of 2,000 MW of offshore wind energy by 2030. Massachusetts H.5060, An Act Driving Clean Energy and Offshore Wind, codified the goal of procuring 5,600 MW of offshore wind energy no later than June 30, 2027. Rhode Island Senate Bill 2583 requires market-competitive procurement of 600 to 1,000 MW of newly developed offshore wind energy. After subtracting the annual estimated CO2 emissions caused by the project, it is estimated that the construction of New England Wind Phase I and Phase II would result in a net avoidance of 3.93 million tons of carbon dioxide emissions annually, which is equivalent to taking 775,000 cars off the road each year. A reduction in carbon emissions and other greenhouse gas emissions has the potential to contribute towards the slowing of climate change and sea level rise. See Final EIS, Appendix G, Section G.2.1 for additional analysis on emissions. When considering past, present, and

reasonably foreseeable future offshore wind projects, USACE anticipates that the cumulative impacts would be moderately beneficial.

Wetlands: USACE anticipates that the projects could result in minor adverse impacts on wetlands based on the impact-producing factors assessed in the Final EIS. When also considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that the cumulative impacts would be minor adverse. See Final EIS Appendix G, Section G.2.6 for an in-depth analysis of various factors. It should be noted that the impact-producing factors in the Final EIS do not include activities that would require a permit from USACE under Section 404 of the CWA or Section 10 of the RHA. Impact-producing factors discussed in the Final EIS include accidental spills and impacts to a wetland from soil disturbance activities outside of the wetland but nearby, neither of which trigger USACE jurisdiction.

Historic Properties: USACE anticipates that the projects would result in major adverse impacts on historic properties and cultural resources. See Section 3.10 of the Final EIS for an in-depth analysis of relevant factors. USACE anticipates that a majority of adverse impacts, which are visual in nature, would cease after project decommissioning. Additional impacts to historic properties may consist of accidental releases, anchoring and gear utilization, cable placement and maintenance, changes to climate change progression, land disturbance and lighting. When also considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that the cumulative impacts would be major adverse. Impacts to historic properties were also addressed under Section 106 of the National Historic Preservation Act (NHPA). USACE designated BOEM as the lead Federal agency and consultation was completed. Adverse effects to historic properties were addressed via an MOA, which USACE signed as a concurring party.

Fish and Wildlife Values: USACE anticipates that the projects would result in moderate adverse impacts to fish and wildlife values. The Final EIS analyzed impacts associated with the Preferred Alternative to wildlife, fish, and other marine fauna including, but not limited to: bats (negligible effects), birds (minor adverse, minor beneficial), benthic invertebrates (moderate adverse, moderate beneficial due to structure presence), finfish (moderate adverse and moderate beneficial due to structure presence), marine mammals (major adverse effects to North Atlantic right whale, moderate adverse impacts to all other marine mammals, minor beneficial impacts due to reef effect), and sea turtles (moderate adverse impacts, moderate beneficial due to reef effect). A summary of impacts can be found in Final EIS Table 2.4-1. Therefore, USACE anticipates that the projects will have moderate adverse impacts on fish and wildlife values.

When considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that the cumulative impact to fish and wildlife values will be moderate. Cumulative effects determinations are the same as the project specific effects determinations above, except for effects to birds. Cumulatively, it is anticipated that effects to birds would be moderate adverse. See sections 3.4, 3.5, 3.6. 3.7, and 3.8 of the Final EIS for a full analysis of impacts to fish and wildlife factors.

33 C.F.R. § 320.4(c) discusses the Fish and Wildlife Coordination Act (FWCA) and the need for USACE to consider input from USFWS, NMFS, and state fish and wildlife agencies with a view to the conservation of wildlife resources by prevention of their direct and indirect loss and

damage due to the proposed project. The MA DEP 401 WQCs, which will be part of the USACE permits, considered input from state fish and wildlife agencies. USFWS did not specifically provide FWCA recommendations for review on this project. NMFS provided two FWCA recommendations for consideration:

1. The project should be required to mitigate the major impacts to NOAA Fisheries scientific surveys consistent with NOAA Fisheries-BOEM Federal Survey Mitigation Strategy - Northeast U.S. Region. New England Wind's plans to mitigate these impacts at the project and regional levels should be provided to NOAA Fisheries for review and approval prior to BOEM's decision on their acceptance. Mitigation is necessary to ensure that NOAA Fisheries can continue to accurately, precisely, and timely execute our responsibilities to monitor the status and health of trust resources.

USACE will implement this recommendation. The applicant intends to enter into a survey mitigation agreement with NMFS and develop a Survey Mitigation Plan, consistent with the NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region.

2. Locations of relocated boulders, created berms, and scour protection, including cable protection measures (e.g., concrete mattresses) should be provided to NOAA Fisheries, all other Federal agencies with maritime jurisdiction, and the public as soon as possible to help inform all interested parties of potential gear obstructions.

USACE will implement this recommendation. The applicant has agreed to report the locations of any relocated boulders that will protrude 6.5 feet [2 meters]) or more on the seafloor to BOEM, MA DEP, Massachusetts Office of Coastal Zone Management (MA CZM), RI Coastal Resources Management Council (RI CRMC), the United States Coast Guard (USCG), NOAA, and the local harbormaster (if within a town's jurisdiction) within 30 days of relocation. These locations must be reported in latitude and longitude degrees to the nearest 10 thousandth of a decimal degree (roughly the nearest meter), or as precisely as practicable. Created berms are not anticipated to result from the proposed project and any berms that do occur during construction are anticipated to rapidly dissipate. It is anticipated that BOEM will require a scour protection plan that indicates the location of scour protection and reporting of berm locations as part of COP approval. USACE anticipates that similar conditions will be incorporated into the USACE permit decision as applicable.

The FWCA recommendations will be implemented and these recommendations were fully considered in making this USACE permit decision. USACE anticipates that the concerns of state fish and wildlife agencies, the USFWS and NMFS in relation to the FWCA will be fully considered and implemented to the degree practicable and appropriate on future offshore wind projects as well.

Flood Hazards: USACE anticipates that the projects will have no effect on flood hazards. 33 C.F.R. § 320.4(k) discusses the safety of impoundment structures. The project does not have any components that involve construction, removal, or modification of impoundment structures. Based on the geographical setting of offshore wind projects, export cables, and onshore components, USACE does not anticipate that future offshore wind projects will impact

impoundment structures. Therefore, when considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that cumulatively there will be no effect on flood hazards.

Floodplain Values: No effect. The projects will not impact floodplains as they are located in the coastal zone. Due to the nature and siting of these projects, USACE estimates that this would be the case for reasonably foreseeable offshore wind projects as well.

Land Use: USACE anticipates that the projects will have minor adverse impacts on land use or minor beneficial impacts to land use depending on the specific impact considered. Impact producing factors considered included accidental releases, land disturbance, lighting, noise, port utilization, presence of structures and traffic. See Final EIS Appendix G, Section G.2.7 for an in-depth analysis of all relevant factors. When considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that there would still be minor adverse impacts or minor beneficial impacts on land use depending on the specific factor considered.

Navigation: USACE anticipates that the projects will have moderate adverse impacts to navigation. Factors considered included anchoring and gear utilization, cable placement and maintenance, port utilization, presence of structures, and vessel traffic.

Mitigation measures for navigation impacts would include but not be limited to the following:

- Siting of all WTGs in a grid with approximately 1.15-mile (1 NM) by 1.15-mile (1 NM) spacing. This layout will help allow for safer navigation within the lease area. This layout will also provide a uniform spacing among structures to facilitate search and rescue operations.

- The WTGs and ESPs will become private aids to navigation (PATONs) once they are installed. The applicant will implement a uniform system of marine navigation lighting and marking for the offshore facilities, which is currently expected to include yellow flashing lights on every WTG foundation and ESP, unique alphanumeric identifiers on the WTGs, ESPs, and/or their foundations, and high-visibility yellow paint on each foundation.

- The applicant will provide Offshore Wind Mariner Update Bulletins and coordinate with the USCG to issue notices to mariners advising other vessel operators of construction and installation activities. The applicant employs a Marine Operations Liaison Officer and will employ a Marine Coordinator during construction of each Phase to coordinate with maritime partners and stakeholders (e.g., USCG, US Navy, port authorities, state and local law enforcement, marine patrol, commercial operators, etc.). Local port communities and local media will also be notified and kept informed as the construction progresses. The Proponent's website will be updated regularly to provide information on the construction activities and specific New England Wind information.

- Reporting the locations of any boulders protruding 2 meters or more above the seafloor that were moved during cable installation activities.

Cumulatively when considered along with recently permitted and reasonably foreseeable offshore wind projects the project would have moderate adverse impacts to navigation. See Final EIS Section 3.13 for an in-depth analysis of all relevant factors.

Shoreline Erosion and Accretion: USACE anticipates that the projects would have no effect on shoreline erosion or accretion as the projects would not be anticipated to alter hydrodynamics that would affect these shoreline processes. Looking at recently permitted and reasonably foreseeable offshore wind projects in the vicinity, none of them appear to contain design elements that would be expected to cause shoreline erosion or accretion. Therefore, cumulatively, USACE anticipates no effect on shoreline erosion and accretion.

Recreation: USACE anticipates that the projects would result in negligible to moderate adverse impacts and negligible to minor beneficial impacts to recreation. Short term adverse impacts during construction include noise, anchored vessels, and hindrances to navigation from the installation of the OECC and WTGs. Long term adverse impacts include constraints on and greater navigational risks for recreational vessels within the SWDA, and the impact of WTGs visible from coastal locations. Beneficial impacts could result from recreational fishing due to the reef effect and the sightseeing attraction of offshore wind energy structures. When also considering recently permitted and reasonably foreseeable offshore wind projects, the cumulative impacts to recreation would be moderate adverse and minor beneficial. See Section 3.15 of the Final EIS for an in-depth analysis of all relevant factors.

Water Supply and Conservation: USACE anticipates that the projects would have no effect on water supply and conservation because the projects would have no effect on water quantities available for water supplies. When considering recently permitted and reasonably foreseeable offshore wind projects in the vicinity, no projects appear to contain design elements that would impact water quantities either. Therefore, cumulatively USACE anticipates that there would be no effect on water supply and conservation.

Water Quality: USACE anticipates that the projects will result in short term minor adverse impacts on water quality. See Final EIS Appendix G, Section G.2.2 for an in-depth analysis of all relevant factors. When considered along with recently permitted and reasonably foreseeable offshore wind projects, USACE anticipates that the project would cumulatively have minor adverse impacts on water quality. Accidental releases, turbidity associated with anchoring and gear utilization, the installation of cable and cable maintenance, discharges and intakes associated with vessel traffic, land disturbance that could result in sediment discharges, port utilization, and the presence of structures were factors considered in regard to water quality. MA DEP issued a 401 WQC for Phase I of the project on May 12, 2023, indicating that the project meets state water quality standards. The applicant has stated its intent to apply for a 401 WQC from MA DEP for Phase II of the New England Wind project by the end of 2024. USACE will not issue a permit decision for Phase II until a valid 401 WQC has been issued determining Phase II meets Massachusetts' water quality standards.

Energy Needs: USACE anticipates that the projects would result in beneficial impacts to energy needs. The projects would provide a total of up to 2,600 MW of renewable energy to the ISO New England energy grid once they are operational. By delivering to the ISO New England grid, the project is contributing to the clean energy goals of three New England states. Connecticut

Public Act 19-71 mandates the procurement of 2,000 MW of offshore wind energy by 2030. Massachusetts Bill H.5060 codified the goal of procuring 5,600 MW of offshore wind energy no later than June 30, 2027. Rhode Island Senate Bill 2583 requires market-competitive procurement of 600 to 1,000 MW of newly developed offshore wind energy. This addition of reliable, renewable energy to these states' power grids is anticipated to have beneficial effects on energy needs. Based on previously permitted and reasonably foreseeable future offshore wind projects, the Final EIS estimates that the projects along the Atlantic seaboard could generate up to 30 GW of clean energy by 2030 to meet the current shared agency goals of the Departments of the Interior, Energy, and Commerce as specified in EO 14008. Cumulatively, these impacts would be beneficial to energy needs.

Safety: USACE anticipates that the projects would have a minor adverse impact on safety. As the projects are anticipated to impact navigation, they could also impact safety. However, mitigation measures described under the Navigation public interest factor and the reporting detailed in the Fish and Wildlife Values public interest factor should limit adverse impacts to safety. When considering recently permitted and reasonably foreseeable offshore wind projects, USACE anticipates that these projects would have similar navigation concerns and implement similar safety measures. Therefore, cumulatively USACE anticipates that the project would have a minor adverse impact to safety.

Food and Fiber Production: USACE anticipates that the projects would have a minor adverse impact on food and fiber production. USACE anticipates that commercial fishing is the primary aspect of food and fiber production in New England that would be impacted by the project. See Final EIS Section 3.9 for an in-depth analysis of estimated impacts to commercial fishing. The Final EIS estimates that impacts to commercial fishing would vary from short term to long term and from negligible to major adverse, with the duration and intensity of impacts varying by project phase and fishery and fishing operations due to differences in target species, gear type, and predominant location of fishing activity. Commercial fishing is only one aspect of food and fiber production and does not include aquaculture and farming, neither of which are proposed to be impacted by the projects. Therefore, USACE estimates that the impacts to food and fiber production would be much less than the impacts to commercial fishing. When considered along with previously permitted and reasonably foreseeable offshore wind projects, USACE anticipates that the cumulative impacts to food and fiber production would be minor adverse.

Mineral Needs: USACE anticipates that the projects would have no effect on mineral needs. The projects are not located within any federal sand or mineral lease areas. As BOEM authorizes offshore mineral lease areas, the wind energy lease area designation determination took into account the presence or potential for offshore sand or mineral extraction. As recently permitted and reasonably foreseeable future wind projects would also occur within lease areas designated by BOEM, USACE anticipates that cumulatively there would be no effect on mineral needs.

Considerations of Property Ownership: USACE anticipates that the projects would have no effect on property ownership. The applicant has obtained a lease from BOEM to utilize the SWDA for the life of the project (up to 35 years). The applicant has received authorizations from the Commonwealth of Massachusetts to install the offshore export cables within state waters. The applicant has obtained all real estate easements required for the onshore part of the work and anticipates the execution of an HCA with the Town of Barnstable. As other recently permitted

and reasonably foreseeable offshore wind projects would be expected to obtain the same authorizations and easements, USACE anticipates that cumulatively there would be no effect on property ownership.

Needs and Welfare of the People: USACE anticipates that the projects would be in the interest of the people as the authorization of the projects, with the required mitigation, would result in increased energy reliability and environmental benefits in the form of a net reduction in greenhouse gas emissions. The projects have received or will receive approval from the RI CRMC, MA DEP, and the MA CZM indicating support for the project at the state level. Regarding public input on the federal permitting process, USACE received no comments on either of the public notices for the projects. However, as the lead Federal agency, BOEM received numerous comments from the public, agencies, interested groups, and stakeholders. As summarized in Final EIS Appendix O, BOEM received individual comment submissions from the public. BOEM also addressed comments from cooperating federal and state agencies. This includes comments submitted online via www.regulations.gov, transcripts of comments by individual speakers at BOEM's three public meetings, and written comments submitted by mail. BOEM counted each public hearing transcript as a single submission but pulled out the individual comments and addressed them separately in the Final EIS. The comments submitted to BOEM were substantive comments regarding information in the DEIS and/or a particular NEPA alternative that were all addressed and considered in the determination of the Preferred Alternatives in the Final EIS. These comments are summarized and addressed in Appendix O of the Final EIS.

5.3.6.2 USACE Evaluation of the Relative Extent of the Public and Private Need for the Proposed Structure or Work (33 CFR § 320.4(a)(2)(i))

In terms of the public need for the proposed work, New England Wind Phase I and Phase II would produce up to 2,600 MW of renewable energy for the ISO New England power grid. The addition of this energy would reduce emissions produced by current energy production methods and contribute towards Connecticut's, Massachusetts', and Rhode Island's goals for clean energy procurement. In terms of the private need, in addition to providing financial gain to the companies investing in the projects, the Final EIS indicates that the projects would have a minor beneficial impact on employment and economics.

5.3.6.3 If there are Unresolved Conflicts as to Resource Use, USACE Evaluation of the Practicability of Using Reasonable Alternative Locations and Methods to Accomplish the Objective of the Proposed Structure or Work (33 CFR § 320.4(a)(2)(ii))

To the extent that there may be unresolved resource use conflicts among offshore wind energy generation, vessel navigation, and commercial fishing, USACE has determined that there are no reasonable alternative locations or methods to accomplish the proposed work that would lessen potential resource conflicts. USACE has determined that the Preferred Alternative is the only environmentally preferable alternative that satisfies the project purpose and need and is technically feasible.

5.3.6.4 USACE Evaluation of the Extent and Permanence of the Beneficial and/or Detrimental Effects Which the Proposed Structure or Work is Likely to Have on the Public and Private uses to Which the Area is Suited (33 CFR § 320.4(a)(2)(iii))

The tidal waters within which the proposed work would be located are also suited for navigation by vessels, as well as recreational and commercial fishing. Phase I and Phase II of New England Wind would be expected to have moderate adverse impacts to navigation, and major adverse impacts to commercial fishing and for-hire recreational fishing. The project is expected to have minor beneficial impacts from the presence of the structures. The project components that could impact public and private uses would be in place for the life of the project, which is up to 35 years.

5.3.7 Compliance with Other Laws, Policies, and Executive Orders:

5.3.7.1 Section 7(a)(2) of the Endangered Species Act (ESA)

The "USACE action area" for Section 7 of the ESA includes all areas in the NEPA scope of analysis. The action area includes all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. USACE designated BOEM as the lead Federal agency for Section 7 consultation and BOEM completed consultation with both USFWS and NMFS.

USACE accepts the USFWS biological opinion dated September 28, 2023, including its Incidental Take Statement (ITS), which states that the proposed action is not likely to jeopardize listed terrestrial species or destroy or adversely modify critical habitat under USFWS jurisdiction. The requirement for the applicant to adhere to the terms and conditions of the ITS will be included as a binding condition of the USACE authorizations. The consultation has been found to be sufficient to ensure that the activities requiring USACE authorization are in compliance with Section 7 of the ESA.

USACE accepts the NMFS biological opinion dated February 16, 2024, including its ITS, which states that the proposed action is not likely to jeopardize listed marine species or destroy or adversely modify critical habitat under NMFS jurisdiction. The terms and conditions of the ITS relevant to the USACE action will be included as binding conditions of the USACE authorizations. The consultation has been found to be sufficient to ensure the activities requiring USACE authorization are in compliance with Section 7 of the ESA.

5.3.7.2 Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), Essential Fish Habitat (EFH)

USACE designated BOEM as the lead Federal agency for complying with the EFH provisions of the Magnuson-Stevens Act. Accordingly, BOEM consulted with NMFS on USACE's behalf by submitting an EFH assessment on July 17, 2023. BOEM and USACE came to the following agreement regarding the analysis of EFH CRs provided by NMFS:

1. USACE agreed to address any EFH CRs that only applied to work within the 3 NM limit of navigable waters and waters of the United States, as this area is outside of BOEM's geographic authority.

2. As the lead Federal agency, BOEM agreed to address any EFH CRs that specifically applied to work on the OCS, even though BOEM and USACE both have geographic authority in this location.

3. BOEM agreed to address any EFH CRs that involved both the OCS and work within the 3 NM limit, coordinating with USACE if needed.

NMFS sent BOEM thirty-nine EFH CRs for the proposed projects on October 20, 2023. USACE analyzed six of the EFH CRs that were related to work both on the OCS and within the 3-NM limit and eight EFH CRs for activities solely within the 3-NM limit, which is outside of BOEM's geographic authority. For each of these EFH CRs, USACE determined whether adopt, partially adopt, or decline to adopt the recommendation. For any EFH CRs that were not adopted USACE provided a detailed rationale. USACE put this information in a response letter to BOEM dated March 8, 2024. The USACE letter was appended to BOEM's EFH CR response letter to NMFS that addressed the other thirty-one EFH CRs that addressed activities exclusively on the OCS or on the OCS and within the 3 NM limit. Consultation has been completed and USACE has determined that it was sufficient to ensure the proposed activities are in compliance with the Magnuson-Stevens Act.

5.3.7.3 Section 106 of the National Historic Preservation Act (NHPA)

The USACE permit area for Section 106 of the NHPA on the New England Wind Project – Phase I and Phase II includes those areas comprising waters of the United States, navigable waters of the United States, and the OCS that will be directly affected by the proposed work or structures, as well as activities outside of these waters because all three tests identified in 33 CFR 325, Appendix C § (1)(g)(1) have been met. USACE designated BOEM as the lead Federal agency for complying with Section 106 of the NHPA. The USACE permit areas have been addressed within the "area of potential effect" (APE) defined by BOEM in the Final EIS.

BOEM determined that the projects would result in visual adverse effects to three aboveground historic properties and one national historic landmark; adverse visual and physical effects would occur to three traditional cultural properties; and 49 ancient submerged landforms would be adversely affected by physical disturbance. See Final EIS Appendix J for additional information and analysis on historic resources.

BOEM, in conjunction with consulting parties, developed a MOA to resolve the adverse effects, and USACE signed the MOA as a concurring party.

USACE has determined that the consultation was sufficient to confirm Section 106 compliance for these permit authorizations, and additional consultation is not necessary. As lead Federal agency, BOEM has fulfilled USACE's responsibilities under section 106 of the NHPA.

5.3.7.4 Tribal Trust Responsibilities

As the lead Federal agency for NEPA and for Section 106 consultation, BOEM also took the lead on government-to-government consultation with federally recognized Tribes. BOEM began government-to-government consultation with federally recognized Tribes via public scoping

meetings on July 19, 2021, July 23, 2021, and July 26, 2021. Due to updates to the COP, an additional scoping period was initiated from November 22, 2021, to December 22, 2021.

The following Tribal Nations were contacted by BOEM and invited to be a consulting party to the Section 106 review of the New England Wind Project (Phase I and Phase II) between June 2021 and April 2022:

- Massachusetts Chappaquiddick Tribe of the Wampanoag Nation (Non-federally recognized)
- The Delaware Nation
- Delaware Tribe of Indians
- Mashantucket (Western) Pequot Tribe of Massachusetts
- Mashpee Wampanoag Tribe of Massachusetts
- Mohegan Tribe of Indians of Connecticut
- Narragansett Indian Tribe
- The Shinnecock Indian Nation
- Wampanoag Tribe of Gay Head (Aquinnah)

The Mashantucket (Western) Pequot Tribe, the Mashpee Wampanoag Tribe of Massachusetts, and the Mashpee Wampanoag Tribe of Gay Head (Aquinnah) accepted BOEM's invitation to consult on the project and are listed as invited signatories on the MOA for the projects. After participating in the Section 106 consultation process and careful internal deliberation, the Mashpee Wampanoag Tribe of Gay Head (Aquinnah) stands in opposition to approval of the project and has declined to sign the MOA.

BOEM held the following government to government consultation meetings as part of Tribal trust responsibilities:

- August 13, 2021: with the Delaware Nation, the Delaware Tribe of Indians, the Mashantucket (Western) Pequot Tribal Nation, the Mashpee Wampanoag Tribe of Massachusetts, and the Wampanoag Tribe of Gay Head (Aquinnah).
- November 4, 2021: with the Delaware Nation, the Mashantucket (Western) Pequot Tribal Nation, the Mashpee Wampanoag Tribe of Massachusetts, and the Wampanoag Tribe of Gay Head (Aquinnah).
- May 2, 2022: with the Wampanoag Tribe of Gay Head (Aquinnah).
- May 26, 2022: with the Mashantucket (Western) Pequot Tribal Nation, the Mashpee Wampanoag Tribe of Massachusetts, and the Wampanoag Tribe of Gay Head (Aquinnah).

- June 2, 2022: with the Wampanoag Tribe of Gay Head (Aquinnah).

- June 2, 2022: the BOEM Director met in-person with the Mashpee Wampanoag Tribe of Massachusetts.

In addition to the government-to-government meetings listed above, federally recognized Tribes also participated in 106 NHPA meetings throughout 2023. Consultation with the Tribes has been completed and found to be sufficient by USACE. Additional consultation by USACE is not necessary. A summary of government-to-government meetings held by BOEM regarding this project are included in Final EIS Appendix J.

5.3.7.5 Section 401 of the Clean Water Act – Water Quality Certification

An individual 401 WQC was required for each phase of the project. MA DEP issued the Phase I 401 WQC on May 12, 2023. In accordance with the 2023 Clean Water Act Section 401 Water Quality Certification Improvement Rule, the Phase I 401 WQC was provided to EPA as part of the 401(a)(2) process on January 29, 2024. No neighboring jurisdiction issues were identified by EPA. At the time of ROD publication, MA DEP was reviewing the Phase II 401 WQC application. No USACE authorization will be issued for Phase II until a valid 401 WQC has been issued by MA DEP and until EPA has determined that there are no neighboring jurisdiction issues with the project. The conditions of the 401 WQCs and their amendments (if any) will be conditions of the USACE authorizations.

5.3.7.6 Coastal Zone Management Act

The New England Wind project requires an individual Massachusetts CZM consistency statement. MA CZM issued CZM consistency statements for Phase I and Phase II of the project on November 9, 2023.

The New England Wind project requires an individual Rhode Island CZM consistency statement was required. RI CRMC issued CZM consistency statements for Phase I and Phase II of the project on October 19, 2023.

5.3.7.7 Wild and Scenic Rivers Act

Phase I and Phase II of the project are not located in a component of the National Wild and Scenic River System or in a river officially designated by Congress as a “study river” for possible inclusion in the National Wild and Scenic River System. USACE has determined that it has fulfilled its responsibilities under the Wild and Scenic Rivers Act.

5.3.7.8 Effects on USACE Civil Works Projects (33 U.S.C. 408)

There are no USACE Civil Works projects in or near the vicinity of the projects. Therefore, Phase I and Phase II of the project do not require review under Section 14 of the RHA (33 U.S.C. 408).

5.3.7.9 USACE Wetland Policy (33 C.F.R. § 320.4(b))

The proposed project phases do not involve any wetland impacts regulated under Section 404 of the CWA or Section 10 of the RHA. Therefore, USACE Wetland Policy does not apply.

5.3.7.10 Presidential Executive Orders (EOs)

EO 13175, Consultation and Coordination with Indian Tribal Governments: As the lead Federal agency for NEPA and for Section 106 consultation, BOEM also took the lead on government-to-government consultation with federally recognized Tribes. See the section above on Tribal Trust Responsibilities for a summary of the consultations.

EO 11988, Floodplain Management: The proposed project is not located in a floodplain. Therefore E.O. 11988 is not applicable.

EO 12898, Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations, EO 14008, Tackling the Climate Crisis at Home and Abroad, and EO 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All: As the lead Federal agency for NEPA, BOEM was also the lead for assessing environmental justice impacts from the proposed project. The project overall is anticipated to have minor adverse to minor beneficial impacts on environmental justice populations. An in-depth analysis of environmental justice communities within the geographic analysis area and anticipated impacts to those communities from the proposed project can be found in Final EIS Section 3.12, which USACE has adopted in this ROD.

EO 13112, Invasive Species, as amended by EO 13751, Safeguarding the Nation from the Impacts of Invasive Species: There are no anticipated invasive species issues involved with this proposed project.

EO 13212 as amended by E.O. 13302, Actions to Expedite Energy-Related Projects: Actions were taken to the extent permitted by law and regulation to accelerate completion of the review of this energy related project while maintaining safety, public health and environmental protections.

5.3.8 U.S. Army Corps of Engineers Approval

I find that the issuance of the USACE permits, as described by regulations published in 33 C.F.R. Parts 320 through 332, with the scope of work described in this document and the Final EIS for the New England Wind Project, is based on a thorough analysis and evaluation of all issues set forth in this Joint ROD. Having completed the evaluation above, I have determined that the proposed discharge of dredged or fill material complies with the 404(b)(1) Guidelines. There are no less-environmentally damaging practicable alternatives available to New England Wind, to construct Phase I and II of the New England Wind Project than under the Preferred Alternative of the Final EIS. The issuance of these permits is consistent with national policy, statutes, regulations, and administrative directives; and on balance, issuance of USACE permits to construct the New England Wind Project Phase I and Phase II is not contrary to the public interest. As explained above, all practicable means to avoid and/or minimize environmental harm from the selected, permitted alternatives have been adopted and will be required by the terms and conditions of the USACE permits.

01 April 2024

Justin R. Pabis, P.E.
Colonel, U.S. Army Corps of Engineers
District Engineer

Date

6 References

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Appendix A. Anticipated Terms and Conditions of COP Approval

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

Anticipated Conditions of Construction and Operations Plan Approval
Lease Number OCS-A 0534
April 1, 2024

Subject to the conditions set forth in this document, the Bureau of Ocean Energy Management (BOEM) approves Park City Wind LLC (Lessee) to conduct activities under the Construction and Operations Plan (COP)[1] for the New England Wind Farm and the New England Wind Export Cable (Project). The Department of the Interior (DOI) reserves the right to amend these conditions or impose additional conditions authorized by law or regulation on any future approvals of COP revisions.

The Lessee must maintain a full copy of these terms and conditions on every Project-related vessel and is responsible for the implementation of, or the failure to implement, each of these terms and conditions by the Lessee's contractors, consultants, operators, or designees.

Contents:

[1] Park City Wind, LLC. August 2023. Construction and Operations Plan, New England Wind. Volumes I-III.

1 GENERAL PROVISIONS

1.1 Adherence to the Approved Construction and Operations Plan, Statutes, Regulations, Permits, and Authorizations. The Lessee must conduct all activities as proposed in its approved COP for the Project as stated in these terms and conditions, and as described in any final plans with which BOEM and/or the Bureau of Safety and Environmental Enforcement (BSEE) have concurred. Additionally, the Lessee must comply with all applicable requirements in commercial lease OCS-A 0534 (Lease), statutes, regulations, consultations, and permits and authorizations issued by federal, state, and local agencies for the Project. BOEM and/or BSEE, as applicable, may issue a notice of noncompliance, pursuant to 30 Code of Federal Regulations (CFR) § 585.106(b) and 30 CFR § 285.400(b), if it is determined that the Lessee failed to comply with any provision of its approved COP, the Lease, the Outer Continental Shelf Lands Act (OCSLA), or OCSLA's implementing regulations. BOEM and/or BSEE may also take additional actions pursuant to 30 CFR § 585.106 and 30 CFR § 285.400, where appropriate.

1.1.1 As indicated in the COP and modified by the selected Alternative in the Record of Decision (ROD), the Lessee may construct and install on the Outer Continental Shelf (OCS) in the area described in Lease OCS-A 0534 (Lease Area) a combination of up to 129 WTGs and 5 ESPs in a total of 130 positions. The Lessee may construct and install inter-array cables linking the individual WTGs to the ESP(s) and up to 5 offshore export cables within an export cable corridor on the OCS.

1.2 Record of Decision. All mitigation measures selected in the ROD for this Project are incorporated herein by reference and are considered terms and conditions of this COP. To the extent there is any inconsistency between the language used in the ROD and that found in these terms and conditions, the language in the latter will prevail.

1.3 Effectiveness. This COP approval and these associated terms and conditions become effective on the date BOEM notifies the Lessee that its COP has been approved and remain effective until the termination of the Lease, which, unless renewed, has an operations term of 33 years from the date of COP approval.

1.4 Consistency with Other Agreements and Authorizations. In the event that these terms and conditions are, or become, inconsistent with the Terms and Conditions of the Project's Biological Opinion (BiOp) issued by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) on February 16, 2024;[2] the BiOp issued by the U.S. Fish and Wildlife Service (USFWS) on August 31,

[2] *See* Biological Opinion Letter from Michael Pentony, Regional Administrator, Greater Atlantic Regional Fisheries Office, U.S. Dept of Commerce, National Oceanic and Atmospheric Administration, NMFS, to Karen Baker, Chief Office of Renewable Energy Programs, BOEM. National Marine Fisheries Service, Endangered Species Act, Section 7, Biological Opinion (February 16, 2024), [hereinafter NMFS BiOp]. This is inclusive of the avoidance, minimization, and mitigation measures described in the proposed action and those included in the BiOp's Incidental Take Statement (ITS).

2023;[3] the Letters of Authorization (LOAs) issued for the Project under the Marine Mammal Protection Act (MMPA); the Section 106 Memorandum of Agreement (MOA) executed on March 1, 2024, or amendments to any of these documents; the language in the NMFS BiOp, USFWS BiOp, LOAs, Section 106 MOA or amendments to any of these documents, will prevail. To the extent the Lessee identifies inconsistencies within or between the language in the NMFS BiOp, USFWS BiOp, LOAs, Section 106 MOA or amendments to any of these documents, it must direct questions regarding potential inconsistencies to BSEE and BOEM. BSEE, in consultation with BOEM, will determine how the Lessee must proceed. Activities authorized by COP approval will be subject to any Terms and Conditions and reasonable and prudent measures (RPM) resulting from any BOEM-reinitiated consultation for the Project's NMFS BiOp or USFWS BiOp, and any stipulations resulting from amendments to the Section 106 MOA.

1.5 Variance Requests. The Lessee may submit a written request via email to the BOEM Office of Renewable Energy Programs Chief or to BSEE through TIMSWeb (https://timsweb.bsee.gov/), requesting a variance from the requirements of these terms and conditions. The request must explain why compliance with a particular requirement is not technically and/or economically practicable or feasible and any alternative actions the Lessee proposes to take. BSEE may require a Certified Verification Agent (CVA) to review and make a recommendation to BSEE and/or BOEM on the technical acceptability and compliance with the COP of the Lessee's variance request and any alternative actions the Lessee proposes to take. To the extent not otherwise prohibited by law and after consideration of all relevant facts and applicable legal requirements, including consideration of project consultations and authorizations, BOEM or BSEE, in consultation with the other Bureau, and any relevant consulting, permitting, or authorizing agency, may grant the request for a variance if the appropriate Bureau(s) determine that the variance: (1) would not result in a change in the Project impact levels described in the Final Environmental Impact Statement (Final EIS) and ROD for the Project, (2) would not alter obligations or commitments resulting from consultations performed by BOEM and BSEE under federal law in connection with this COP approval in a manner that would require BOEM to re-initiate or perform additional consultations (e.g., under the Endangered Species Act (ESA), Coastal Zone Management Act (CZMA), National Historic Preservation Act (NHPA), Magnuson-Stevens Fishery Conservation and Management Act (MSA)); and (3) would not alter BOEM's determination that the activities associated with the Project would be conducted in accordance with Section 8(p)(4) of OCSLA. After making a determination regarding a request for a variance, BOEM or BSEE will notify the Lessee in writing whether the appropriate Bureau(s) will allow the proposed variance from the identified requirements set forth in this COP approval. Approvals of variance requests will be made publicly available. This provision applies to the extent it is not inconsistent with more specific provisions in these terms and conditions for variances or departures.

[3] *See* Biological Opinion Letter from Audrey Mayer, Supervisor, New England Field Office, Fish and Wildlife Serv., to Karen Baker, BOEM, (September 28, 2023), [hereinafter USFWS BiOp]. This is inclusive of the avoidance, minimization, and mitigation measures described in the proposed action and included in the BiOp's ITS.

1.6 48-Hour Notification Prior to Construction Activities. The Lessee must submit a 48-hour notification to BSEE through TIMSWeb prior to the start of each of the following construction activities occurring on the OCS: seabed preparation activities such as boulder relocation and pre-lay grapnel runs, export cable installation, inter-array cable installation, WTG and ESP foundation installation, WTG tower and nacelle installation, ESP topside installation, and cable and scour protection installation.

1.7 Inspections. As provided for in Term and Condition Item 10 of the NMFS BiOp, the Lessee must consent to on-site observations and inspections by federal agency personnel, including NOAA personnel, during activities described in the NMFS BiOp, for the purpose of evaluating the effectiveness and implementation of measures designed to minimize or monitor incidental take.

1.8 Project Website. The Lessee must develop and maintain a Project website to provide a means for the public to communicate with the Lessee about the Project, including fisheries communication and outreach. The website must provide a method for the public to register comments or ask questions through either a direct link to a comment form or email, or by providing the contact information (phone and/or email address) of a representative of the Lessee who will, as practicable, respond to these communications.

1.8.1 The Lessee must post construction notices and other publicly relevant information to the Project website on a monthly basis. The Project website must allow users to subscribe (or unsubscribe) to an electronic mailing list for Project update notifications.

1.8.2 The Lessee must post the following information to the Project website within 5 business days of availability.

1.8.2.1 Locations where cable target burial depths were not achieved, locations of cable protection measures, and locations where cable burial conditions have deteriorated or changed significantly as identified in Section 2.11.

1.8.2.2 Project-specific information found in the most current Local Notices to Mariners (LNM).

1.8.2.3 The Fisheries Communications Plan.

1.8.2.4 The Project Mitigation Report identified in Section 1.9. The Project Mitigation Report must be submitted to BOEM (renewable_reporting@boem.gov) and BSEE via TIMSWeb for a 30-day review prior to being finalized. The report must also be submitted to NMFS GARFO-HESD at NMFS.GAR.HESDoffshorewind@noaa.gov.

1.8.3 Geographic information system (GIS) location data must be downloadable from the Project website and packaged in an ESRI-compatible format, preferably an ESRI shapefile. Files must utilize a NAD83 UTM Zone 19 or a geographic

coordinate system in NAD83. A text file with table field descriptions that contain measurement units, where applicable, must be included.

1.9 Project Mitigation Report. The Lessee must develop a Project Mitigation Report that reflects public engagement and consultation concerning environmental mitigation measures completed to date with the appropriate Tribal Nations, federal and state agencies, and regional, and non-governmental organizations. The Project Mitigation Report will be a comprehensive compilation of all environmental mitigation measures or commitments required by the terms and conditions of COP approval, as well as other federal and state authorizations and consultations (e.g., ESA, CZMA, NHPA Section 106 MOA, Clean Water Act, Rivers and Harbors Act) required for the construction and operation of the Project. The Project Mitigation Report must (1) describe and provide technical details for each mitigation measure (including the type of Project impact to which it relates and the consultation, authorization, or conditions under which it is required) and (2) identify procedures to evaluate additional or modified measures that respond to impacts detected in Project monitoring and other monitoring and research studies and initiatives. The Lessee must update the Project Mitigation Report periodically, as described in such Report, for status and completion of mitigation measures.

1.10 Lease Segregation and Assignment. Should the Lessee request to segregate the Lease and assign a portion of the Lease Area to a different lessee ("assignee"), BOEM reserves the right to issue separate COP approval letters which may include conditions reflecting the appropriate party, either the assignor or assignee, and conditions specific to the lease to which the particular COP approval letter pertains and its associated project components, as appropriate, and consistent with the alternative selected in the ROD and the mitigation measures adopted in the ROD. Further, should such assignment occur, the NHPA Section 106 MOA, titled Memorandum of Agreement Among the Bureau of Ocean Energy Management, Mashpee Wampanoag Tribe, Mashantucket (Western) Pequot Tribal Nation, Massachusetts State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) Regarding the New England Wind Offshore Wind Energy Project (Lease Number OCS-A 0534) and dated March 1, 2024, will be binding on the assignee, even though the assignee was not an original signatory to such MOA.

1.11 Submissions. Unless otherwise stated, the Lessee must provide any submissions required under these conditions to stated agencies through the following:

1.11.1 BOEM[4] and/or BSEE:

1.11.1.1 For Sections 1 through 4 of this appendix, via email to the Office of Renewable Energy Programs Project Coordinator for submissions to BOEM,

[4] BOEM will notify the Lessee in writing if BOEM designates a different process for BOEM submissions.

1.11.1.2 For Sections 5 through 8 of this appendix, via email to renewable_reporting@boem.gov for submissions to BOEM, and

1.11.1.3 TIMSWeb for submissions to BSEE.

1.11.2 NMFS:

1.11.2.1 NMFS Greater Atlantic Regional Fisheries Office Protected Resources Division (GARFO-PRD) at nmfs.gar.incidental-take@noaa.gov,

1.11.2.2 NMFS Office of Protected Resources (NMFS-OPR) at PR.ITP.MonitoringReports@noaa.gov,

1.11.2.3 NMFS GARFO Habitat and Ecosystem Services Division (GARFO-HESD) at NMFS.GAR.HESDoffshorewind@noaa.gov, and

1.11.2.4 NMFS Northeast Fisheries Science Center (NEFSC) at nefsc.survey.mitig@noaa.gov.

1.11.3 U.S. Army Corps of Engineers (USACE) New England District Offshore Wind team at cenae-r-offshorewind@usace.army.mil and Christine.M.Jacek@usace.army.mil.

1.11.4 USFWS New England Field Office at newengland@fws.gov.

1.11.5 Environmental Protection Agency (EPA) at Bird.Patrick@epa.gov. The Lessee must confirm the correct point of contact with the EPA prior to submitting.

1.11.6 United States Coast Guard (USCG) First District. The Lessee must confirm the correct point of contact with the USCG prior to submitting.

1.12 Calendar Days. Unless otherwise specified in the terms and conditions, the term "days" means "calendar days."

1.13 Temporary Placement of Equipment on the OCS Outside of the Lease Area. To the maximum extent possible, the Lessee must place all equipment, including jack-up legs, within the Lease Area (including the project easements). Subject to BSEE's concurrence and the following conditions, the Lessee may temporarily place equipment outside of the Lease Area, but in no case may the Lessee conduct activity on the OCS that is not described in the COP or place equipment on the OCS in an area for which the Lessee has not provided all required information in the COP under 30 CFR § 585.626.

1.13.1 Notification of Activities Outside of the Lease Area. If the Lessee anticipates temporarily, (*i.e.,* a few days or hours) placing any equipment on the OCS outside the Lease Area, the Lessee must submit a notification to BSEE via TIMSWeb 30 days prior to such activities. The Lessee must also clearly identify and include said activities in its Construction Status submissions under Section

2.22 or its Maintenance Schedule submissions under Section 2.23. The activities necessitating such placement of equipment will be reviewed by BSEE in coordination with BOEM to confirm that the equipment does not unreasonably interfere with other uses of the OCS. All such activities must be conducted in accordance with these terms and conditions of COP approval and all applicable requirements in the Lease, statutes, regulations, consultations, and permits and authorizations issued by federal, state, and local agencies for the Project. This requirement does not apply to anchors that have already been disclosed in an anchoring plan submitted, reviewed, and made final under Section 5.3.2.

1.13.2 Installation, Repair and Maintenance on the OCS Outside of the Lease Area on an Adjoining Lease. To the extent that equipment, including anchors, cannot be located within the Lease Area, and full enjoyment of the Lease requires the temporary placement of equipment in an adjoining lease, the Lessee must execute a long-term agreement with the adjoining leaseholder that describes the scope and timing of, and the manner in which the Lessee will perform, activities in the adjoining lease ("Installation, Repair and Maintenance Agreement"). If the Lessee and the adjoining leaseholder do not execute the Installation, Repair and Maintenance Agreement, then BOEM, in coordination with BSEE, may evaluate the scenario to determine if the proposed activities would result in unreasonable interference with the rights granted to the adjoining leaseholder and/or to ensure compliance with any other requirement in applicable law, and may impose any conditions deemed necessary.

2 TECHNICAL CONDITIONS

2.1 Munitions and Explosives of Concern/Unexploded Ordnance Investigation. The Lessee must investigate the areas of potential disturbance for the presence of Munitions and Explosives of Concern (MEC)/Unexploded Ordnance (UXO) and evaluate the risk consistent with the As Low as Reasonably Practical (ALARP) risk mitigation principle. The ALARP risk mitigation principle requires (1) a desktop study (DTS); (2) an investigation survey to determine the presence of objects and report of findings; (3) an identification survey to determine the nature of the identified objects and report of findings; (4) MEC/UXO mitigation (avoidance, disposition, or relocation); and (5) a certification that MEC/UXO risks from installation and operation of the facility have been reduced to ALARP levels. The Lessee must implement the mitigation methods identified in the approved COP, the DTS, and the subsequent survey report(s) following the resolution of all comments provided by BOEM and BSEE. In the event archaeological discoveries are made during the MEC/UXO Investigation, the Lessee must notify BOEM within 24 hours of discovery (pursuant to 30 CFR § 585.702 and Lease Stipulation 4.2.7). As part of the Fabrication and Installation Report (FIR) and prior to commencing installation activities, the Lessee must make available for review to the approved CVA, BOEM, and BSEE the complete and final versions of information on implementation and installation activities associated with the ALARP mitigation process, including the: (1) DTS; (2) investigation surveys to determine the presence of objects; (3) identification surveys to determine the nature of the identified objects; and (4) MEC/UXO relocation and/or construction re-routing.

2.2 MEC/UXO Identification Survey Report. The Lessee must submit an Identification Survey Report to BOEM and BSEE for each Bureau's review and concurrence prior to the installation of facilities in the areas of potential disturbance. The report must include the following:

2.2.1 A detailed discussion of methodologies.

2.2.2 A summary and detailed description of the findings and information on all planned mitigations necessary for MEC/UXO risks to reach ALARP levels, such as: detailed information on MEC/UXO relocation activities, micrositing of facilities, changes to installation or operational activities, and cable re-routings.

2.2.3 A separate list of findings that identify conditions different from those anticipated and discussed in the DTS.

2.2.4 A statement attesting that the installation methods and MEC/UXO mitigation strategies discussed in the FIR, DTS, and/or Investigation Survey Report are consistent with the results of the Identification Survey Report, accepted engineering practices, and applicable best management practices. Alternatively, the Lessee may submit a detailed discussion of alternative installation methods and/or MEC/UXO mitigation strategies that the Lessee has determined to be appropriate given the results of the Identification Survey, accepted engineering practices, and applicable best management practices.

2.3 MEC/UXO ALARP Certification. The Lessee must provide to BOEM, BSEE, and the approved CVA, a certification confirming that MEC/UXO risks related to the installation and operation of the facility have been reduced to ALARP levels. The certification must be made by a qualified third party. ALARP Certification must be made available prior to seabed preparation activities discussed in such plans as the Pre-Lay Grapnel Run Plan (Section 2.24), and the Boulder Identification and Relocation Plan (Section 5.4), and prior to commencing installation activities with the submission of the relevant FIR.

2.4 MEC/UXO Discovery Notification. In the event of a confirmed MEC/UXO, the Lessee must coordinate with the USCG to ensure the MEC/UXO discovery is published in the next version of the LNM for the specified area and provide BOEM and BSEE a copy of the LNM once it is available. The Lessee must also provide the following information to BOEM (BOEM_MEC_Reporting@boem.gov), BSEE (via TIMSWeb, renops@bsee.gov, and env-compliance-arc@bsee.gov), and relevant agency representatives within 24 hours of any such discovery made during activities, such as seabed clearance, construction, and operations:

2.4.1 A narrative describing activities that resulted in the identification of confirmed MEC/UXO;

2.4.2 A description of the activity taking place at the time of discovery (survey, seabed clearance, cable installation, etc.);

2.4.3 A description of the location (latitude (DDD°MM.MMM'), longitude (DDD°MM.MMM)), Lease Area, and block) of the discovery;

2.4.4 The water depth (meters (m)) of the confirmed MEC/UXO;

2.4.5 A description of the MEC/UXO type, dimensions, and weight; and

2.4.6 The MEC/UXO vertical position (description of exposure or estimated depth of burial).

2.5 Munitions Response Plan for Confirmed MEC/UXO. In the event the Project plans to mitigate confirmed MEC/UXO, the Lessee must implement methods identified in the approved COP and as described in the MEC/UXO Investigation (as referenced in Section 2.1) for MEC/UXO mitigation activities. The Lessee must avoid confirmed MEC/UXO through micrositing of planned infrastructure (e.g., WTGs, OSSs, inter-array cables, or export cables) or must demonstrate to BSEE and BOEM's satisfaction that such avoidance is not feasible. For confirmed MEC/UXO on the OCS where avoidance through micrositing is not feasible, the Lessee must provide a Munitions Response Plan. The Munitions Response Plan must include the following:

2.5.1 A description of the method of munitions response and an analysis describing the identification and determination of the method chosen for each confirmed MEC/UXO;

2.5.2 A hazard analysis of the response activities;

2.5.3 A description of the type and designation of work vessels, remotely operated vehicles, unmanned surface vehicles, or craft planned to be used in proximity to the MEC/UXO;

2.5.4 The contact information of the identified munitions response contractor;

2.5.5 The contractor qualifications and competencies to safely carry out the response work;

2.5.6 A proposed timeline of activities;

2.5.7 The position of confirmed MEC/UXO and, if applicable, planned relocation position;

2.5.8 A description of the potential impact of weather and sea state on munitions response operations;

2.5.9 A description of the potential for human exposure;

2.5.10 A medical emergency procedures plan;

2.5.11 A description of the protective measures to be implemented to reduce risk and/or monitor effects to protected species and habitats or other ocean users;

2.5.12 A plan for accidental detonation; and

2.5.13 A plan for debris removal during MEC/UXO mitigation.

2.6 Munitions Response After Action Report. The Lessee must submit a Munitions Response After Action Report detailing the activity and outcome to BOEM and BSEE. The report must include the following information:

2.6.1 A narrative describing the activities the Lessee undertook, including the following:

2.6.1.1 The as Found Location and, if applicable, As Left Location (latitude [DDD°MM.MMM'], longitude [DDD°MM.MMM]), lease area, and block);

2.6.1.2 The water depth (in meters) of munitions response activities;

2.6.1.3 The weather and sea state at the time of munitions response;

2.6.1.4 The number and detailed characteristics (e.g., type, size, classification) of MEC items subject to response efforts;

2.6.1.5 The duration of the munitions response activities, including start and stop times.

2.6.2 A summary describing how the Lessee followed its Munitions Response Plan and any deviations from the plan;

2.6.3 A description of safety measures used, including but not limited to the presence of a USCG safety-zone, notices to mariners, other USCG safety actions in place prior to taking any munitions response actions, and how security call protocols were used;

2.6.4 The results of the munitions response;

2.6.5 A description of any threats and effects to health, safety, or the marine environment;

2.6.6 A description of any effects on protected species and marine mammals and measures implemented to reduce risk and monitor effects;

2.6.7 The details and results of any geophysical surveys conducted after the completion of the munitions response activities; and

2.6.8 If applicable, a description of anticipated future munitions response activities.

2.7 Safety Management System. Pursuant to 30 CFR § 285.810, the Lessee, designated operator, contractor, or subcontractor constructing, operating, or decommissioning renewable energy facilities on the OCS must have a Safety Management System (SMS) that will guide all activities described in the approved COP (hereinafter the "Lease Area's Primary SMS").

2.7.1 The Lessee will submit all SMS related documents to BSEE via TIMSWeb.

2.7.2 The Lessee will submit its Lease Area's Primary SMS to BSEE within 30 days of COP approval. BSEE will review the Lease Area's Primary SMS and compare it to the regulations and requirements in Section 2.7.3 and verify that the submissions are acceptable.

2.7.3 The Lease Area's Primary SMS must identify and assess risks to health, safety, and the environment associated with the offshore wind facilities and operations and must include an overview of the methods that will be used and maintained to control the identified risks.

2.7.4 Pursuant to 30 CFR § 285.811, the Lease Area's Primary SMS must be functional when the Lessee begins activities described in the approved COP. The Lessee must provide to BSEE a description of any changes to the Lease Area's Primary SMS to address new or increased risk before each phase of the Project commences (i.e., construction, operation, maintenance, decommissioning). In addition, the Lessee must demonstrate to BSEE's satisfaction, the functionality of the Lease Area's Primary SMS by providing evidence of such functionality no later than 30 days prior to beginning the relevant activities described in the COP.

2.7.5 The Lessee must conduct periodic Lease Area Primary SMS audits and provide BSEE with a report summarizing the results of the most recent audit at least once every 3 years, and upon BSEE's request. The report must include any corrective actions implemented or being implemented as a result of that audit and an updated description of the Lease Area's Primary SMS highlighting changes that were made since the last such submission to BSEE. Following BSEE's review of the report, the Lessee must engage with and respond to BSEE until any questions or concerns that BSEE has are resolved to BSEE's satisfaction.

2.7.6 In addition to maintaining an acceptable Lease Area's Primary SMS, the Lessee, designated operator, contractor, and subcontractor(s) constructing, operating, or decommissioning renewable energy facilities on the OCS must follow the policies and procedures of any other SMS(s) applicable to their contracted activities and must take corrective action whenever there is a failure to follow the relevant SMS(s) or where relevant SMS(s) failed to ensure safety.

2.8 Emergency Response Procedure. Prior to construction of the Project, the Lessee must submit an Emergency Response Procedure to address non-routine events for review and concurrence by BSEE. The Lessee must submit any revisions of the procedure once every

3 years and upon BSEE's request, consistent with Section 2.7.5. The Emergency Response Procedure must address the following:

2.8.1 Standard Operating Procedures. The Lessee must describe the procedures and systems that will be used at Project facilities in the case of emergencies, accidents, or non-routine conditions, regardless of whether man-made or natural. The Lessee must include, as a part of the standard operating procedures for non-routine conditions, descriptions of high-consequence and low probability events and methods to address those events, including methods for (1) establishing and testing WTG rotor shutdown, braking and locking; (2) lighting control; (3) notifying the USCG of mariners in distress or potential/actual search and rescue incidents; (4) notifying BSEE and the USCG of any events or incidents that may impact maritime safety or security; and (5) providing the USCG with environmental data, imagery, communications, and other information pertinent to search and rescue or marine pollution response.

2.8.2 Communications. The Lessee must describe the capabilities the control center will maintain in order to communicate with the USCG.

2.8.3 Monitoring. The Lessee must ensure that the control center maintains the capability to monitor (e.g., utilizing cameras already installed to support Lessee's operations) the Lessee's installation and operations in real time, including at night and in periods of poor visibility.

2.9 Oil Spill Response Plan. Pursuant to 30 CFR § 585.627(c), the Lessee must submit an Oil Spill Response Plan (OSRP) to the BSEE Oil Spill Preparedness Division (OSPD) at BSEEOSPD_ATL_OSRPs@bsee.gov for review and approval prior to the installation of any component that may handle or store oil on the OCS. The Lessee should not include any confidential or proprietary information in the OSRP. The OSRP may be lease-specific, or it may be a regional OSRP covering multiple leases. Facilities and leases covered in a regional OSRP must have the same owner or operator (including affiliates) and must be located in the Atlantic OCS region. For a regional OSRP, subject to BSEE OSPD approval, the Lessee may group leases into sub-regions for the purposes of determining worst-case discharge (WCD) scenarios, conducting stochastic trajectory analyses, and identifying response resources. The Lessee's OSRP must be consistent with the National Contingency Plan, Regional Contingency Plan, and the appropriate Area Contingency Plan(s), as defined in 30 CFR § 254.6. To continue operating, the Lessee must operate consistent with the OSRP approved by BSEE. The Lessee's OSRP, including any regional OSRP, must contain the following information:

2.9.1 Bookmarks. Appropriately labeled bookmarks that are linked to their corresponding sections of the OSRP.

2.9.2 Table of Contents.

2.9.3 Record of Change. A table identifying the changes made to the current version of the OSRP and, as applicable, a record of changes made to previously submitted versions of the OSRP.

2.9.4 Facility and Oil Information. "Facility," as defined in 30 CFR § 585.113, means an installation that is permanently or temporarily attached to the seabed of the OCS. An ESP and WTG, as examples, each meet this definition of facility. "Oil," as defined in 33 U.S.C. 1321(a), means oils of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Dielectric fluid, as an example, meets this definition of oil. The OSRP must:

2.9.4.1 List the latitude and longitude, water depth, and distance to the nearest shoreline for each facility that may handle and/or store oil.

2.9.4.2 List the oil(s) by product/brand name and corresponding volume(s) on each type of facility covered under the Lessee's OSRP.

2.9.4.3 Include a map depicting the location of each facility that may handle and/or store oil within the boundaries of the covered lease area(s) and their proximity to the nearest shoreline. The map must also feature a compass rose, scale, and legend.

2.9.5 Safety Data Sheets. The OSRP must include a safety data sheet for every type of oil present on any OCS facility in quantities equal to or greater than 100 gallons.

2.9.6 Response Organization. The OSRP must identify a trained Qualified Individual (QI), and at least one alternate, with full authority to implement removal actions and ensure immediate notification of appropriate federal officials and response personnel. The Lessee must designate personnel to serve as trained members of an Incident Management Team (IMT) and identify them by name and Incident Command System position in the OSRP.

2.9.6.1 "Qualified Individual" means an English-speaking representative of the Lessee who is located in the United States, available on a 24-hour basis, and given full authority to obligate funds, carry out removal actions, and communicate with the appropriate federal officials and the persons providing personnel and equipment in removal operations.

2.9.6.2 "Incident Management Team" (IMT) means the group of personnel identified within the Lessee's organizational structure who manage the overall response to an incident in accordance with the Lessee's OSRP. The IMT consists of the Incident Commander (IC), Command and General Staff, and other personnel assigned to key ICS positions designated in the Lessee's OSRP. With respect to the IMT, the Lessee must identify at least one alternate in the OSRP as the IC, Planning Section Chief, Operations Section Chief, Logistics Section Chief, and

Finance Section Chief. If a contract has been established with a third-party IMT, the Lessee must provide evidence of such a contract in the OSRP.

2.9.7 Notification Procedures. The OSRP must describe the procedures for spill notification. Notification procedures must include the 24-hour contact information for:

2.9.7.1 The QI and an alternate, including phone numbers and email addresses;

2.9.7.2 IMT members, including phone numbers and email addresses;

2.9.7.3 Federal, state, and local regulatory agencies that must be notified when a spill occurs, including, but not limited to, the National Response Center;

2.9.7.4 The Oil Spill Removal Organizations (OSRO) and Spill Response Operating Teams (SROT) that are available to respond; and

2.9.7.5 Other response organizations and subject matter experts that the Lessee will rely on for the Lessee's response.

2.9.8 Spill Mitigation Procedures. The OSRP must describe the different discharge scenarios that could occur from the Lessee's facilities and the mitigation procedures which the offshore facility operator and any listed/contracted OSROs would follow when responding to such discharges. The mitigation procedures must address responding to both smaller spills (with slow, low-volume leakage) and larger spills, to include the largest WCD scenario covered under the Lessee's OSRP. To achieve compliance with this section, the OSRP must include the following:

2.9.8.1 Procedures for the early detection of a spill (i.e., monitoring procedures for detecting dielectric fluid and other oil-based substances handled or stored on the facility when spilled to the ocean).

2.9.8.2 General procedures for ensuring that the source of a discharge is controlled as soon as possible after a spill occurs.

2.9.8.3 Procedures to remove oil and oiled debris from shallow waters and along shorelines.

2.9.8.4 Procedures to store, transfer, and dispose of recovered oil and oil-contaminated materials and to ensure that all disposal is consistent with federal, state, and local requirements.

2.9.9 Resources at Risk. The OSRP must include a concise list of the sensitive resources that could be impacted by a spill. In lieu of listing sensitive resources, the Lessee may identify the areas that could be impacted by a spill from the Lessee's facility and provide hyperlinks to corresponding Environmentally Sensitive Index Maps and Geographic Response Strategies/Plans for those areas from the appropriate Area Contingency Plan(s).

2.9.10 OSRO(s) and SROT(s). The OSRO is an entity contracted by the Lessee to provide spill response equipment and/or manpower in the event of an oil spill. The SROT are the trained persons who deploy and operate oil spill response equipment in the event of a spill, threat of a spill, or an exercise. The OSRP must include a list (with contact information) of the OSRO(s) and SROT(s) who are under contract and/or membership agreement to respond to the WCD of oil from the Lessee's offshore facilities. Evidence of such contracts and/or membership agreements must be provided in the OSRP.

2.9.11 Oil Spill Response Equipment. The OSRP must include a list, or a hyperlink to a list, of the oil spill response equipment that is available to the Lessee through a contract and/or membership agreement with the OSRO(s). The OSRP must include a map that shows the oil spill response equipment storage depot(s) and planned/potential staging area(s) for the oil spill response equipment that would be deployed by the facility operators or the OSRO(s) listed in the plan in the event of a discharge.

2.9.11.1 The Lessee must ensure that the oil spill response equipment is maintained in proper operating condition.

2.9.11.2 The Lessee must ensure that all oil spill response equipment maintenance, modification, and repair records are kept for a minimum of 3 years.

2.9.11.3 The Lessee must provide oil spill response equipment maintenance, modification, and repair records to BSEE OSPD upon request.

2.9.11.4 The Lessee or the OSRO must provide BSEE OSPD with physical access to the oil spill equipment storage depots and perform functional testing of the equipment upon request.

2.9.11.5 BSEE OSPD may require maintenance, modifications, or repairs to oil spill response equipment or require the Lessee to remove equipment from being listed in the OSRP if it does not operate as intended.

2.9.12 Training. The OSRP must include a description of the training necessary to ensure that the QI, IMT, OSRO(s) and SROT(s) are sufficiently trained to perform their respective duties. The Lessee must ensure that the IMT, OSRO(s), and SROT(s) receive annual training. The Lessee's OSRP must provide the most recent dates of applicable training(s) completed by the QI, IMT, OSRO(s) and

SROT(s). The Lessee must maintain and retain training records for three years and must provide the training records to BSEE upon request.

2.9.13 Worst-Case Discharge (WCD) Scenario. The OSRP must describe the WCD scenario for the facility containing the highest cumulative volume of oil(s). For a regional OSRP covering multiple sub-regions, a WCD scenario must be described for each sub-region.

2.9.13.1 If multiple candidate WCD facilities contain the same cumulative volume of oil(s), the WCD facility is the one closest to shore.

2.9.13.2 The WCD facility must be identified on the facility map consistent with the "Facility and Oil Information" Section 2.9.4.

2.9.13.3 The OSRP must identify the subset of oil spill response equipment from the inventory listed in the OSRP that will be used to contain and recover the WCD volume. The OSRP must include timeframes for response resources to deploy to the WCD facility. Timeframes must include times for equipment procurement, loadout, travel, and deployment.

2.9.14 Stochastic Trajectory Analysis. The OSRP must include a stochastic spill trajectory analysis for the WCD facility. For a regional OSRP containing multiple WCD scenarios, a stochastic trajectory analysis must be included for each WCD scenario. The stochastic trajectory analysis must:

2.9.14.1 Be based on the WCD volume.

2.9.14.2 Be conducted for the longest period that the discharged oil would reasonably be expected to persist on the water's surface, or 14 days, whichever is shorter.

2.9.14.3 Identify the probabilities for oiling on the water's surface and on shorelines, and the minimum travel times for the transport of the oil over the duration of the model simulation. Oiling probabilities and minimum travel times must be calculated for exposure threshold concentrations reaching 10 g/m^2. The stochastic analysis must incorporate a minimum of 100 different trajectory simulations using random start dates selected over a multi-year period.

2.9.15 Response Plan Exercise. The OSRP must include a triennial exercise plan for review and concurrence by BSEE to ensure that the Lessee is able to respond quickly and effectively whenever oil is discharged from the Lessee's facilities. Compliance with the National Preparedness for Response Exercise Program guidelines will satisfy the exercise requirements of this section. If the Lessee chooses to follow an alternative exercise program, the OSRP must provide a description of that program. For a regional OSRP covering multiple sub-regions,

the IMT exercise scenarios must be rotated between each sub-region within the triennial exercise period.

2.9.15.1 The Lessee must conduct an annual scenario-based notification exercise, an annual scenario-based IMT tabletop exercise, and, during the triennial exercise period, at least one functional IMT exercise.

2.9.15.2 The Lessee must conduct an annual oil spill response equipment deployment exercise.

2.9.15.3 The Lessee must notify BSEE OSPD at least 30 days in advance of any exercise it intends to conduct for compliance with this condition.

2.9.15.4 BSEE will advise the Lessee about the options it has to satisfy these requirements and may require changes in the type, frequency, or location of the required exercises, exercise objectives, equipment to be deployed and operated, or deployment procedures or strategies.

2.9.15.5 BSEE may evaluate the results of the exercises and advise the Lessee of any needed changes in response equipment, procedures, tactics, or strategies.

2.9.15.6 BSEE may periodically initiate unannounced exercises to test the Lessee's spill preparedness and response capabilities.

2.9.15.7 The Lessee must maintain and retain exercise records for at least three years and must provide the exercise records to BSEE upon request.

2.9.16 OSRP Review and Update. The Lessee must review and update the entire OSRP at least once every 3 years and more frequently as needed, starting from the date the OSRP was initially approved. The Lessee must send a written notification to BSEE OSPD upon completion of this review and submit any updates for concurrence. BSEE OSPD may require the Lessee to make changes to the OSRP at any time if it is determined to be outdated or to contain significant inadequacies as discovered through a review of the Lessee's OSRP, information obtained during exercises or actual spill responses, or other relevant information obtained by BSEE OSPD.

2.9.17 OSRP Maintenance. The Lessee must submit a revised OSRP to BSEE OSPD within 15 days if any of the following conditions occur:

2.9.17.1 The Lessee experiences a change that would significantly reduce their oil spill response capabilities.

2.9.17.2 The calculated WCD volume has significantly increased.

2.9.17.3 The Lessee removes a contracted IMT, OSRO, or SROT from the Lessee's plan.

2.9.17.4 There has been a significant change to the applicable area contingency plan(s).

2.10 Cable Routings. The Lessee must submit the final Cable Burial Risk Assessment (CBRA) package and engineered cable routings for all cable routes on the OCS to BSEE for review and concurrence no later than the submittal of the relevant Facility Design Report (FDR). The final CBRA package must include a summary of final information on (1) natural and man-made hazards; (2) sediment mobility, including high and low seabed levels, from both mobile and stable seabed, expected over the Project lifetime; (3) feasibility and effort level information required to meet burial targets; (4) profile drawings of the cable routings illustrating cable burial target depths, and (5) minimum burial depths from stable seabed to address threats to the cable including, but not limited to, anchoring risk, military activity, third party cable crossings, and fishing gear interaction. Detailed supporting data and analysis may be incorporated by reference or attachments, including relevant geospatial data. The Lessee must resolve any BSEE comments on the CBRA to BSEE's satisfaction before BSEE completes its review of the associated FDR under 30 CFR § 285.700.

2.10.1 The Lessee must consolidate all cables within the Eastern Muskeget Channel corridor. The Lessee must avoid cable installation within the Western Muskeget Variant unless installation of all cables within the Eastern Muskeget Channel corridor is technically or economically infeasible. In the event that the Lessee believes there is technical or economic infeasibility preventing consolidation of cables within the Eastern Muskeget Channel corridor, the Lessee must submit a technical or economic feasibility analysis, as appropriate, for distribution to NMFS and for review and concurrence by BOEM and BSEE. The Lessee must wait for BOEM/BSEE concurrence before installation of a cable in the Western Muskeget OECC.

2.11 Cable Burial. The Lessee must install the export, interconnector and inter-array cables using jetting, control flow excavation, trenching, or plowing as described in Volume I, Sections 3.3.1.3.6 and 4.3.1.3.6 of the approved COP. For the approved COP, BOEM has determined the proper burial depth to be a minimum of 4.9 feet (1.5 m) below stable seabed for federal sections of the export and inter-array cables. This depth is consistent with the approved COP. Unless otherwise authorized by BSEE, the Lessee must comply with cable burial conditions described in the COP by demonstrating proper burial depth of the installed submarine cables along at least 94 percent of the total export cable length on the OCS and at least 98 percent of the inter-array and interconnector cable routings, excluding cable crossings and approaches to foundations. The Lessee must demonstrate proper burial depth by providing cable monitoring reports (Section 2.14) and final, as-built information (Section 2.21).

2.12 Cable Protection Measures. The Lessee must install the export, interconnector, and inter-array cables using jetting, control flow excavation, trenching, or plowing as described in

Volume I, Sections 3.3.1.3.6 and 4.3.1.3.6 of the approved COP. In areas where the final cable burial depth is less than 1.5 m below stable seabed, excluding within the vicinity of WTG/ESP foundations where cables are enclosed within a Cable Entry Protection System, the Lessee must install secondary protection such as concrete mattresses, half-shell pipes, rock bags or rock placement and must adhere to the scour and cable protection measures in Section 5.8.

2.12.1 The use of cable protection measures must not exceed 6 percent of the total export cable length on the OCS or 2 percent along the interconnector and inter-array cable routing, excluding cable crossings and approaches to foundations. The Lessee must employ cable protection measures when proper burial depth, as defined in Section 2.11, is not achieved. The Lessee must include design information and drawings as part of the relevant FDR and must include installation information as a part of the relevant FIR prior to installing cable protection. The Lessee must also provide BSEE with detailed drawings/information of the actual burial depths and locations where protective measures were used, no later than when the final, as-built cable drawings are submitted within 6 months following installation of the export and inter-array cables. The Lessee must ensure notice of locations where target burial depths were not achieved and where cable protection measures were used, including an accessible graphic/geo-referenced repository for this information, is made available on the project website (Section 1.8 Project Website).

2.12.2 If the Lessee requests a variance under Section 1.5, the Lessee must include with the request CVA verification of the proposed alternative.

2.13 Crossing Agreements. The Lessee must provide final cable crossing agreements for each active, in-service submarine cable or other types of in use infrastructure, such as pipelines, to BOEM at least 60-days before seabed preparation activities, including boulder clearance, begin for the applicable cable route(s). The Lessee must make the agreements and crossing designs available to the CVA for review, unless otherwise determined by BOEM.

2.13.1 If the Lessee concludes that it will be unable to reach a cable crossing agreement, the Lessee must inform BOEM as soon as possible, and no later than 60-days before seabed preparation activities, including boulder clearance. A cable crossing agreement will not be required if BOEM has determined—at its sole discretion and based on its review of the record of relevant communications from the Lessee to owners or operators of active, in-service submarine cables or other types of in use infrastructure—that the Lessee made reasonable efforts to enter an agreement and was unable to do so. Information to support a claim of reasonable efforts may include call logs, emails, letters, or other methods of communication.

2.14 Post-Installation Cable Monitoring. The Lessee must conduct an inspection of each inter-array, interconnector and export cable to determine cable location, burial depths, and site conditions, and to assess the state of the cable. Inspections must occur within 6 months

following installation of the export interconnector or inter-array cables, and additional inspections within 1 year following completion of the post-construction inspection and every 3 years thereafter. These inspections must also be conducted within 180 days of a storm event (as defined in the Post-Storm Event Monitoring Plan, described in Section 2.18). The Lessee must provide BSEE and BOEM with a cable monitoring report within 90 days following each inspection. Inspections of the cable location and burial must include high resolution geophysical (HRG) methods, involving, for example, multibeam bathymetric survey equipment; and must identify seabed features, natural and man-made hazards, and site conditions along federal sections of the cable routing. Inspections of the state of the cable must evaluate degradation to cable integrity and operational performance, including assessments of thermal, electrical, mechanical, and ambient stress factors acting on the cables.

2.14.1 If BSEE determines that the condition of the cable or conditions along the cable corridor warrant adjusting the frequency of inspections (e.g., due to changes in cable burial or seabed conditions that may impact cable stability or other users of the seabed), then BSEE may require the Lessee to submit a revised inspection schedule for review and concurrence.

2.14.2 If BSEE determines that conditions along the cable corridor or the state of the cable have deteriorated or changed significantly and remedial actions are warranted, BSEE will notify the Lessee that the Lessee must submit to BSEE the following within 90 days of being notified: a seabed stability analysis and/or cable integrity analysis, a remedial action plan, and a schedule for completing remedial actions. All remedial actions must be consistent with the approved COP. BSEE will review the plan and schedule and provide any comments within 60 days of receiving the plan. The Lessee must resolve all comments to BSEE's satisfaction.

2.14.3 If the Lessee determines that conditions along the cable corridor or the state of the cable have deteriorated or changed significantly and remedial actions are warranted, the Lessee must submit the following to BSEE within 90 days of making the determination: the data used to make the determination, a seabed stability analysis and/or cable integrity analysis, a plan for remedial actions, and a schedule for the proposed work. All remedial actions must be consistent with those described in the approved COP. BSEE will review the plan and schedule and provide comments within 60 days, if applicable. The Lessee must resolve all comments to BSEE's satisfaction.

2.15 WTG and ESP Foundation Depths. The FDR must include geotechnical investigations at all approved foundation locations along with associated geotechnical design parameters and recommendations consistent with 30 CFR § 585.626(a)(4)(ii) and pursuant to BOEM's April 22, 2021, departure approval.[5] The geotechnical investigations at each

[5] BOEM April 22, 2021, Departure Approval from 30 CFR § 585.626(a)(4)(ii); https://www.boem.gov/departure-request.

ESP must include, at a minimum, one deep boring located within the footprint of each ESP.

2.16 Structural Integrity Monitoring. In accordance with 30 CFR § 285.824 (Annual Self-Inspection Plan), the Lessee must submit the inspection plan covering the design life of the facility to BSEE for concurrence with the FDR. The Lessee must provide a summary of the findings in the Annual Self-Inspection Report pursuant to 30 CFR § 285.824(b).

2.16.1 Underwater Inspection. The Lessee must conduct a baseline underwater inspection to establish the as-installed platform condition. The baseline underwater inspection must be conducted prior to implementation of a risk-based inspection plan for the platform. The minimum scope of work must include the following, unless the information is available from the installation records: a) a visual survey of the platform for structural damage, from the mudline to waterline, including coating integrity through the splash zone; b) a visual survey to verify the presence and condition of the anodes; c) a visual survey to confirm the presence and condition of installed appurtenances; d) measurement of the as-installed mean water surface elevation, with appropriate correction for tide and sea state conditions; e) record of the as-installed platform orientation; and f) measurement of the as-installed platform elevation from the mean lower low water datum.

2.16.2 Above-water Inspection. The Lessee must conduct annual above-water inspections to ensure structural integrity is maintained. The Lessee must inspect the condition of the cathodic protection system(s) and inspect for indications of obvious overloading; deteriorating coating systems; excessive corrosion; and bent, missing, and/or damaged members of the structure in the splash zone and above the water line.

2.17 Foundation Scour Protection Monitoring. The Lessee must inspect scour protection performance. The Lessee must submit an Inspection Plan to BSEE with the relevant FDR submittal. BSEE will review the Inspection Plan and provide comments, if any, on the plan within 60 days of its submittal. The Lessee must resolve all comments on the Inspection Plan to BSEE's satisfaction and receive concurrence prior to initiating the inspection program. If BSEE does not send comments within 60 days, the Lessee may presume concurrence.

2.17.1 The Lessee must carry out an initial foundation scour inspection within 6 months of completing the installation of each foundation location; thereafter at intervals not greater than 5 years; and within 180 days after a storm event (as defined in the Post-Storm Event Monitoring Plan, described in Section 2.18).

2.17.2 The Lessee must provide BOEM and BSEE with a foundation scour monitoring report within 90 days of completing each foundation scour inspection. If multiple foundation locations are inspected within a single survey effort, the foundation scour monitoring reports for those locations may be combined into a single foundation scour monitoring report provided within 90 days of completing the

last foundation scour inspection. The schedule of reporting must be included in the Inspection Plan for BSEE review and concurrence.

2.17.3 The Lessee must submit a plan for additional monitoring and/or mitigation to BSEE for review and concurrence if scour protection losses develop within 10 percent of the maximum loss allowance, edge scour develops within 10 percent of the maximum allowance, or spud depressions from installation affect scour protection stability.

2.18 Post-Storm Event Monitoring Plan. The Lessee must provide a plan for post-storm event monitoring of the facility infrastructure, foundation scour protection, and cables to BSEE for review at least 60 days prior to commencing installation activities. The Lessee must address BSEE's comments to BSEE's satisfaction and receive concurrence prior to commencing installation activities. Separate plans may be submitted for the cables (including cable protection), the WTGs, and the ESPs. The plan must describe how the Lessee will measure and monitor environmental conditions and duration of storm events; describe potential monitoring, mitigation, and damage identification methods; and state when the Lessee must notify BSEE of post-storm event related activities. At a minimum, post-storm event inspections must be conducted following each storm where conditions exceed the 10-year return period. BSEE reserves the right to require post-storm mitigations to address conditions that could result in safety risks and/or impacts to the environment.

2.19 High Frequency Radar Interference Analysis and Mitigation. The Project has the potential to interfere with oceanographic high-frequency (HF) radar systems in the U.S. called the Integrated Ocean Observing System (IOOS®), which is managed by the IOOS Office within the NOAA pursuant to the Integrated Coastal and Ocean Observation System Act of 2009 (Pub. L. No. 111-11), as amended by the Coordinated Ocean Observation and Research Act of 2020 (Pub. L. No. 116-271, Title I), codified at 33 U.S.C. §§ 3601–3610 (referred to herein as "IOOS HF-radar"). IOOS HF-radar measures the sea state, including ocean surface current velocity and waves in near real time. These data have many vital uses, including tracking and predicting the movement of spills of hazardous materials or other pollutants, monitoring water quality, and predicting sea state for safe marine navigation. The USCG also integrates IOOS HF-radar data into its Search and Rescue systems. The Project is within the measurement range of the 10 IOOS HF radar systems listed in the table below:

Table 2.19-1: Identified IOOS HF-radar Systems

Radar Name	Radar Operator
Amagansett, NY SeaSonde	Rutgers University
Block Island Long Range, RI SeaSonde	Rutgers University
Camp Varnum, RI LERA	Woods Hole Oceanographic Institution (WHOI)
Horseneck Beach State Reservation, MA LERA	WHOI
Long Point Wildlife Refuge, MA LERA	WHOI
Martha's Vineyard, MA SeaSonde	Rutgers University
Moriches, NY SeaSonde	Rutgers University
Nantucket, MA LERA	WHOI
Nantucket Island, MA SeaSonde	Rutgers University
Nauset, MA SeaSonde	University of Massachusetts Dartmouth

2.19.1 Mitigation Requirement. Due to the potential interference with IOOS HF-radar and the risk to public health, safety, and the environment, the Lessee must mitigate unacceptable interference with IOOS HF-radar from the Project. Interference must be mitigated before commissioning the first WTG or before blades start spinning, whichever is earlier, and interference mitigation must continue throughout operations and decommissioning until the point of decommissioning when all rotor blades are removed. Interference is considered unacceptable if, as determined by BOEM in consultation with NOAA's IOOS Office, IOOS HF-radar performance falls or may fall outside any of the specific radar systems' operational parameters or fails or may fail to meet IOOS's mission objectives.

2.19.2 Mitigation Review. The Lessee must submit to BOEM documentation demonstrating how it will mitigate unacceptable interference with IOOS HF-radar systems in accordance with Section 2.19.1. The Lessee must submit this documentation to BOEM at least 120 days prior to commissioning the first WTG or the start of blades spinning, whichever is earlier. After the Lessee submits the documentation and after consultation with the NOAA IOOS Office, if BOEM deems the mitigation acceptable, the Lessee must conduct activities in accordance with the proposed mitigation. If, after consultation with the NOAA IOOS Office, BOEM deems the mitigation unacceptable, the Lessee must resolve all comments on the documentation to BOEM's satisfaction.

2.19.3 Mitigation Agreement. The Lessee is encouraged to enter into an agreement with the NOAA IOOS Office to implement mitigation measures, and any such Mitigation Agreement may satisfy the requirement to mitigate unacceptable interference with IOOS HF-radar. The point of contact for the development of a Mitigation Agreement with the NOAA IOOS Office is the Surface Currents Program Manager, whose contact information is available at https://ioos.noaa.gov/about/meet-the-ioos-program-office/ and upon request from BOEM. If the parties reach a mitigation agreement, the Lessee must submit the agreement to BOEM. The Lessee may satisfy its obligations under Section 2.19.2 by providing BOEM with an executed Mitigation Agreement between the Lessee and NOAA IOOS. If there is any discrepancy between Section 2.19.2 and the terms of a Mitigation Agreement, the terms of the Mitigation Agreement will prevail.

2.19.4 Mitigation Data Requirements. Mitigation required under Section 2.19.2 must address the following:

2.19.4.1 Before commissioning the first WTG or before blades start spinning, whichever is earlier, and continuing throughout the life of the Project until the point of decommissioning when all rotor blades are removed, the Lessee must make publicly available via NOAA IOOS near real-time, accurate numerical telemetry of surface current velocity, wave height, wave period, wave direction, and other

oceanographic data measured at Project locations selected by the Lessee in coordination with the NOAA IOOS Office.

2.19.4.2 If requested by the NOAA IOOS Office, the Lessee must share with IOOS accurate numerical time-series data of blade rotation rates, nacelle bearing angles, and other information about the operational state of each WTG in the Lease Area to aid interference mitigation.

2.19.5 Additional Notification and Mitigation.

2.19.5.1 If at any time the NOAA IOOS Office or an HF-radar operator informs the Lessee that the Project will cause unacceptable interference to an HF-radar system, the Lessee must notify BOEM of the determination and propose new or modified mitigation pursuant to Section 2.19.5.2 as soon as possible and no later than 30 days from the date on which the determination was communicated.

2.19.5.2 If a mitigation measure other than that identified in the Mitigation Approval (Section 2.19.2) is proposed, then the Lessee must submit information on the proposed mitigation measure to BOEM for its review and concurrence. If, after consultation with the NOAA IOOS Office, BOEM deems the mitigation acceptable, the Lessee must conduct activities in accordance with the proposed mitigations. The Lessee must resolve all comments on the documentation to BOEM's satisfaction prior to implementation of the mitigation.

2.20 Critical Safety Systems and Equipment. The Lessee must provide to BSEE a qualified third-party verification of (1) the identification, (2) proper installation, and (3) commissioning of all critical safety systems and equipment designed to prevent or ameliorate fires, spillages, or major accidents that could result in harm to health, safety, or the environment (hereinafter "critical safety systems"). The documentation provided to BSEE must demonstrate that the qualified third party verified that the critical safety systems were identified using appropriate methodologies as defined by the operator's risk management standards, were installed and commissioned in conformity with the Original Equipment Manufacturer's (OEM's) standards and the Project's functional requirements and are functioning properly as required by the surveillance reporting requirements in Section 2.20.5.

2.20.1 Qualified Third Party. A qualified third party must be either a technical classification society, a licensed professional engineering firm, or a registered professional engineer capable of providing the necessary certifications, verifications, and reports. The qualified third party must not have been involved in the design of the Project.

2.20.2 Critical Safety Systems. Critical safety systems include but are not limited to equipment, devices, engineering controls, or system components that are designed to prevent, detect, or mitigate impacts from fires, spillages, or other

major accidents that could result in harm to health, safety or the environment including systems that facilitate the escape and survival of personnel.

2.20.3 Identification of Critical Safety Systems Risk Assessment(s). The Lessee must conduct a risk assessment to identify hazards and the critical safety systems used within its facilities, including WTG(s), tower(s), and each ESP, to prevent or mitigate identified risks. The Lessee must submit each risk for which a Critical Safety System acts as a control to BSEE and the qualified third party for review in a single document no later than submission of the FDR. The submission must include a description of the specific hazard along with the determined likelihood and consequence. The Lessee must arrange with the qualified third party - and provide the necessary information - for a qualified third party to make a recommendation to BSEE on the acceptability of the identified risks, and any associated conclusions regarding identified hazards and implemented or changed critical safety systems and equipment. The Lessee must resolve BSEE's comments to BSEE's satisfaction before BSEE completes its review of the associated FDR under 30 CFR § 285.700.

2.20.4 Installation and Commissioning Surveillance Requirements. The Lessee must ensure the proper installation and commissioning of the critical safety systems. The Lessee must arrange for a qualified third party to evaluate whether the installation and commissioning of the critical safety systems are in conformance with the OEM requirements and the Project's functional requirements. BSEE and the Lessee may agree to perform additional tests during commissioning surveillance activities. The third-party evaluation must include (1) an examination of the commissioning records of the critical safety systems and equipment for every WTG and ESP and (2) witnessing the commissioning of the critical safety systems and equipment of 5 percent of the WTGs, including at least one WTG in the first array string, and each ESP. The Lessee must arrange for a qualified third party, at a minimum, to verify the following:

2.20.4.1 The installation procedures and/or commissioning instructions supplied by the manufacturer and identified in the Project's functional requirements are adequate.

2.20.4.2 During commissioning, the Lessee is following the instructions supplied by the manufacturer and identified in the Project's functional requirements.

2.20.4.3 The systems and equipment function as designed.

2.20.4.4 The final commissioning records are complete.

2.20.5 Surveillance Reporting. The Lessee must submit to BSEE surveillance records, including for the examination of commissioning records and witnessing, (for example, the final results and acceptance of the commissioning test by the qualified third party) or a Conformity Statement and supporting documentation

(prepared consistent with International Electrotechnical Commission System for Certification to Standards Relating to Equipment for Use in Renewable Energy Applications [IECRE OD-502, 2018]) for the critical safety systems identified in Section 2.20.2. Surveillance records for each ESP must be submitted within one month of verification by the qualified third party. After the commissioning of the critical safety systems has been completed for the first WTG, the Lessee must, on a monthly basis, submit the surveillance records or Conformity Statement and supporting summary documentation for all WTGs which have been verified by a qualified third party within the previous month. If BSEE has not responded to the surveillance records or Conformity Statement and supporting documentation submitted by the qualified third party within 5 business days, then the Lessee may presume concurrence and continue operating. If the surveillance records or Conformity Statement and supporting documentation are not submitted within one month of qualified third-party verification of the commissioning of the safety systems, or if BSEE objects to the submission, BSEE may require the facility to which the surveillance records or Conformity Statement pertains to cease operations.

2.21 Engineering Drawings. The Lessee must compile, retain, and make available to BSEE the drawings and documents specified in Table 2.21-1.

Table 2.21-1: Engineering Drawings and Documents

Drawing Type	Time Frame to Submit "Issued for Construction" (IFC) Drawings	Deadline to Submit Final, As-Built Drawings
Complete set of structural drawing(s), including major structural components and evacuation routes[6]	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	Submit no later than March 31st of each calendar year, for all structures installed the prior year and submitted annually until completion of installation.
Front, side, and plan view drawings [7]	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	N/A
Location plat for all Project facilities[8]	With FDR submittal. Drawings must be reviewed and stamped by a registered professional land surveyor.	Submit no later than March 31st of each calendar year, for all facilities installed the prior year and updated annually until completion of installation. Drawings must be reviewed and stamped by a registered professional land surveyor.

6 As required by 30 CFR § 285.701(a)(4). This is applicable to the WTGs and ESPs.
7 As required by 30 CFR § 285.701(a)(3). This is applicable to the WTGs and ESPs.
8 As required by 30 CFR § 285(a)(2). This is applicable for all installed assets on the OCS including scour protection, cables, WTGs, and ESPs.

Drawing Type	Time Frame to Submit "Issued for Construction" (IFC) Drawings	Deadline to Submit Final, As-Built Drawings
Complete set of cable drawing(s)	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	Submit preliminary as-built reports quarterly for all facilities installed in the previous quarter. Submit final as-built reports within 6 months following installation of the export and inter-array cables.
Proposed Anchoring Plat as required by Section 5.3.2 and 7.1.3	120 days before anchoring activities. If there are fewer than 120 days between anchoring activities and this COP approval, no later than 60 days prior to commencing anchoring activities.	N/A
As-placed Anchor Plats for all anchoring	N/A	Submit 90 days after completion of an activity or construction of a major facility component(s).
Piping and instrumentation diagram(s)	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	Submit quarterly for all facilities installed in the previous quarter.
Safety diagram(s)[9]	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	Submit quarterly for all facilities installed in the previous quarter.
Electrical drawings, i.e. Electrical one-line drawing(s) and Protective Relay Coordination Study/Diagram	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	Submit quarterly for all facilities installed in the previous quarter.
Cause and Effect Chart	With FDR submittal.	N/A
Schematics of fire and gas-detection system(s)	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	Submit quarterly for all facilities installed in the previous quarter.
Area classification diagrams	With FDR submittal.	Submit quarterly for all facilities installed in the previous quarter.

9 Safety diagrams should depict the location of critical safety systems and equipment designed to prevent or ameliorate major accidents that could result in harm to health, safety, or the environment. This should include, but not be limited to, escape routes, station bill, fire/gas detectors, firefighting equipment, etc.

2.21.1 Engineering drawings, as outlined in Table 2.21-1, and the associated engineering report(s) must be reviewed and stamped by a licensed professional engineer or a professional land surveyor. Pursuant to 30 CFR § 285.705(2), any changes to the approved design must be evaluated by BSEE to determine if the Lessee is required to use a CVA for any project modifications under 30 CFR § 285.703(c). This applies from the submission date of FDR and FIR through construction, commissioning, and operations and includes structural, mechanical, electrical, and safety systems. For modified systems, only the modifications are required to be stamped by a licensed professional engineer(s) or a professional land surveyor. The professional engineer or land surveyor must be licensed in a State or Territory of the United States and have sufficient expertise and experience to perform the duties. The Lessee must ensure that the engineer of record submits a stamped report showing that the as-built design documents have been reviewed, do not make material changes from the IFC drawings, and accurately represent the as-installed facility. The Lessee must also ensure that the engineer of record documents any differences between the IFC drawings and the as-built drawings in the stamped report and submits the report with the as-built drawings.

2.21.2 As-Placed Anchor Plats. The Lessee must provide as-placed anchor plats to BOEM and BSEE within 90 days of activity completion associated with seabed preparation, operations and maintenance, or construction of a major facility component (e.g., buoys, export and inter array cables, WTGs, ESPs, etc.), or decommissioning, demonstrating that seafloor-disturbing activities complied with avoidance requirements for seafloor features and hazards, archaeological resources, and/or anomalies. As-placed anchor plats must show the "as-placed" location of all anchors and any associated anchor chains and/or wire ropes and relevant locations of interest or avoidance on the seafloor for all seabed disturbing activities. The plats must be at a scale of 1 inch = 1,000 feet (300 m) with Differential Global Positioning System accuracy.

2.22 Construction Status. On a monthly basis, the Lessee must provide BSEE, BOEM, and the USCG with a construction status update and any changes to the construction schedule or process described in the plan required by Section 3.2.1 (Installation Schedule).

2.23 Maintenance Schedule. On a quarterly basis, the Lessee must provide BSEE with its maintenance schedule for any planned WTG or ESP maintenance.

2.24 Pre-lay Grapnel Run Plan. The Lessee must submit a Pre-lay Grapnel Run Plan for BSEE review and concurrence. The plan must be submitted at least 60 days prior to pre-lay grapnel run activities. BSEE will review the plan and provide comments, if applicable, within 60 days of submittal. The Lessee must resolve BSEE's comments to BSEE's satisfaction prior to starting activities described in the plan. If BSEE does not provide comments on the plan within 60 days of its submittal, then the Lessee may presume BSEE's concurrence with the plan. The plan must be consistent and meet the conditions of the SMS in Section 2.7.

2.24.1 The plan must include the following:

2.24.1.1 Figures of the location of pre-lay grapnel run activities.

2.24.1.2 A description of pre-lay grapnel run methods, including expected grapnel penetration depth, vessel specifications, metocean limits on operation, etc.

2.24.1.3 A description of removal and disposal methods of debris collected by grapnel run and applicable environmental regulations for disposal.

2.24.1.4 A description of safety distances or zones to limit pre-lay grapnel activities near third party assets. Descriptions should be consistent with Cable Crossing Agreements (Section 2.13).

2.24.1.5 The environmental footprint of disturbance activities and measures taken to avoid further adverse impacts to archaeological resources, seafloor hazards, complex habitat, and fishing operations.

2.24.1.6 A description of MEC/UXO ALARP certified areas, which must be consistent with MEC/UXO ALARP Certification (Section 2.3).

2.24.1.7 A summary of any consultation and outreach with resource agencies and the fishing industry in the development of the plan (e.g., notifications to mariners).

2.24.2 The Lessee must submit a letter to BSEE outlining any deviations from the Pre-lay Grapnel Run Plan within 90 days following the completion of pre-lay grapnel run activities.

3 NAVIGATIONAL AND AVIATION SAFETY CONDITIONS

3.1 Design Conditions.

3.1.1 Marking. The Lessee must mark each WTG and ESP with Private Aids to Navigation (PATON). No sooner than 60 and no fewer than 30 days before foundation installation, the Lessee must file an application (form CG-2554 or CG-4143, as appropriate), with the Commander of the First Coast Guard District to establish PATON, as provided in 33 CFR Part 66. USCG approval of the application must be obtained before the Lessee begins installation of the facilities. The lighting, marking, and signaling plan and the design specifications for maritime navigation lighting must be included in the PATON application. The Lessee must:

3.1.1.1 Provide a lighting, marking, and signaling plan for review by BOEM, BSEE, and USCG and concurrence by BOEM and BSEE at least 120 days before foundation installation. The plan must conform to applicable federal law and regulations, and guidelines, e.g.,

International Association of Marine Aids to Navigation and Lighthouse Authorities Recommendation G1162, The Marking of Man-Made Offshore Structures (Ed. 1.1, Dec. 2021); and BOEM's Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development (April 28, 2021).

3.1.1.2 Mark each individual WTG and ESP with clearly visible, unique, alpha-numeric identification characters consistent with the attached Rhode Island and Massachusetts Structure Labeling Plot, as identified in the lighting, marking, and signaling plan. The Lessee must additionally display this label on each WTG nacelle, visible from above. If the Lessee's ESP includes helicopter landing platforms, the Lessee must also display this label on the platforms visible from above.

3.1.1.3 For each WTG, install red obstruction lighting that is consistent with the Federal Aviation Administration (FAA) (Advisory Circular 70/7460-lM (Nov. 2020)).

3.1.1.4 Provide signage that is visible to mariners in a 360-degree arc around the structures to inform vessels of the vertical blade-tip clearance (also referred to as Air Gap) as determined at Highest Astronomical Tide.

3.1.1.5 Submit documentation to BSEE, no later than January 31 of each calendar year for all facilities installed within the preceding calendar year, of the Lessee's compliance with Sections 3.1.1.1 through 3.1.1.4.

3.1.1.6 Immediately report discrepancies in the status of all PATONs to the local USCG Sector Command Center (a timeline of when discrepancies can be resolved must be sent to USCG within 14 days of identifying the discrepancy).

3.1.2 Blade/Nacelle Control. The Lessee must equip all WTG rotors (blade assemblies) with control mechanisms constantly operable from the Lessee's control center.

3.1.2.1 Control mechanisms must enable the Lessee to immediately initiate the shutdown of any WTG upon emergency order from the Department of Defense (DoD) or USCG. The Lessee must initiate braking and shutdown of each requested WTG immediately after the shutdown order. The Lessee may resume operations only upon notification from the entity (DoD or USCG) that initiated the shutdown.

3.1.2.2 The Lessee must include a shutdown procedure in its Emergency Response Procedure and test the shutdown capability (functioning) of

at least one WTG within the lease area at least annually. The Lessee must submit the results of testing to BSEE with the Project's annual inspection results.

3.1.2.3 The Lessee must work with the USCG to establish the proper blade configuration during WTG shutdown for USCG air assets conducting search and rescue operations.

3.1.2.4 The Lessee must notify USCG and BSEE in advance of trainings and exercises to test and refine notification and shutdown procedures, allow USCG and BSEE to participate in these trainings and exercises, and provide search and rescue and training opportunities for USCG Command Centers, vessels, and aircraft.

3.1.3 Structure Micrositing. The Lessee must not adjust approved structure locations in a way that narrows any linear rows and columns oriented both northwest-southeast or northeast-southwest to less than 0.6 nautical miles (nmi), nor to a layout that eliminates two distinct lines of orientation in a grid pattern. The Lessee must submit the final as-built structure locations as part of the as-built documentation outlined in Section 2.21.

3.2 Installation Conditions.

3.2.1 Installation Schedule. No fewer than 60 days prior to commencing offshore construction activities, the Lessee must provide USCG with a plan that describes the schedule and process for seabed preparation, export, substation interconnector and inter-array cable installation, and the WTGs and ESPs installation, including all planned mitigations to be implemented to minimize any adverse impacts to navigation while installation is ongoing. Appropriate LNM submissions must accompany the plan and its revisions.

3.2.2 Design Modifications. Any changes or modifications in the design of the Lease Area that may impact navigation safety (including, but not limited to a change in the number, size, or location of WTGs, or a change in construction materials or construction method), requires written approval by BSEE.

3.2.3 Cable Burial. A detailed cable burial plan containing the proposed locations and burial depths must be submitted to the USCG no later than the relevant FIR submittal. In accordance with Section 2.21, the Lessee must submit to BOEM and the USCG a copy of the final as-built cable burial report containing a route positioning list that depicts the precise location and burial depths of the entire cable system (export, interconnector, and array routes).

3.2.4 Nautical Charts/Navigation Aids. The Lessee must submit the as-built cable burial reports (containing precise locations and burial depths), ESP locations, and WTG locations to USCG and NOAA, consistent with Section 2.21, to facilitate government-produced and commercially available nautical charts and navigation aids.

3.3 Reporting Conditions.

3.3.1 Complaints. On a monthly basis, the Lessee must provide BSEE with (1) a description of any complaints received (written or oral) by boaters, fishermen, commercial vessel operators, or other mariners regarding impacts to navigation safety allegedly caused by construction or operations vessels, crew transfer vessels, barges, or other equipment; and (2) a description of remedial action(s) taken in response to complaints received, if any. BSEE reserves the right to require additional remedial action consistent with 30 CFR Part 285.

3.3.2 Correspondence. On a monthly basis, the Lessee must provide BSEE, BOEM, and USCG with copies of any correspondence received from other federal, state, or local agencies regarding navigation safety issues.

3.4 Meeting Attendance. As requested by BSEE, BOEM, and the USCG, the Lessee must attend meetings (i.e., Harbor Safety Committee, Area Committee) to provide briefings on the status of construction and operations, and on any problems or issues encountered with respect to navigation safety.

4 NATIONAL SECURITY CONDITIONS

4.1 Hold and Save Harmless – United States Government. Whether compensation for such damage or injury might otherwise be due under a theory of strict or absolute liability or any other theory, the Lessee assumes all risks of damage or injury to any person or property that occurs in, on, or above the OCS in connection with any activities being performed by the Lessee in, on, or above the OCS, if the injury or damage to any person or property occurs by reason of the activities of any agency of the United States Government, its contractors or subcontractors, or any of its officers, agents, or employees, being conducted as a part of, or in connection with, the programs or activities of the individual military command headquarters (hereinafter "the appropriate command headquarters") listed below:

United States Fleet Forces (USFF) N46
1562 Mitscher Ave, Suite 250
Norfolk, VA 23551
(757) 836-6206

The Lessee assumes this risk, whether or not such injury or damage is caused in whole or in part by any act or omission, regardless of negligence or fault, of the United States, its contractors or subcontractors, or any of its officers, agents, or employees. The Lessee further agrees to indemnify and save harmless the United States against all claims for loss, damage, or injury in connection with the programs or activities of the appropriate command headquarters, whether the same is caused in whole or in part by the negligence or fault of the United States, its contractors or subcontractors, or any of its officers, agents, or employees and whether such claims might be sustained under a theory of strict or absolute liability or otherwise.

4.2 Mitigation Agreement. The Lessee must enter into a mitigation agreement with the DoD for purposes of implementing Section 4.3. If there is any discrepancy between Section 4.3 and the terms of the mitigation agreement, the terms of the mitigation agreement will prevail. Within 15 days of entering into the mitigation agreement, the Lessee must provide BOEM and BSEE with a copy of the executed mitigation agreement. The DoD point-of-contact for the development of the agreement is osd.dod-siting-clearinghouse@mail.mil.

4.3 North American Aerospace Defense Command (NORAD) Operations. Within 45 days of completing the requirements in Section 4.3, the Lessee must provide BOEM with evidence of compliance with those requirements. The NORAD point-of-contact is John Rowe: John.Rowe.14@us.af.mil. If the NORAD point-of-contact is no longer active, the Lessee must identify a point-of-contact through the DoD Clearinghouse at osd.dod-siting-clearinghouse@mail.mil.

4.3.1 Radar Adverse Impact Management (RAM) Scheduling. To mitigate impacts on NORAD's operation of the Falmouth, MA, Air Surveillance Radar-8, the Lessee must complete the following:

4.3.1.1 NORAD Notification. At least 30, but no more than 60, days prior to the completion of commissioning of the last WTG (i.e., that date by which every WTG in the Project is installed with potential for blade rotation), the Lessee must notify NORAD for RAM scheduling.

4.3.1.2 Funding for RAM Execution. For each phase of the Project, at least 30, but no more than 60, days prior to completion of commissioning of the last WTG (i.e., that date by which every WTG in the Project is installed with potential for blade rotation), the Lessee must contribute funds in the amount of $80,000 to NORAD toward the execution of the RAM. For each phase of the Project, if the time gap between the commissioning of the first and last WTG is anticipated to be 3 years or greater, the Lessee must contribute funds in the amount of $80,000 to NORAD toward the execution of the RAM when 50 percent of the WTGs are commissioned, and an additional $80,000 to NORAD toward the execution of additional RAM when the last WTG is commissioned. This allows NORAD to manage radar adverse impacts over an extended period of construction.

4.4 Department of the Navy Operations. To mitigate potential impacts on the Department of the Navy's (DON) operations, the Lessee must coordinate with the DON for purposes of implementing Section 4.4. Within 45 days of completing the requirements in Section 4.4.1. and 4.4.2, the Lessee must provide BOEM with evidence of compliance with those requirements. The DON point-of-contact for coordination is Matthew Senska: matthew.senska@navy.mil 571-970-8400. If the DON point-of-contact is no longer active, the Lessee must identify a point-of-contact through the DoD Clearinghouse at osd.dod-siting-clearinghouse@mail.mil.

4.4.1 Distributed Optical Fiber Sensing (DOFS) Technology and Acoustic Monitoring Devices. The Lessee must provide all information necessary for evaluation of the potential submarine power cables, data cables, and acoustic monitoring devices to be used in the Project to osd.dod-siting-clearinghouse@mail.mil and opnavn4imissioncompatibility@us.navy.mil for review. The Lessee must coordinate with the DoD to determine the timing for the Lessee to provide all information to DoD for review. If the DoD requests additional information, the Lessee must provide it within 15 days of the request. The following information must be provided:

- Sensor deployment dates and duration;
- Siting routes and locations of acoustic monitoring devices;
- Shore station location;
- DOFS and acoustic monitoring capabilities;
- Make and model of integrated (or planned integration/deployment of) and standalone scientific sensors;
- Manufacturers and vendors;
- Plans for data storage;
- Transmission and usage; and
- Associated physical and cybersecurity protocols.

4.4.2 The Lessee must provide DoD with notice of the intent to change this information at least 30 days prior to any change.

4.4.3 As-Builts. The Lessee must provide DoD with as-built schematics and diagrams showing the exact makes and models of all DOFS equipment and acoustic monitoring devices used at commissioning. Thereafter, this information must be updated within 10 business days of any change.

4.5 National Security Review.

4.5.1 Initial Screening. Within 45 days following COP approval, the Lessee must provide DoD with the names of each entity and person having beneficial ownership or control of 5 percent or more of the Lessee and the project operator, all material vendors and manufacturers who will regularly visit the Project on the OCS, who supply or manufacture equipment used on the OCS, control equipment used on the OCS, or have access to associated data systems. In addition, the following information must be provided for each director and the top five executives of the Lessee and the project operator: full legal name, date of birth, country of citizenship, and permanent address.

4.5.2 Supplementary Screenings. The Lessee and DoD must establish a process to review additional entities not previously reviewed during the initial screening based on when the information will be available during the project planning process. This process will include Lessee's provision to DoD of information regarding any foreign entities and persons, as defined by the DoD, allowed to access the WTG structures and associated data systems.

4.5.3 The Lessee must provide written notice to the DoD Parties at least 45 days in advance of the intended use of any material vendor not previously screened pursuant to this section. The Lessee must allow the DoD 45 days following such notice to conduct a security review and assess any security concern. Notwithstanding the foregoing, the Lessee need not wait 45 days if an unexpected situation arises for which employing services or vendors immediately is prudent for the safe operation of the Project.

4.5.4 DoD will screen the names of the entities and persons identified. Once submitted for screening, DoD Parties will identify to the Lessee, no later than 60 days after the receipt of the name of any entity and person posing a national security concern. In any case in which the DoD identifies any entity and any person screened in accordance with this section as posing a national security concern, the Lessee agrees to enter into negotiations with DoD to mitigate any threat to national security that arises as a result of the proximity of any entity and person posing a national security concern. Except in unexpected situations, as previously described, the threat to national security must be resolved to the satisfaction of the DoD Parties prior to allowing access to the site or its associated data systems by representatives of any entity and person posing a national security concern or the use of WTG or other permanent on-site equipment or associated data systems manufactured by any entity and person posing a national security concern. In any case in which an entity and person is identified as posing a national security concern following an unexpected situation, the threat to national security must be resolved to the satisfaction of DoD at the earliest opportunity.

4.6 Mitigation Measures. As a result of the analyses conducted pursuant to Sections 4.4 and 4.5 above, the DoD may determine the Lessee must enter into an additional mitigation agreement to ensure submarine data and power cables DOFS and acoustic monitoring devices are not used to detect sensitive data from DoD activities, or for any other type of surveillance of U.S. Government operations. Any mitigation measures required must be further detailed in the mitigation agreement between the Lessee and DoD and may include, but are not limited to, the following:

4.6.1 Lessee appointment of a DoD-approved Security Officer, subject to citizenry and other requirements, to monitor compliance with mitigation measures.

4.6.2 Restrictions on DOFS or acoustic monitoring equipment operating modes, parameters, locations, and/or capabilities; these may include programmed modes to avoid distributed sensing on specified portions of a cable when required by DoD.

4.6.3 Equipment and component restrictions and requirements, to include prohibitions on usage, installation, or connection of equipment or components manufactured in specified foreign countries; no equipment may be used on the Project if banned by any agency of the United States.

4.6.4 Physical and cybersecurity protections at, and Government inspections of, locations where the Lessee's DOFS and/or acoustic monitoring equipment and components are installed and monitored.

4.6.5 Temporary or permanent shutdown or data diversion of cable distributed sensing or acoustic monitoring devices in sensitive locations, as determined and required by DoD.

4.6.6 Reporting requirements for the Lessee and any subcontractors concerning business and ownership relationships with foreign entities and use of non-citizens for installation and maintenance work.

4.7 Communication Protocol for Construction and Operations. The Lessee must establish a point-of-contact through the DoD Clearinghouse (osd.dod-siting-clearinghouse@mail.mil) to coordinate with the Eastern Air Defense Sector and the Fleet Area Control and Surveillance Facilities for the following conditions:

4.7.1 The Lessee will communicate and coordinate the planned construction and operations schedule with appropriate military department commands to deconflict planned construction and operations activities to the extent practicable.

4.7.2 The Lessee and military department commands will mutually determine an appropriate meeting frequency to facilitate communication.

4.7.3 This protocol will serve as a forum to communicate the project schedule and identify potential military mission compatibility concerns or conflicts experienced due to construction activities. The Lessee will resolve conflicts to the maximum extent practicable or provide justification to the DoD stating why resolution is infeasible.

5 PROTECTED SPECIES[10] AND HABITAT CONDITIONS

5.1 General Environmental Conditions.

5.1.1 Aircraft Detection Lighting System. The Lessee must use an FAA-approved vendor for the Aircraft Detection Lighting System (ADLS), which will activate the FAA hazard lighting only when an aircraft is in the vicinity of the wind facility, to reduce visual impacts at night once the system is commissioned. The Lessee must confirm the use of, and submit to BOEM and BSEE information about, the FAA-approved vendor for ADLSs on WTGs and the ESPs at the time the relevant FIR is submitted.

[10] As used herein, the term "protected species" means species of fish, wildlife, or plant that have been determined to be endangered or threatened under Section 4 of the Endangered Species Act (ESA). ESA-listed species are provided in 50 CFR § 17.11-12. The term also includes marine mammals protected under the MMPA.

5.1.2 Marine Debris[11] Awareness and Elimination. The Lessee must submit required documents related to marine debris awareness training, reporting, and recovery (e.g., annual training compliance, incident reporting, 24-hour notices, recovery plans, recovery notifications, monthly reporting, annual survey and reporting, and decommissioning and site clearance) described in Sections 5.1.2.2 through 5.1.2.9 to BSEE via TIMSWeb with a notification email sent to marinedebris@bsee.gov.

5.1.2.1 Marine Debris Awareness Training and Certification. The Lessee must ensure that all vessel operators, employees, and contractors engaged in offshore activities pursuant to the approved COP complete marine debris awareness training initially (i.e., prior to engaging in offshore activities pursuant to the approved COP) and annually. Operators must implement a marine debris awareness training and certification process that ensures that their employees and contractors are adequately trained. The training and certification process must include the following elements:

5.1.2.1.1 Viewing a marine debris training video or training slide pack posted on the BSEE website (https://www.bsee.gov/debris) or by contacting BSEE;

5.1.2.1.2 Receiving an explanation from management personnel that emphasizes their commitment to the requirements;

5.1.2.1.3 Attendance measures (initial and annual); and

5.1.2.1.4 Record keeping and the availability of records for inspection by BSEE.

5.1.2.2 Training Compliance Report. By January 31 of each year, the Lessee must submit to BSEE an annual report that describes its marine debris awareness training process and certifies that the training process has been followed for the previous calendar year.

5.1.2.3 Marking. Any materials, equipment, tools, containers, and other items used in OCS activities, which are of such shape or configuration that make them likely to snag or damage fishing devices or be lost or discarded overboard, must be clearly marked with the vessel or facility identification number, and must be properly secured to prevent loss overboard. All markings must clearly identify the owner and must be durable enough to resist the effects of the environmental conditions to which they may be exposed.

[11] Throughout this document, "marine debris" is defined as any object or fragment of wood, metal, glass, rubber, plastic, cloth, paper, or any other man-made item or material that is lost or discarded in the marine environment.

5.1.2.4 Recovery and Prevention. Discarding debris in the marine environment is prohibited. Debris accidentally released by the Lessee into the marine environment while performing any activities associated with the lease or project must be recovered within 24 hours when the marine debris is likely to (1) cause undue harm or damage to natural resources (e.g., entanglement or ingestion by protected species); or (2) interfere with OCS uses (e.g., snagging or damaging fishing equipment, or presenting a hazard to navigation). If the marine debris was lost within the boundaries of an archaeological resource/avoidance area, or a sensitive ecological/benthic resource area, the Lessee must contact BSEE for concurrence before conducting any recovery efforts. The Lessee must take steps to prevent similar releases of marine debris and must submit a description of these preventative actions to BSEE within 30 days from the date on which the release of marine debris occurred.

5.1.2.5 Notification. The Lessee must notify BSEE within 24 hours of any releases of marine debris and indicate whether the released marine debris was immediately recovered. If the marine debris was not recovered, the Lessee must provide its rationale for not recovering the marine debris (e.g., marine debris is located within the boundaries of a sensitive area, recovery was not possible because conditions were unsafe, or recovery was not practicable and warranted because the released marine debris is not likely to result in items (1) or (2) listed in Section 5.1.2.4).

5.1.2.6 Remedial Recovery. After reviewing the notification and rationale for any decision by the Lessee to forgo recovery as described in Section 5.1.2.5, BSEE may order the Lessee to recover the marine debris if BSEE finds that the reasons provided by the Lessee in the notification are insufficient and the marine debris would cause undue harm or damage to natural resources or interfere with OCS uses.

5.1.2.6.1 Recovery Plan. If BSEE requires the Lessee to recover the marine debris, the Lessee must submit a Recovery Plan to BSEE within 10 days after receiving BSEE's order. Unless BSEE objects within 48 hours after the Recovery Plan has been accepted or is in review status by BSEE in TIMSWeb, the Lessee may proceed with the activities described in the Recovery Plan. Recovery activities must be completed 30 days from the date on which marine debris was released, unless BSEE grants the Lessee an extension.

5.1.2.6.2 Recovery Completion Notification. Within 30 days after the marine debris is recovered, the Lessee must provide notification to BSEE that recovery was completed and, if

applicable, describe any substantial variance from the activities described in the Recovery Plan that was required during the recovery efforts.

5.1.2.7 Monthly Reporting. The Lessee must submit to BSEE a monthly report, no later than the fifth day of the month, of all marine debris lost or discarded during the preceding month, including, if applicable, information related to 24 Hour Reporting and Recovery Plan and the referenced TIMSWeb Submittal ID (SID). The Lessee is not required to submit a report for those months in which no marine debris was lost or discarded. The report must include the following:

5.1.2.7.1 Project identification and contact information for the Lessee and for any operators or contractors involved;

5.1.2.7.2 The date and time of the incident;

5.1.2.7.3 The lease number, OCS area and block, and coordinates of the object's location (latitude and longitude in decimal degrees);

5.1.2.7.4 A detailed description of the dropped object, including dimensions (approximate length, width, height, and weight), composition (e.g., plastic, aluminum, steel, wood, paper, hazardous substances, or defined pollutants), and buoyancy (floats or sinks);

5.1.2.7.5 Pictures, data imagery, data streams, and/or a schematic/illustration of the object, if available;

5.1.2.7.6 An indication of whether the lost or discarded item could be detected as a magnetic anomaly of greater than 50 nanotesla, a seafloor target of greater than 1.6 feet (0.5 m), or a sub-bottom anomaly of greater than 1.6 feet (0.5 m) when operating a magnetometer or gradiometer, side scan sonar, or sub-bottom profiler;

5.1.2.7.7 An explanation of the how the object was lost; and

5.1.2.7.8 A description of immediate recovery efforts and results, including photos.

5.1.2.8 Annual Surveying and Reporting, Periodic Underwater Surveys, Reporting of Monofilament and Other Fishing Gear Around WTG Foundations. The Lessee must monitor indirect impacts associated with charter and recreational fishing gear lost from expected increases in fishing around WTG foundations by annually surveying at least 10 of the WTGs in the Lease Area for the first three years following

COP approval and every 5 years thereafter. The Lessee may conduct surveys by remotely operated vehicles, divers, or other means to determine the amount and locations of marine debris. The Lessee must report the results of the surveys to BOEM and BSEE in an annual report, submitted by January 31, for the preceding calendar year. Annual reports must be submitted in both Microsoft Word and Adobe PDF format. Photographic and videographic materials (TIFF or Motion JPEG 2000) must be provided in TIMSWeb with the submittal of the annual report. Photographic and videographic files can also be submitted to marinedebris@bsee.gov if the files cannot be uploaded in TIMSWeb. Survey design and effort (i.e., the number of WTGs and frequency of reporting) may be modified only upon review and concurrence by BOEM and BSEE.

5.1.2.8.1 Annual reports must include a summary of the survey reports that includes survey date(s); contact information of the operator; location and pile identification number; photographic and/or video documentation of the survey and debris encountered; any animals sighted; and the disposition of any located debris (i.e., removed or left in place). Annual reports must also include claim data attributable to the Project from the Lessee's corporate gear loss compensation policy and procedures. Required data and reports may be archived, analyzed, published, and disseminated by BOEM and BSEE.

5.1.2.9 Site Clearance and Decommissioning. The Lessee must include and address information on unrecovered marine debris in the description of the site clearance activities provided in the decommissioning application required under 30 CFR § 285.906.

5.2 Avian and Bat Protection Conditions.

5.2.1 The Lessee must submit all required documents related to avian and bat protection conditions in Sections 5.2.2 through Section 5.2.14 to BOEM, to BSEE via TIMSWeb and notification email at protectedspecies@bsee.gov, and to USFWS. The Lessee must confirm the relevant point of contact before submitting the required documents and must also confirm that the agencies have received the documents.

5.2.2 Bird-Deterrent Devices and Plan. To minimize the attraction of birds that are prone to perching, the Lessee must, where safety permits, install bird perching deterrent device(s) on each WTG and electric service platform (ESP). The Lessee must submit for BOEM and BSEE approval a plan to deter perching on offshore infrastructure by roseate terns and other marine birds . The Lessee must resolve all comments on the Bird Perching Deterrent Plan to BOEM's and BSEE's satisfaction before the Lessee may begin installation of WTGs or ESPs.

The Bird Perching Deterrent Plan must include the type(s) and locations of bird perching deterrent devices, include a maintenance plan for the life of the Project, allow for modifications and updates as new information and technology become available, track the efficacy of the deterrents, and include a timeline for installation. The plan will be based on best available science regarding the efficacy of perching deterrent devices on avoiding and minimizing collision risk. The location of bird deterrent devices must be proposed by the Lessee based on Best Management Practices applicable to the appropriate operation and safe installation of the devices. The Lessee must submit the Bird Perching Deterrent Plan with the FIR. The Bird Perching Deterrent Plan must be approved before the Lessee may commence with installation of any WTGs or ESPs. The Lessee must also provide the location and type of bird-deterrent devices as part of the as-built submittals to BSEE.

5.2.3 Navigation Lighting Upward Illumination Minimization. Nothing in this condition supersedes or is intended to conflict with lighting, marking, and signaling requirements of FAA, USCG, or BOEM. The Lessee must use lighting technology that minimizes impacts on avian species to the extent practicable including lighting designed to minimize upward illumination. The Lessee must provide USFWS with a courtesy copy of the final Lighting, Marking, and Signaling plan, and the Lessee's approved application to USCG to establish PATON.

5.2.4 Avian and Bat Post-Construction Monitoring Program. The Lessee must develop and implement an Avian and Bat Post-Construction Monitoring Plan (ABPCMP) based on the New England Wind Avian and Bat Post-Construction Monitoring Framework (June 2023), in coordination with USFWS, and other relevant regulatory agencies. BOEM and BSEE will use annual monitoring reports to determine the need for adjustments to monitoring approaches and to consider new monitoring technologies, and/or additional periods of monitoring. Prior to or concurrent with offshore construction activities, including seabed preparation activities, the Lessee must submit an ABPCMP for BOEM, BSEE, and USFWS review. BOEM, BSEE, and USFWS will review the ABPCMP and provide any comments on the plan to the Lessee within 60 days of its submittal. The Lessee must resolve all comments on the ABPCMP to BOEM's and BSEE's satisfaction before implementing the plan and before commissioning the first WTG.

5.2.5 Monitoring. The Lessee must conduct monitoring as outlined in the New England Wind Avian and Bat Post-Construction Monitoring Framework (June 2023). In addition, the Lessee must monitor the action area for piping plovers and rufa red knots. The monitoring method(s) must be informed by the best available information and technology and could include boat-based monitoring, Motus stations, remote sensing, cameras, microphones, Doppler and Next Generation Weather Radar (NEXRAD), environmental DNA (eDNA), etc. The monitoring must occur during the time(s) of year when collisions are most likely. Initially, monitoring will proceed according to the Lessee's Avian and Bat Post-Construction Monitoring Framework and be operational for the first piping

plover and rufa red knot migratory seasons after the WTGs are operational (see Monitoring and Reporting Requirements in USFWS BiOp). Subsequently, consideration of new methods and timing by BOEM and USFWS will occur on the same timeline as the Collision Minimization Report (CMR) described in the Terms and Conditions of the USFWS BiOp unless BOEM and USFWS agree to a different schedule.

5.2.6 Annual Monitoring Reports. The Lessee must submit a comprehensive report after each full year of post-construction monitoring within 12 months of completion of the survey season (see addresses in Section 5.2.1). The report must include all data, analyses, and summaries regarding ESA-listed and non-ESA-listed birds and bats. In addition, the Lessee must report observations of injured or dead piping plovers and rufa red knots; any listed species perching on Project infrastructure (including offshore substations); implementation and effectiveness of avoidance and minimization measures; and any other relevant activity and information related to the proposed action and potential impacts to listed species (see Monitoring and Reporting Requirements in USFWS BiOp).

5.2.7 Post-Construction Quarterly Progress Reports. During the first 12 months that the Project is fully operational and commissioned (all installed WTGs producing power), the Lessee must submit quarterly progress reports concerning the implementation of the ABPCMP to BOEM, BSEE, and USFWS by the 15th day of the first month following the end of each quarter. The Lessee must include a summary of all work performed, an explanation of overall progress, and any technical problems encountered.

5.2.8 Monitoring Plan Revisions. Within 30 days of submitting the annual monitoring report, the Lessee must meet with BOEM, BSEE, USFWS, and appropriate state wildlife agencies to discuss the monitoring results, the potential need for revisions to the ABPCMP, including technical refinements or additional monitoring, and the potential need for any additional efforts to reduce impacts. If, following that meeting, BOEM and BSEE, in consultation with USFWS, determine that revisions to the ABPCMP are necessary, the Lessee must modify the ABPCMP. If the reported monitoring results deviate substantially from the impact analysis included in the Final EIS,[12] the Lessee must transmit to BOEM, BSEE, and USFWS recommendations for new mitigation measures and/or monitoring methods. In consultation with USFWS, BOEM and BSEE may adjust the frequency, duration, and methods for various monitoring efforts in future revisions of the ABPCMP based on current technology (including its cost), and the evolving weight of evidence regarding the likely levels of collision mortality for each listed bird species.

5.2.9 Operational Reporting. Upon commissioning of the first WTG, the Lessee must submit to BOEM and BSEE an annual report, due by January 31, summarizing monthly operational data from the preceding year, calculated from 10-minute

[12] https://www.boem.gov/renewable-energy/state-activities/new-england-wind-final-eis

supervisory control and data acquisition data, for all WTGs together in tabular format, including the proportion of time the WTGs were spinning each month, the average rotor speed (monthly revolutions per minute) of spinning WTGs plus 1 standard deviation, and the average pitch angle of blades (degrees relative to rotor plane) plus 1 standard deviation. Any data considered by the Lessee to be privileged or confidential must be clearly marked as confidential business information and will be handled by BOEM and BSEE in a manner consistent with 30 CFR § 585.114.

5.2.10 Raw Data. The Lessee must store the raw data from all avian and bat surveys and monitoring activities using accepted archiving practices. Such data must be accessible to BOEM, BSEE, and USFWS upon request for the duration of the Lease. The Lessee must work with BOEM to ensure the data are publicly available. All avian tracking data (i.e., from radio and satellite transmitters) must be stored, managed, and made available to BOEM and USFWS following the protocols and procedures outlined in the USFWS document entitled *Guidance for Coordination of Data from Avian Tracking Studies* effective at time of COP approval.

5.2.11 Incidental Mortality Reporting. The Lessee must provide an annual report to BOEM, BSEE, and the USFWS documenting any dead (or injured) birds or bats found on vessels and structures during construction, operations, and decommissioning. The report must contain the following information: the name of the species, date found, location, a picture to confirm species identity (if possible), and any other relevant information. Carcasses with federal or research bands must be reported to the United States Geological Survey Bird Band Laboratory, available at https://www.pwrc.usgs.gov/BBL/bblretrv/.. The Lessee must also submit to BOEM, BSEE, and USFWS an annual report covering each calendar year, due by January 31, documenting the implementation of any collision-prevention measures during the preceding year.

5.2.11.1 Immediate Reporting. Any occurrence of a dead or injured ESA-listed bird or bat in or within 1 mile of the New England Wind lease area must be reported to BOEM, BSEE, and USFWS (New England Field Office at newengland@fws.gov and 603-223-2541) as soon as practicable (taking into account crew and vessel safety), no later than 72 hours after the sighting and, if practicable, the dead specimen will be carefully collected and preserved in the best possible state. BOEM will coordinate with USFWS on procedures and required permits for processing and handling specimens.

5.2.12 Collision Minimization. Within 5 years of the commissioning of the first WTG and every 5 years thereafter for the operational life of the Project, the Lessee must provide BOEM with a review of best available scientific and commercial data on technologies and methods that have been implemented or are being studied to reduce or minimize bird collisions at WTGs. The review must be worldwide and include both offshore and onshore WTGs. This review will

inform BOEM's Collision Minimization Report, consistent with Term and Condition 1b of the USFWS BiOp. Within 60 days of BOEM's issuance of the final Collision Minimization Report, the Lessee must participate in a meeting to discuss the report with BOEM, BSEE, USFWS, and appropriate state agencies.

5.2.13 Compensatory Mitigation for Piping Plover and rufa Red Knot. At least 180 days prior to the start of commissioning of the first WTG, the Lessee must distribute a Compensatory Mitigation Plan to BOEM, BSEE, and the USFWS for review and comment. BOEM, BSEE, and USFWS will review the Compensatory Mitigation Plan and provide any comments on the plan to the Lessee within 60 days of its submittal. The Lessee must resolve all comments on the Compensatory Mitigation Plan to BOEM's and BSEE's satisfaction before implementing the plan and before commissioning of the first WTG. The Compensatory Mitigation Plan must provide compensatory mitigation actions to offset take of Piping Plover and rufa Red Knot by the fifth year of WTG operation. The Compensatory Mitigation Plan must include a) detailed description of the mitigation measures; b) the specific location for each mitigation action; c) a timeline for completion of the mitigation actions; d) itemized costs for implementing the mitigation actions; e) details of the mitigation mechanisms (e.g., mitigation agreement, applicant-proposed mitigation); and f) monitoring to ensure the effectiveness of the mitigation actions in offsetting take.

5.2.14 Piping Plover Protection Plan. The Lessee must implement the Piping Plover Protection (PPP) Plan, titled Draft Piping Plover Protection Plan in COP Appendix III-R (June 2022), which is also consistent with Conservation Measure 7 in the USFWS BiOp. Following demobilization of construction equipment, and by January 31, the Lessee must provide a copy of the summary report described in Section V of the PPP Plan to BOEM, BSEE, and USFWS.

5.3 Pre-Seabed Disturbance Conditions.

5.3.1 The Lessee must submit all required documents related to pre-seabed disturbance and specified in Sections 5.6.2 to 5.6.11 to BOEM and BSEE.

5.3.2 Anchoring Plan. The Lessee must prepare and implement an Anchoring Plan(s) for all areas where anchoring or buoy placement occurs and jack-up barges are used during construction and operations/maintenance within 1,640 ft (500 m) of habitats, resources, and submerged infrastructure that are sensitive, including sensitive benthic habitats; boulders greater than or equal to 0.5 m; ancient submerged landform features (ASLFs); known and potential shipwrecks; potentially significant debris fields; potential hazards; third-party infrastructure, and any related facility installation activities (such as cable, WTG, and ESP installation). Avoidance buffers must be consistent with the following: exclusion zones for potential and confirmed unexploded ordnances consistent with risks identified in the MEC/UXO Desktop Study (Section 2.1) and relative to risks of planned activities; avoidance of cultural resources and shipwrecks and ASLFs will be consistent with Section 7.1.6.

The Lessee must provide to all construction and support vessels the locations where anchoring or buoy placement must be avoided to the extent technically and/or economically practicable or feasible, including sensitive benthic habitats, boulders greater than or equal to 0.5 m, ASLFs, known and potential shipwrecks, potentially significant debris fields, potential hazards, and any related facility installation activities (such as cable, WTG, and ESP installation). If avoidance and minimization is determined to be infeasible, the plans must describe in detail the rationale for such infeasibility. Dynamic positioning systems should be used in these areas instead of anchoring, as practicable. If anchoring is necessary at these locations, then all vessels deploying anchors must extend the anchor lines to the extent practicable to minimize the number of times the anchors must be raised and lowered to reduce the amount of habitat disturbance, unless the anchor chain sweep area includes sensitive benthic habitat that may be impacted by the chain sweep. On all vessels deploying anchors, the Lessee must use mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seabed, unless the Lessee demonstrates, and BOEM and BSEE accept, that (1) the use of mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seabed is not technically practical or feasible; or (2) a different alternative is as safe and provides the same or greater environmental protection.

If placement of jack-up barge spud cans is necessary in sensitive benthic habitats, locations for the spud cans must be selected to avoid or minimize impacts according to the following list, including complex habitat sub-types (using NMFS complexity categories), prioritized from highest to lowest priority: complex habitats with high density large boulders, complex habitats with medium density large boulders, complex habitats with low density large boulders, complex habitats with scattered large boulders, complex habitats with no large boulders, as technically feasible and practicable. Benthic habitat (NOAA complexity categories) and benthic feature/habitat type maps in conjunction with backscatter, bathymetry, and boulder layers should be used to inform the anchoring plan. In the event of any misalignment in avoidance buffers described above with any other permits or authorizations, please refer to Section 1.4.

5.3.2.1 The Lessee must provide the proposed Anchoring Plan to BOEM and BSEE, for the agencies' 60-day review (in coordination with NMFS GARFO-HESD), at least 120 days before anchoring activities or construction begins for export and inter-array cables. The Lessee must resolve all comments on the Anchoring Plan to BOEM's and BSEE's satisfaction before conducting any OCS seabed-disturbing activities that require anchoring. If there are fewer than 120 days between anchoring activities and this COP approval, the Lessee must submit the plan as soon as practicable and no later than 60 days prior to commencing activities. The final version of each Anchoring Plan must be provided to BOEM, BSEE, NMFS GARFO-HESD, and USACE.

5.4 Boulder Identification and Relocation Plan. The Lessee must submit a Boulder Identification and Relocation Plan(s) to BOEM and BSEE for the agencies' 60-day review (in coordination with NMFS GARFO-HESD), 120 days prior to boulder relocation activities within the scope of the plan. The Lessee must resolve all comments on the Boulder Identification and Relocation Plan to BOEM's and BSEE's satisfaction prior to implementation of the plan. If BOEM or BSEE do not provide comments on the plan within 60 days of its submittal, then the Lessee may presume concurrence with the plan. Concurrence with the plan will be determined by BSEE. The plan(s) must detail how the Lessee will avoid or minimize impacts to sensitive benthic habitats[13] and fishing operations. The plan(s) must provide for relocation of boulders as closely as practicable to the original location, in areas of soft bottom that are immediately adjacent to existing similar habitat from which the boulder originated. The plan(s) must include multibeam backscatter data and boulder (greater than or equal to 0.5 m in diameter) data layers to inform the siting of boulders and areas for relocation. The plan must include sufficient scope to mitigate boulders for facility installation and operational risks. The plan must be consistent with and meet the conditions of the SMS in Section 2.7. The plan must include the following for boulders that are proposed to be relocated:

5.4.1 A summary and detailed description of locations along the cable routes and WTG areas where surface and subsurface boulders greater than 0.5 m in diameter have been found.

5.4.2 A detailed summary of methodologies used in boulder identification, including geological and geophysical survey results;

5.4.3 Figures of the location of boulder relocation activities specified by activity type (e.g., pick or plow, removal, or placement). Separate submissions of these depictions overlaid on multibeam bathymetry and backscatter data and fishing activity data must also be submitted;

5.4.4 A description of boulder removal and/or relocation methods for each type of boulder relocation activity and technical feasibility constraints, including, but not limited to, the capacity of the crane used in grab systems, vessel specifications and metocean limits on operations;

5.4.5 The areal extent of the environmental footprint of disturbance activities by habitat type and specific measures taken to avoid further adverse impacts to archaeological resources, complex habitat and fishing activity, and a description of how information regarding these resources is shared with vessel operators;

[13] Sensitive benthic habitats include complex habitat, benthic features, and bathymetric features, Complex habitat is defined as coarse unconsolidated mineral substrates (i.e., substrates containing 5 percent or greater gravels), rock substrates (e.g., bedrock), and shell substrates (e.g., mussel reef) consistent with Coastal and Marine Ecological Classification Standards definitions, as well as vegetated habitats (e.g., SAV). Benthic features are defined as sand waves, megaripples, and ripples. Bathymetric features are defined as topographic features of the seafloor such as lumps, scarps, ledges, and banks.

5.4.6 A comprehensive list and shapefile of locations of boulders that would be relocated (latitude, longitude), boulder dimensions (m), buffer radius (m), areas of active (within last 5 years) fishing (latitude, longitude), areas where boulders greater than 2 m in diameter are anticipated to occur (latitude, longitude), and identification of approximate areas to which boulders would be relocated (latitude, longitude);

5.4.7 The specific strategies and measures taken to minimize the impacts to complex habitats and quantity of seafloor obstructions from relocated boulders in areas of active fishing, as technically and/or economically feasible;

5.4.8 A description of safety distances or zones to limit boulder relocation activities near third party assets;

5.4.9 A description of MEC/UXO ALARP Certified areas, which should be consistent with MEC/UXO ALARP Certification (Section 2.3);

5.4.10 A summary of any consultation and outreach with resource agencies and the fishing industry in the development of the plan (e.g., notifications to mariners); and

5.4.11 A statement of consistency with the Micrositing Plan (Section 5.7).

5.4.12 The Lessee must provide USCG, NOAA, and the local harbormaster with a comprehensive list and shapefile of positions and areas to which boulders greater than 2 m would be relocated (latitude, longitude) at least 60 days prior to boulder relocation activities.

5.5 Boulder Relocation. The Lessee must implement methods identified in the approved COP and described in the Boulder Identification and Relocation Plan (Section 5.4) for boulder relocation activities. The Lessee must consider the spatial extent of boulder relocation in the micrositing of WTGs and ESP foundations and inter-array and export cables for this Project and must relocate boulders as closely as practicable to the original location, in areas of soft bottom immediately adjacent to existing similar habitat. The relocation of boulders must be consistent with the Project easement.

5.6 Boulder Relocation Report. The Lessee must provide a Boulder Relocation Report to BSEE, BOEM, NMFS GARFO-HESD, and the approved CVA. The report must include a post-relocation summary of the boulder relocation activities and information to certify boulder risks related to the installation and operation of the facility have been properly mitigated. The report must also identify boulders that could not be relocated with documentation of technical feasibility concerns, including information on how, if at all, the final boulder placement differs from the Boulder Relocation Plan and why such changes were necessary. The report must be submitted within 60 days of completion of the boulder relocation activities and prior to or with the relevant FIR. The Lessee must also provide BOEM and BSEE a comprehensive list and shapefile of boulder locations to which boulders were relocated (latitude, longitude), boulder dimensions (m), any safety

distances or zones to limit boulder relocation near third-party assets (m), and areas of active (within last 5 years) fishing (i.e., as a raster file for use in ArcGIS).

5.7 Micrositing Plan(s). The Lessee must prepare and implement a Micrositing Plan(s) that describes how inter-array cables, export cable routes, WTGs, and ESPs will be microsited to avoid or minimize impacts (as technically and/or economically practicable or feasible) to archaeological resources (Sections 7.1.4 and 7.1.5), sensitive benthic habitats, boulders greater than or equal to 0.5 meters in diameter, and potential and confirmed MEC/UXO. The plan(s) must describe MEC/UXO ALARP Certified areas, which should be consistent with MEC/UXO ALARP Certification (Section 2.3). To the extent practicable, cables should cross sensitive benthic habitat areas perpendicularly at the narrowest points; cables unable to avoid benthic features such as sand waves should be sited along natural benthic contours within troughs/lows, to maximize cable burial while minimizing disturbance to local submarine topography. The Lessee must submit detailed supporting data and analysis as part of the FDR or FIR, including relevant geophysical and geospatial data. The submission of the data may be incorporated by reference or submitted as an attachment to the FDR or FIR. The Micrositing Plan(s) must be consistent with, Cable Routings (Section 2.10) and the Boulder Identification and Relocation Plan(s) (Section 5.4).

5.7.1 The Micrositing Plan(s) must include a figure for each microsited cable segment, including benthic habitat delineations showing sensitive benthic habitat and locations of boulders greater than or equal to 0.5 m. The plans must include a figure encompassing the lease area, depicting large boulder locations, benthic habitat delineations, and the proposed microsited locations for cables, WTGs, and ESPs. Benthic habitat (NOAA complexity categories) and benthic feature/habitat type maps in conjunction with backscatter, bathymetry, and boulder layers should be used to inform the Micrositing Plan.

5.7.2 For cables, ESPs, and/or WTGs that cannot be microsited to avoid impacts to sensitive benthic habitat or boulders greater than or equal to 0.5 m, the micrositing plan must identify technically and/or economically practicable or feasible impact minimization measures and use the following prioritized list, including complex habitat sub-types (using NMFS complexity categories), to avoid during micrositing: complex habitats with high density large boulders, complex habitats with medium density large boulders, complex habitats with low density large boulders, complex with scattered large boulders; complex habitats with no large boulders.

5.7.3 The Micrositing Plan(s) must be submitted to BOEM and BSEE for a 60-day review (in coordination with NMFS GARFO-HESD), 120 days prior to site preparation activities for cables, WTGs, and ESP(s) within the scope of the plan. The Lessee must resolve all comments on the Micrositing Plan(s) to BOEM's and BSEE's satisfaction prior to implementation of each plan(s). If there are fewer than 120 days between site preparation activities and this COP approval, the Lessee must submit the plan as soon as practicable and no later than 60 days prior to commencing activities. The final version of each Micrositing Plan must

be provided to BOEM, BSEE, NMFS, and USACE. Additionally, the plan must describe how information regarding sensitive benthic habitats is shared with vessel operators.

5.8 Scour and Cable Protection Plan. The Lessee must prepare and implement a Scour and Cable Protection Plan(s) that includes descriptions and specifications for all scour and cable protection materials. The plan(s) must include a depiction of the location and extent of cable protection, the habitat delineations for the areas of cable protection measures, and detailed information on the proposed scour or cable protection materials for each area and habitat type. The Scour and Cable Protection Plan(s) must demonstrate consistency with the Micrositing Plan(s), as appropriate.

5.8.1 The Lessee must avoid the use of engineered stone or concrete mattresses in complex habitat, as practicable and/or feasible. The Lessee must ensure that all materials used for scour and cable protection measures consist of natural or engineered stone that does not inhibit epibenthic growth and provides three-dimensional complexity in height and in interstitial spaces, as practicable and feasible. If concrete mattresses are necessary, bioactive concrete (i.e., with bio-enhancing admixtures) must be used as practicable as the primary scour protection (e.g., concrete mattresses) or veneer to support biotic growth.

5.8.2 Cable protection measures must have tapered or sloped edges to reduce hangs for mobile fishing gear. The Lessee must avoid the use of plastics/recycled polyesters/net material (i.e., rock-filled mesh bags, fronded mattresses) for scour protection.

5.8.3 The Scour and Cable Protection Plan(s) must be submitted to BOEM and BSEE for a 60-day review (in coordination with NMFS GARFO-HESD), at least 120 days prior to placement of scour and cable protection within the area covered by the scope of the Plan(s). BOEM and BSEE must concur with the Scour and Cable Protection Plan(s) prior to BSEE issuing a no-objection to an FDR covering the scour and/or cable protection materials.

5.8.4 The Lessee must resolve all comments on each Plan to BOEM's and BSEE's satisfaction before placement of the scour and cable protection materials. The final version of the Scour and Cable Protection Plan(s) must be provided to BSEE, NMFS, and USACE.

5.9 Benthic Habitat and Fisheries Monitoring Conditions.

5.9.1 Post Installation Micrositing Report. The Lessee must provide a post-installation Micrositing Report to BOEM and BSEE for coordination with NMFS GARFO-HESD. The report must include a summary of the micrositing activities for WTGs, inter-array cables, and the export cable and demonstrate (i.e., figures of as-built locations overlaid on multibeam echosounder backscatter survey data) how impacts to complex habitats and benthic features were avoided and/or minimized within the lease area and export cable corridors. The report must also

identify and depict (i.e., figures) areas in which WTGs or cables could not be microsited to avoid complex habitats with a description of the complex habitat sub-types impacted (see prioritized list of complex habitat sub-types listed under the Micrositing Plan Section 5.7) and include documentation of technical feasibility issues encountered. The report must be submitted within 60 days of completion of all WTG and cable installations. The Lessee must also provide BOEM, BSEE, and NMFS GARFO-HESD a shapefile of as-built WTGs, inter-array cables, and the export cables, as well as best-available multibeam echosounder backscatter survey data (i.e., as a raster file for use in ArcGIS).

5.9.2 Berm Survey and Report. Where plows, jets, grapnel runs, or other similar methods are used, post-construction geophysical surveys required as part of the Post-Installation Cable Monitoring must be capable of detecting bathymetry changes of 0.5 meters or less and must be completed to determine the height and width of any created berms. The Lessee must capture bathymetry changes greater than 3 feet during the first and second post-installation surveys along the cable routes (as described in Section 2.10). If there are bathymetric changes in berm height greater than 1 meter above grade after the second survey, the Lessee must develop and implement a Berm Remediation Plan to restore created berms to match adjacent natural bathymetric contours (isobaths), as technically and/or economically practical or feasible. The Lessee must submit the Berm Remediation Plan to BOEM and BSEE for a 60-day review (in coordination with NMFS) within 90 days of completion of the post-construction survey where the change was detected. The Lessee must resolve all comments on the Berm Remediation Plan to BOEM's and BSEE's satisfaction prior to initiating restoration activities. The final version of the Berm Remediation Plan must be provided to BOEM, BSEE, NMFS, and USACE.

5.9.3 Benthic Habitat Monitoring Plan (BHMP). The Lessee must conduct benthic habitat monitoring consistent with the Lessee's BHMP (Appendix III-U of the COP) dated December 2023 to assess benthic habitat in the Project area pre-, during, and post-construction. The Lessee must submit any revisions to the BHMP to BOEM, to BSEE with status updates of submittals in the Annual Certification, and to NMFS GARFO-HESD. Benthic monitoring plan reports and resulting data should also be submitted to NMFS GARFO-HESD.

5.9.4 Sacrificial Anodes. To the extent it is technically and economically feasible, the Lessee must avoid using Zinc sacrificial anodes on external components of WTG and ESP foundations to reduce the release of metal contaminants in the water column.

5.9.5 UXO Detonation Prohibition. UXO detonation must not commence until BOEM has notified the Lessee that all necessary MSA Essential Fish Habitat consultations addressing this action have concluded. The Lessee must also implement any conservation recommendations adopted by BOEM as part of the reinitiated consultation.

5.10 Non-Avian Protected Species Monitoring Plan Conditions.[14]

5.10.1 The Lessee must submit all required documents related to protected species in accordance with all the Terms and Conditions of the February 16, 2024, NMFS BiOp (e.g., marine mammal and sea turtle monitoring plan, nighttime monitoring plan, passive acoustic monitoring (PAM), sound field verification (SFV), UXO detonation plan, and vessel strike avoidance plan). All documents must be submitted to BOEM, BSEE via TIMSWeb with a notification email sent to BSEE at protectedspecies@bsee.gov, NMFS GARFO-PRD, NMFS-OPR, and USACE. The Lessee must follow final plans.

5.10.2 If BOEM and BSEE inform the Lessee the plan is inconsistent with the ITS and NMFS BiOp, the Lessee must submit a modified plan that addresses the identified issues within 30 days of the receipt of the comments but at least 15 days before the start of the associated activities for which a plan is required. BOEM, BSEE, and NMFS will review of the modified plan within the Lessee's proposed schedule to the maximum extent practicable. The Lessee must obtain BOEM's and BSEE's concurrence with the Plan(s) prior to the start of any specified activity.

5.11 Vessel Strike Avoidance Conditions and Plan Conditions. The Lessee must comply with the following vessel strike avoidance conditions for any construction, operations, or decommissioning vessel transits associated with the project, unless the safety of the vessel or crew necessitates deviation from these requirements. The Lessee must report any such deviations as set forth in Section 5.11.6 (Vessel Strike Avoidance Plan).

5.11.1 Regardless of vessel size, vessel operators must reduce vessel speed to 10 knots (18.5 mph) or less while operating in any Seasonal Management Area (SMA) and Dynamic Management Area (DMA) or Slow Zone for North Atlantic right whales, unless the vessel is operating in a designated DMA or Slow Zone where right whales have not been detected and it is not reasonable to expect the presence of North Atlantic right whales (e.g., Long Island Sound, shallow harbors).

5.11.2 Vessel captain and crew must maintain a vigilant watch for all protected species and reduce speed, stop their vessel, or alter course, as appropriate and regardless of vessel size, to avoid striking any listed species. The presence of a single individual at the surface may indicate the presence of submerged animals in the vicinity; therefore, precautionary measures should always be exercised. If pinnipeds or small delphinids of *Delphinus*, *Lagenorhynchus*, *Stenella*, or *Tursiops* are visually detected approaching the vessel (i.e., to bow ride) or towed

[14] The requirements in this section set forth BOEM's conditions pursuant the reasonable and prudent measures and the implementing terms and conditions of the NMFS Biological Opinion. *See* Reasonable and Prudent Measure 5 and Term and Condition 13, in the Incidental Take Statement. BOEM intends to implement its conditions of approval, including those in this section, consistently with the Terms and Conditions in the Biological Opinion. *See*, Section 1.4, above.

equipment, vessel speed reduction, course alteration, and shutdown are not required.

5.11.3 If a vessel is underway, a PSO must monitor a protected species separation distance of 100 m for sea turtles and 500 m or greater for marine mammals visible at the surface, to ensure detection of that animal in time to take necessary measures to avoid striking the animal. If the vessel does not require a PSO for the type of activity being conducted, crew may be used as a Trained Lookout to meet this requirement.

5.11.4 All vessel crew members must be briefed in the identification of protected species that may occur in the survey area and in regulations and best practices for avoiding vessel collisions. Reference materials must be available aboard all project vessels for identification of listed species. The expectation and process for reporting of protected species sighted during surveys must be clearly communicated and posted in highly visible locations aboard all project vessels, so that there is an expectation for reporting to the designated vessel contact (such as the lookout or the vessel captain), as well as a communication channel and process for crew members to do so.

5.11.5 A minimum separation distance of 500 m from all ESA-listed whales (including unidentified large whales) must be maintained around all surface vessels at all times.

5.11.6 If a large whale is identified within 500 m of the forward path of any vessel, the vessel operator must steer a course away from the whale at 10 knots (18.5 km/hr) or less until the 500 m minimum separation distance has been established. Vessels may also shift to idle if feasible.

5.11.7 If a large whale is sighted within 200 m of the forward path of a vessel, the vessel operator must reduce speed and shift the engine to neutral. Engines must not be engaged until the whale has moved outside of the vessel's path and beyond 500 m. If stationary, the vessel must not engage engines until the large whale has moved beyond 500 m.

5.11.8 If a sea turtle or manta ray is sighted at any distance within the operating vessel's forward path, the vessel operator must slow down to 4 knots and steer away (unless unsafe to do so). The vessel may resume normal vessel operations once the vessel has passed the turtle or ray.

5.11.9 For all vessels operating north of the Virginia/North Carolina border, between June 1 and November 30, the Lessee must have a trained lookout posted on all vessel transits during all phases of the Project to observe for sea turtles. For all vessels operating south of the Virginia/North Carolina border, year-round, the Lessee must have a trained lookout posted on all vessel transits during all phases of the Project to observe for sea turtles. The trained lookout must communicate any sightings, in real time, to the captain so that the requirements in Sections

5.11.10 - 5.11.16 below can be implemented. The trained lookout must communicate any sightings, in real time, to the captain.

5.11.10 The trained lookout must monitor https://seaturtlesightings.org/ prior to each trip and report any observations of sea turtles in the vicinity of the planned transit to all vessel operators/captains and lookouts on duty that day.

5.11.11 The trained lookout must maintain a vigilant watch and monitor a 500 m Vessel Strike Avoidance Zone at all times to avoid potential vessel strikes of ESA-listed sea turtle species. Alternative monitoring technology (e.g., night vision, thermal cameras, etc.) must be available and utilized by the lookout to ensure effective watch at night and in any other low visibility conditions. If the trained lookout is a vessel crew member, this must be their designated role and primary responsibility while the vessel is transiting. Any designated crew lookouts must receive training on protected species identification, vessel strike minimization procedures, how and when to communicate with the vessel captain, and reporting requirements.

5.11.12 If a sea turtle is sighted within 100 m or less of the operating vessel's forward path, the vessel operator must slow down to 4 knots (unless unsafe to do so) and then proceed away from the turtle at a speed of 4 knots or less until there is a separation distance of at least 100 m at which time the vessel may resume normal operations. Vessel transits to and from the Wind Farm Area that require PSOs must maintain a speed that will allow, taking into account weather conditions, effective detection of sea turtles prior to reaching the 100 m avoidance measure. If a sea turtle is sighted within 50 m of the forward path of the operating vessel, the vessel operator must shift to neutral when safe to do so and then proceed away from the turtle at a speed of 4 knots. The vessel may resume normal operations once it has passed the turtle.

5.11.13 Vessel captains/operators must avoid transiting through areas of visible jellyfish aggregations or floating sargassum lines or mats. In the event that operational safety prevents avoidance of such areas, vessels must slow to 4 knots while transiting through such areas.

5.11.14 All vessel crew members must be briefed in the identification of sea turtles and in regulations and best practices for avoiding vessel collisions. Reference materials must be available aboard all Project vessels for identification of sea turtles. The expectation and process for reporting of sea turtles (including live, entangled, and dead individuals) must be clearly communicated and posted in highly visible locations aboard all Project vessels, so that there is an expectation for reporting to the designated vessel contact (such as the lookout or the vessel captain), as well as a communication channel and process for crew members to do so.

5.11.15 If a vessel is carrying a PSO or trained lookout for the purposes of maintaining watch for NARWs, an additional lookout is not required and this PSO or trained lookout must maintain watch for whales and sea turtles.

5.11.16 The Lessee must submit a Vessel Strike Avoidance Plan no later than 180 days prior to the planned mobilization of any vessels operated by or under contract by the Lessee (NMFS BiOp Term and Condition 13e). An additional plan for the transmit corridor is required to describe any visual or PAM measures that will be implemented for any vessel that proposes to travel above 10 knots within the transit corridor. Consistent with the requirements of the MMPA Final Rule/LOA and the NMFS BiOp, unless and until this section of the vessel strike avoidance plan is reviewed by NMFS-OPR and NMFS GARFO-PRD, all vessels transiting between the operations and maintenance facility and the Lease Area, year-round, must comply with the 10-knot speed restriction. The Lessee must prepare a plan (a standalone plan or supplement to a Vessel Strike Avoidance Plan) that describes: the location of each transit corridor (with a map); how PAM, in combination with visual observations, will be conducted to ensure highly effective monitoring for the presence of right whales in the transit corridor; and the protocols that will be in place for vessel speed restrictions following detection of a right whale via PAM or visual observation. This plan must be provided at least 180 days in advance of planned deployment of the PAM system (see NMFS BiOp Term and Condition 13). Plans must be submitted to BOEM, BSEE, and NMFS GARFO-PRD. The Lessee must receive approval from BOEM and BSEE before implementation.

5.11.17 Protected Species Observer Requirements. The Lessee must ensure that vessel operators and crew members maintain a vigilant watch for marine mammals and sea turtles, and reduce vessel speed, alter the vessel's course, or stop the vessel as necessary to avoid striking marine mammals or sea turtles, consistent with identified requirements.

5.11.17.1 All vessels must have a visual observer on board who is responsible for monitoring the vessel strike avoidance zone for marine mammals and sea turtles. Visual observers may be PSO or crew members, but crew members responsible for these duties must be provided sufficient training by the Lessee to distinguish marine mammals and sea turtles from other phenomena and must be able to identify a marine mammal as a NARW, other whale (defined in this context as sperm whales or baleen whales other than NARW), or other marine mammal, as well as identify sea turtles. Crew members serving as visual observers must not have other duties while observing for marine mammals when the vessel is operating over 10 knots.

5.11.18 Vessel Communication of Threatened and Endangered Species Sightings. The Lessee must ensure that whenever multiple Project vessels are operating, any detections of ESA-listed species (marine mammals and sea turtles) are

communicated in near real time to these personnel on the other Project vessels: PSOs, vessel operators, or both.

5.11.18.1 Year-round, all vessel operators must monitor the Project's Situational Awareness System, WhaleAlert, USCG VHF Channel 16, and the Right Whale Sighting Advisory System (RWSAS) for the presence of NARWs once every 4-hour shift during Project-related activities. The PSO and PAM operator monitoring teams for all activities must also monitor these systems no less frequently than every 12 hours. If a vessel operator is alerted to a NARW detection within the Project area, the operator must immediately convey this information to the PSO and PAM teams. For any UXO/MEC detonation, vessel operators must monitor these systems for 24 hours prior to detonating any UXO/MEC.

5.11.18.2 Any observations of any large whale by any of the Lessee's staff or contractor, including vessel crew, must be communicated immediately to PSOs and all vessel operators to increase situational awareness.

5.12 Passive Acoustic Monitoring (PAM) During Construction. The Lessee must conduct PAM to supplement visual monitoring of marine mammals before, during, and after all monopile installations and UXO/MEC detonations.

5.13 Clearance and Shutdown Zones. Pile driving will not proceed unless the visual PSOs can effectively monitor the full extent of the minimum visibility zones and identified clearance zones for marine mammals and sea turtles. The Lessee will not proceed with pile driving unless the visual PSOs can effectively monitor the full extent of the minimum visibility zones. The Lessee must not proceed with UXO/MEC detonation unless the entirety of the clearance zone is visible to the PSOs. Detection of an animal within the clearance zone triggers a delay of initiation of pile driving or UXO/MEC detonation and detection of an animal in the shutdown zone triggers the identified shutdown requirements. The following clearance and shutdown zones must be established and monitored for the specified activity unless otherwise approved by BOEM and BSEE (in consultation with NMFS).

Table 5.13-1. Clearance and Shutdown Zones for Pile Driving and UXO Detonation

Species	Clearance Zone (m)	Shutdown Zone (m)
Monopile Foundation Installation – visual PSOs and PAM		
Minimum visibility zone from each PSO platform (pile driving vessel and at least one PSO vessel): 2,100 m monopile; PAM monitoring out to 12,000 m		
North Atlantic right whale (visual and PAM monitoring)	At any distance (Minimum visibility zone (2.1 km for monopiles) plus any additional distance observable by the visual PSOs on all PSO platforms); At any distance within the 12 km zone monitored by PAM	At any distance (Minimum visibility zone (2.1 km for monopiles) plus any additional distance observable by the visual PSOs on all PSO platforms); At any distance within the 12 km zone monitored by PAM

Species	Clearance Zone (m)	Shutdown Zone (m)
Blue, Fin, sei, and sperm whale (visual and PAM monitoring/detection)	3,300	2,700
Sea Turtles (visual detection)	250	250
Jacket Foundation Installation – visual PSOs and PAM		
Minimum visibility zone from each PSO platform (pile driving vessel and at least one PSO vessel): 3,400 m jacket foundations; PAM monitoring out to 12,000 m		
North Atlantic right whale (visual and PAM monitoring)	At any distance (Minimum visibility zone (3.4 km) plus any additional distance observable by the visual PSOs on all PSO platforms); At any distance within the 12 km zone monitored by PAM	At any distance (Minimum visibility zone (3.4 km) plus any additional distance observable by the visual PSOs on all PSO platforms); At any distance within the 12 km zone monitored by PAM
Blue, Fin, sei, and sperm whale (visual and PAM monitoring/detection)	4,900	4,100
Sea Turtles (visual detection)	250	250
UXO Detonations – Entirety of clearance zone must be visible; PAM monitoring out to 12,000 m		
North Atlantic right whale (visual and PAM monitoring)	At any distance observable by the visual PSOs on all PSO platforms; At any distance within the 12 km zone monitored by PAM	N/A
Blue, Fin, sei whale (visual and PAM monitoring)	2,500-10,000 m*	N/A
Sperm whale	500-2,000 m*	N/A
Sea Turtles	500 m	N/A

*The clearance zones, which are visually and acoustically monitored, for UXO/MEC detonations were derived based on an approximate proportion of the size of the Level B harassment (TTS) isopleth. The clearance zone sizes are contingent on the Lessee being able to demonstrate that it can identify charge weights in the field; if they cannot identify the charge weight sizes in the field then the Lessee would need to assume the E12 charge weight size for all detonations and must implement the E12 clearance zone.

5.13.1 Noise Abatement Systems. The Lessee must employ noise abatement systems during all foundation pile driving and UXO/MEC detonation events and operate that system in a manner that achieves maximum noise attenuation levels practicable, but, at minimum, results in noise levels equal to or less than those modeled assuming 10 dB attenuation.

5.13.2 The Lessee must follow pre-clearance, soft start, shutdown, and restart procedures according to the Terms and Conditions and Appendix A of the February 16, 2024, NMFS BiOp and the final MMPA ITA.

5.13.3 Adaptive Monitoring Conditions. The purpose of the SFV plan is to ensure that the Lessee does not exceed the distances to the auditory injury (i.e., harm) or behavioral harassment threshold (Level A and Level B harassment respectively) for marine mammals, the harm or behavioral harassment thresholds for sea turtles, or the harm or behavioral disturbance thresholds for Atlantic sturgeon

that are identified in the NMFS BiOp. The Lessee must monitor through SFV and the required reporting, adaptive attenuation measures, and monitoring measures consistent with Terms and Conditions 2, 4, 7, and 13 of the NMFS BiOp issued under the ESA and requirements of the LOA issued under the MMPA. The Lessee must send all raw SFV PAM data to the NCEI Passive Acoustic Data archive within 12 months following the completion of WTG/ESP foundation installation and the Lessee must follow NCEI guidance for packaging the data and metadata unless such submission conflicts with conditions in Section 4, in which case the language in Section 4 will govern the submission of PAM data.

5.13.4 Long-term PAM. The Lessee must conduct long-term monitoring of ambient noise and baleen whales; and commercially important fish vocalizations in the Lease Area before, during, and following construction. The Lessee must conduct continuous[15] recording at least one year before the start of pile installation, through pile installation, initial operation, and for at least 3 but no more than 10 full calendar years of operations[16] to monitor for potential impacts. The Lessee must meet with BOEM and BSEE at least 60 days prior to conclusion of the third full calendar year of operation monitoring (and at least 60 days prior to the conclusion of each subsequent year until monitoring is concluded) to discuss: 1) monitoring conducted to-date, 2) the need for continued monitoring, which need will be determined by BOEM, and 3) if monitoring is continued, whether adjustments to the monitoring are warranted. The monitoring instrument(s) must be configured to ensure that the specific locations (with confidence intervals) of vocalizing NARW anywhere within the lease area can be identified, assuming a 10 km detection range for their calls. The Lessee may satisfy this condition through either of the options set forth more fully below but must notify BOEM of its choice at least 120 days before pile driving is scheduled to begin. PAM deployment and data submission requirements of this Section must be consistent with Section 4. In the case where there is a conflict, the Lessee must follow the language in Section 4.

5.13.4.1 Option 1 - Lessee Conducts Long-term Passive Acoustic Monitoring. If the Lessee chooses to comply with Section 5.5.6 using this option, the Lessee must conduct PAM, including data processing and archiving following the Regional Wildlife Science Collaborative (RWSC) best practices[17] to ensure data comparability and transparency. PAM instrumentation must be deployed to allow for identification of any NARW that vocalize anywhere within the lease area, as well as Atlantic cod.

[15] Continuous recording in this measure recognizes that PAM devices can be damaged or lost from weather and other ocean uses, mechanical failures, and general maintenance. The Lessee must make every effort to maintain the PAM system as near continuous as possible. If temporal gaps in recording are expected, the lessee must ensure that additional recorders can be deployed to fill gaps.

[16] For the purposes of this condition, operation initiates with the commissioning of the first WTG.

[17] https://rwsc.org/wp-content/uploads/2022/12/RWSC-PAM-Data-Management-Storage-Best-Practices.pdf.

The sampling rate (minimum 10 kHz) of the recorders must prioritize baleen whale detections but must also have a minimum capability to record noise from vessels, pile-driving, and WTG operation in the lease area. The system must be configured for continuous recording over the entire year. If temporal gaps in recording are expected, the Lessee must ensure that additional recorders can be deployed to fill gaps. The Lessee must use trawl-resistant moorings to ensure that instruments are not lost and must replace any lost instruments as soon as possible. The Lessee must also notify BOEM if this occurs.

The Lessee must follow the best practices outlined in the RWSC best practices document,[18] unless otherwise required through conditions of COP approval. The best practices include engaging with the RWSC, calibrating the instruments, running QA/QC on the raw data, following the templates for reporting species vocalizations, and preparing the data for archiving at National Centers for Ecological Information (NCEI). Although section III of the RWSC best practices document specifies steps for Section 106 compliance, the Lessee must instead follow the conditions outlined in Section 7.13 and the Section 106 Memorandum of Agreement.

The Lessee must document the occurrence of mysticte vocalizations (as well as odontocete clicks, as available based on sample rate) using automatic or manual detection methods. In addition, data must be processed with either manual or automatic detection software to detect vocalizations of spawning cod. The Lessee must submit a log of these detections as well as the detection methodology to BOEM, BSEE (at protectedspecies@bsee.gov and TIMSWeb) and NMFS (at nmfs.pacmdata@noaa.gov) within 120 days following each recorder retrieval. All raw data must be sent to the NCEI Passive Acoustic Data archive on an annual basis and the Lessee must follow NCEI guidance for packaging the data.

5.13.4.1.1 Long-term Passive Acoustic Monitoring Plan. The Lessee must prepare and implement a Long-term PAM Plan under this option. No later than 120 days prior to instrument deployment and before any construction begins, the Lessee must submit to BOEM and BSEE (renewable_reporting@boem.gov and renewableenergyoperations@bsee.gov and TIMSWeb) the Long-term PAM Plan that describes all proposed equipment (including number and configuration of instruments), deployment locations, mooring design, detection review methodology, and other procedures and protocols related to the required use of PAM. If there are

[18] https://rwsc.org/wp-content/uploads/2022/12/RWSC-PAM-Data-Management-Storage-Best-Practices.pdf.

fewer than 120 days between the commencement of any construction activity and this COP approval, the Lessee must submit the plan as soon as practicable and no later than 60 days prior to commencing activities. As the Lessee prepares the Long-term PAM Plan, it must coordinate with the RWSC.

BOEM and BSEE will review the Long-term PAM Plan and provide comments, if any, on the plan within 45 days of its submittal. The Lessee may be required to submit a modified Long-term PAM Plan based on feedback from BOEM and BSEE. The Lessee must address all outstanding comments to BOEM's and BSEE's satisfaction and will need to receive written concurrence from BOEM and BSEE. If BOEM or BSEE do not provide comments on the Long-term PAM Plan within 45 days of its submittal, the Lessee may conclusively presume BOEM's and BSEE's concurrence with the Long-term PAM Plan.

5.13.4.2 Option 2 –Financial and Other Contributions to BOEM's Environmental Studies Program.[19] As an alternative to conducting long-term PAM in the Lease Area, the Lessee may make a financial contribution to BOEM's Environmental Studies Partnership for an Offshore Wind Energy Regional Observation Network (POWERON) initiative on an annual basis and cooperate with the POWERON team to allow the team's access to the Lease Area for deployment, regular servicing, and retrieval of instruments. In the event the Lessee selects this Option, BOEM and the Lessee will enter into a separate agreement. The Lessee's financial contribution must provide for all activities necessary to conduct PAM within and adjacent to the Lease Area, such as vessel and staff time for regular servicing of instruments, QA/QC on data, data processing to obtain vocalizations of sound-producing species and ambient noise metrics, as well as long-term archiving of data at NCEI. At the Lessee's request, BOEM will provide an estimate of the necessary amount of the financial contribution. BOEM will also invite the Lessee to contribute to discussions about the scientific approach of the POWERON initiative via the RWSC. The Lessee may request temporary withholding of the public release (i.e., the placement into the NCEI public data archive) of raw acoustic data collected within the Lease Area for up to 180 days after collection of that data. During this temporary hold, BOEM may elect to provide the Lessee may with

[19] The Lessee may elect Option 2 initially or during any subsequent calendar year of monitoring, subject to agreement with BOEM and BSEE.

a copy of the raw PAM data collected under this option after the DON has cleared the data for national security concerns.

5.14 Project Design Criteria and Best Management Practices for Protected Species. The Lessee must comply with all the Project Design Criteria and Best Management Practices for Protected Species at https://www.boem.gov/sites/default/files/documents//PDCs%20and%20BMPs%20for%20Atlantic%20Data%20 Collection%2011222021.pdf that implement the integrated requirements for threatened and endangered species in the June 29, 2021, programmatic consultation under the ESA, revised November 22, 2021. Survey Plans must be submitted to BOEM and BSEE (via TIMSWeb with a notification email at protectedspecies@bsee.gov) for review and concurrence at least 90 days prior to the planned start of geophysical and geotechnical surveys. If HRG surveys are necessary during periods of low visibility (e.g., darkness, rain, fog, etc.), an Alternative Monitoring Plan must be submitted to BOEM and BSEE detailing the monitoring methodology that will be used during nighttime and low-visibility conditions and an explanation of how it will be effective at ensuring that the shutdown zone(s) can be maintained during nighttime and low-visibility survey operations. The plan must be submitted 60 days before low visibility survey operations are set to begin.

5.15 Reporting for Protected Species. The Lessee must implement the reporting requirements necessary to document the amount of and extent of authorized incidental take exempted through the NMFS BiOp under the ESA consistent with RPM 4 and according to Terms and Conditions 8 and 9 of the February 16, 2024, NMFS BiOp, and any reporting requirements included as specified in the final ITA under the MMPA, and as specified in the following conditions. Unless otherwise specified, all reports must be submitted to NMFS GARFO-PRD and BSEE (see Section 5.9.1 above).

5.15.1 Reporting of ESA-Listed Species within Shutdown Zone During Active Pile Driving. The Lessee must report any threatened or endangered species that is observed within the identified shutdown zone during active pile driving (vibratory or impact) or drilling. The Lessee must file a report within 48 hours of the incident and include the following: description of the activity (i.e., drilling, vibratory or impact pile driving) and duration of pile driving or drilling prior to the detection of the animal(s), location of PSOs and any factors that impaired visibility or detection ability, time of first and last detection of the animal(s), distance of animal at first detection, closest point of approach of animal to pile, behavioral observations of the animal(s), time the PSO called for shutdown, hammer log (number of strikes, hammer energy), time the pile driving began and stopped, and any measures implemented (e.g., reduced hammer energy) prior to shutdown. If shutdown was determined not to be feasible, the report must include an explanation for that determination and the measures that were implemented (e.g., reduced hammer energy).

5.15.2 Detected or Impacted Dead Non-ESA-Listed Fish. The Lessee must report any occurrence of at least 10 dead non-ESA-listed fish within established shutdown or monitoring zones to BOEM and to BSEE (via email to

protectedspecies@bsee.gov) as soon as practicable (taking into account crew and vessel safety), but no later than 24 hours after the sighting. BOEM or BSEE will notify NMFS GARFO-HESD. In the email, the Lessee must confirm the relevant point of contact for questions regarding the report and confirm with BOEM and BSEE that the report was received.

5.15.3 Weekly Reports. The Lessee must compile and submit weekly reports during construction that document pile driving, HRG survey, and detonation activities, including associated PSO, SFV, and noise abatement activities. These weekly reports must include the information required by NMFS BiOp Term and Condition 9e and be submitted to NMFS GARFO-PRD, BOEM, and BSEE (protectedspecies@bsee.gov); they may be submitted directly from the PSO providers and may consist of raw data. Weekly reports must be submitted no later than Wednesday for the previous week (Sunday – Saturday). Weekly reports must include:

5.15.3.1 Summaries of pile driving activities and piles installed, including pile ID, type of pile, pile diameter, start and finish time of each drilling and pile driving event, hammer log (number of strikes, max hammer energy, duration of piling) per pile, any changes to noise attenuation systems and/or hammer schedule, details on the deployment of PSOs and PAM operators, including the start and stop time of associated observation periods by the PSOs and PAM Operators, and a record of all observations/detections of marine mammals and sea turtles as detailed in Section 5.14.3.8 below;

5.15.3.2 A summary of SFV and NAS implemented during pile driving;

5.15.3.3 Any UXO/MEC detonation activities, including a summary of SFV and NAS implemented during UXO/MEC detonation;

5.15.3.4 Which WTGs become operational and when (a map must be provided);

5.15.3.5 Summaries of HRG survey activities;

5.15.3.6 Vessel operations (including port departures and destinations, number of vessels, type of vessel(s), and route);

5.15.3.7 All protected species detections. This includes: species identification, number of animals, time at initial detection, time at final detection, distance to pile/vessel at initial detection, closest point of approach to pile/vessel, animal direction of travel relative to pile/vessel; description of animal behavior, features used to identify species, and for moving vessels: speed (knots), distance and bearing to animal at initial detection, closest point of approach and bearing to animal, distance and bearing to animal at final detection, and animal direction of travel relative to vessel. Sightings/detections during pile driving

activities (clearance, active pile driving, post-pile driving) and all other (transit, opportunistic, etc.) sightings/detection must be reported and identified as such; and

5.15.3.8 Vessel strike avoidance measures taken.

5.15.4 Monthly Reports. Starting the first month that in-water activities occur on the OCS, the Lessee must compile and submit monthly reports that include a summary of all Project activities carried out in the previous month, including dates and locations of any fisheries surveys, vessel transits (number of transits, name and type of vessel, ports used, and route inclusive of foreign and domestic ports), piles installed (number and ID), HRG surveys conducted, and UXO/MEC detonations, and all observations of ESA-listed whales, sea turtles, and sturgeon inclusive of any mitigation measures taken as a result of those observations. Sightings/detections must include species ID, time, date, initial detection distance, vessel/platform name, vessel activity, vessel speed, bearing to animal, Project activity, and if any, mitigation measures taken. These reports must include the information identified in NMFS BiOp Term and Condition 9f, and the Lessee must submit the reports to BOEM, BSEE, and NMFS GARFO-PRD no later than the 15th of the month for the previous month.

5.15.4.1 Reporting Instructions for Monthly PSO Pile Driving Monitoring Reports. PSOs must collect data consistent with standard reporting forms, software tools, or electronic data forms authorized by BOEM for the particular activity. PSOs must fill out report forms for each vessel with PSOs aboard. Unfilled cells must be left empty and must not contain "NA." The reports must be submitted in Microsoft Word and Excel formats (not as a PDF). Enter all dates as YYYY-MM-DD. Enter all times in 24 Hour Coordinated Universal Time (UTC) as HH:MM.

5.15.4.2 The PSO must create a new entry on the Effort form each time a pile segment changes, or weather conditions change, and at least once an hour as a minimum. The PSO must review and revise all forms for completeness and resolve incomplete data fields before submittal. The file name must follow this format: Lease#_ ProjectName_PSOData_YearMonthDay toYearMonthDay.xls. Data fields must be reported in Excel format. Data categories must include Project, Operations, Monitoring Effort, and Detection, as further specified below. All PSO data must be generated through software applications or otherwise recorded electronically by PSOs and provided to BOEM and BSEE in electronic format (CSV files or similar format) and be checked for quality assurance and quality control. Applications developed to record PSO data are encouraged if the data fields listed below can be recorded and exported into Excel. Alternatively, BOEM has developed an Excel spreadsheet, with all the necessary data fields, that is available upon request.

Required data fields include:

Project Information:

- Project name
- Lease number
- State coastal zones
- PSO contractors
- Vessel names
- Reporting dates (YYYY-MM-DD)
- Visual monitoring equipment used (e.g., bionics, magnification, infrared cameras)
- Distance finding method used
- PSO names (Last, First) and training
- Observation height above sea surface

Operations Information:

- Date (YYYY-MM-DD)
- Hammer type used (make and model)
- Greatest hammer power used for each pile
- Pile identifier and pile number for the day (e.g., pile 2 of 3 for the day)
- Pile diameters
- Pile length
- Total number of strikes used to install each pile
- Total hammer energy used to install each pile
- Pile locations (latitude and longitude)
- Number of vessel transits
- Types of vessels used
- Vessel routes used

Monitoring Effort Information:

- Date (YYYY-MM-DD)
- Noise source (ON=Hammer On; OFF=Hammer Off)
- PSO name(s) (Last, First)
- If visual, how many PSOs on watch at one time?
- Time pre-clearance visual monitoring began in UTC (HH:MM)
- Time pre-clearance monitoring ended in UTC (HH:MM)
- Time pre-clearance PAM monitoring began in UTC (HH:MM)
- Time PAM monitoring ended in UTC (HH:MM)
- Duration of pre-clearance PAM and visual monitoring
- Time power-up or ramp-up began
- Time equipment full power was reached

- Duration of power-up or ramp-up
- Time pile driving began (hammer on)
- Time pile driving activity ended (hammer off)
- Duration of activity
- Duration of visual detection
- Wind speed (knots), from direction
- Swell height (m)
- Water depth (m)
- Visibility (kilometers)
- Glare severity
- Latitude (decimal degrees), longitude (decimal degrees)
- Compass heading of vessel (degrees)
- Beaufort scale
- Precipitation
- Cloud coverage (%)
- Did a shutdown/power-down occur?
- Time shutdown was called for (UTC)
- Time equipment was shut down (UTC)
- Habitat or prey observations
- Marine debris sighted

Detection Information:

- Date (YYYY-MM-DD)
- Sighting ID (V01, V02, or sequential sighting number for that day; multiple sightings of the same animal or group must use the same ID)
- Date and time at first detection in UTC (YY-MM- DDT HH:MM)
- Time at last detection in UTC (YY-MM-DDT HH:MM)
- PSO name(s) (Last, First)
- Effort (ON=Hammer On; OFF=Hammer Off)
- If visual, how many PSOs on watch at one time?
- Start time of observations
- End time of observations
- Duration of visual observation
- Wind speed (knots), from direction
- Swell height (m)
- Water depth (m)
- Visibility (kilometers)
- Glare severity
- Latitude (decimal degrees), longitude (decimal degrees)
- Compass heading of vessel (degrees)
- Beaufort scale
- Precipitation

- Cloud coverage (%)
- Sightings including common name, scientific name, or family
- Percent certainty of identification
- Number of adults
- Number of juveniles
- Total number of animals
- Bearing to animals when first detected (ship heading + clock face)
- Bearing to animals at closest approach (ship heading+ clock face)
- Bearing to animal at final detection (ship heading+ clock face)
- Range from vessel and pile (reticle distance in meters)
- Description (include features such as overall size; shape of head; color and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow, etc.)
- Detection narrative (note behavior, especially changes in relation to activity and distance from service vessel)
- Direction of animal travel in first approach relative to vessel and pile
- Behaviors observed: indicate behaviors and behavioral changes observed in sequential order (use behavioral codes)
- If any bow-riding behavior observed, record total duration during detection (UTC HH:MM)
- Initial heading of animals (degrees)
- Final heading of animals (degrees)
- Shutdown zone size during detection (m)
- Was the animal inside the shutdown zone?
- Closest distance to vessel and pile (reticle distance in m)
- Time at closest approach to vessel and pile (UTC HH:MM)
- Time animal entered shutdown zone (UTC HH:MM)
- Time animal left shutdown zone (UTC HH:MM)
- If observed or detected during ramp-up or power-up: first distance (reticle distance in m), closest distance (reticle distance in m), last distance (reticle distance in m), behavior at final detection
- Did a shutdown/power-down occur?
- Time shutdown was called for (UTC HH:MM)
- Time equipment was shut down (UTC HH:MM)
- Detections with PAM

5.15.5 Annual Reports. Beginning one calendar year after the commissioning of the first WTG, the Lessee must compile and submit annual reports that include a summary of all Project activities carried out in the previous year, including vessel transits (number, type of vessel, ports used, and route), repair and maintenance activities, survey activity, and all observations of ESA-listed species. The annual reports must be submitted to BOEM, BSEE, and NMFS GARFO-PRD. The Lessee must submit these reports by April 1 of each year for the previous calendar year (i.e., the 2026 report is due by April 1, 2027). BOEM

and BSEE (in consultation with NMFS) may approve changes to the frequency and timing of reports.

5.16 Protected Species Training and Coordination. Before beginning any in-water activities involving vessel use (transit), cable installations, pile driving, UXO/MEC detonation, and HRG surveys, and when new personnel join the work, the Lessee must conduct briefings for construction supervisors and crews, PSO and PAM teams, vessel operators, and all staff in order to explain responsibilities, communication procedures, and protected species mitigation, monitoring, and reporting requirements.

5.16.1 The Lessee must submit all required documents and reports related to protected species training and coordination to BOEM, BSEE, NMFS-OPR, and NMFS GARFO-PRD (see Section 5.9.1 above).

5.16.2 Vessel Crew and Protected Species Observer Training Requirements. The Lessee must provide Project-specific training to all vessel crew members, PSOs, and Trained Lookouts on the identification of sea turtles and marine mammals, vessel strike avoidance and reporting protocols, how and when to communicate with the vessel operator, the authority of the PSOs, and the associated regulations for avoiding vessel collisions with protected species prior to the start of in-water construction or detonation activities. The Lessee must make available aboard all Project vessels reference materials for identifying sea turtles and marine mammals, copies of the Marine Mammal and Sea Turtle Monitoring Plan (Section 5.5) and Vessel Strike Avoidance Plan (Section 5.10). Confirmation of the training and understanding of the requirements must be documented on a training course log sheet, and the Lessee must provide the log sheets to BOEM and BSEE upon request. The Lessee must communicate to all crew members its expectation for them to report sightings of sea turtles and marine mammals to the designated vessel contacts. The Lessee must communicate to all crew members its expectation that the crew report sightings of sea turtles and marine mammals (including live, entangled, and dead individuals) to the designated vessel contact. The Lessee must post the reporting instructions, including communication channels, in highly visible locations aboard all Project vessels.

5.16.3 PSO Requirements. The Lessee must use independent, dedicated, qualified PSOs provided by a third party. The PSOs' sole Project-related duty must be to observe, collect and report data, and communicate with and instruct relevant vessel crew regarding the presence of protected species and mitigation requirements (including brief alerts regarding maritime hazards). PSOs or any PAM operators serving as PSOs must have completed a commercial PSO training program for the Atlantic with an overall examination score of 80 percent or greater.[20] The Lessee must use NMFS-approved PSOs and PAM operators. The Lessee must provide training certificates for individual PSOs to BOEM or BSEE upon request. PSOs and PAM operators must be approved by NMFS before the start of construction activities. Application requirements to become a

[20] https://repository.library.noaa.gov/view/noaa/15851

NMFS-approved PSO for construction activities can be found on the NOAA website[21] or for geological and geophysical surveys by sending an inquiry to nmfs.psoreview@noaa.gov. PSOs and PAM operators must be on watch for no more than a maximum of 4 consecutive hours, followed by a break of at least 2 hours between watches.

5.17 Other Protected Species Conditions. On February 16, 2024, NMFS issued a BiOp, including an ITS for the Project. The ITS includes RPMs and Terms and Conditions that NMFS determined were necessary and appropriate to minimize and monitor the amount or extent of incidental take of species listed as endangered or threatened under the ESA and under NMFS jurisdiction. The NMFS BiOp's coverage for incidental take from the Project requires the Lessee to execute the proposed action in compliance with all avoidance and minimization measures described in the NMFS BiOp, to comply with all conditions in Appendix A, and to comply with RPMs and implementing Terms and Conditions included in the NMFS BiOp's ITS. Those RPMs and Terms and Conditions are incorporated by reference in this document. This includes all measures specified in the NMFS BiOp including measures from the final MMPA ITA to minimize effects of foundation installation, UXO detonations, and other activities on marine mammals.

6 CONDITIONS RELATED TO COMMERCIAL FISHERIES, FOR-HIRE AND RECREATIONAL FISHING

6.1 Fisheries Compensation and Mitigation Funds. No later than 1 year after the approval of the COP, unless a different schedule is agreed to as a component of a separate agreement between the Lessee and Rhode Island or Massachusetts or with BOEM and BSEE for funds not subject to a state agreement, the Lessee must establish and implement a direct compensation program to provide monetary compensation to commercial and for-hire fishermen impacted by the Project funded in accordance with Sections 6.1.1 and Section 6.1.2 below. Calculation steps are shown in Section 6.1.3 below.

6.1.1 Direct Compensation Program. The Lessee must ensure that the Direct Compensation Fund (hereinafter sometimes referred to as "Fund") includes an amount sufficient to be used to pay claims brought by both commercial and for-hire fishermen and must be based, at a minimum, on the annual average commercial fisheries landings values as derived from Table B-8 (Appendix B, page B-29) of the New England Wind Project Final EIS. The Fund amount must be determined by the formula set out below for states other than those for which there are formal agreements (e.g., Rhode Island and Massachusetts), provided the formal agreements exceed the calculation for those states with which the agreements were made (see Section 6.1.1.3 below).

6.1.1.1 In the Fund, the Lessee must reserve the amount of, at a minimum, 100 percent of annual revenue exposure during the post-COP approval pre-construction and construction period and (pending BSEE's approval of the Lessee's decommissioning application)

[21] www.fisheries.noaa.gov/new-england-mid-atlantic/careers-and-opportunities/protected-species-observers

projected decommissioning period. The Lessee must reserve 100 percent of annual revenue exposure for the first year after construction, 80 percent of revenue exposure 2 years after construction, 70 percent of revenue exposure 3 years after construction, 60 percent after 4 years, and 50 percent for the 5th year post-construction. BSEE will evaluate the need for additional compensatory mitigation consistent with the Annual Certification under 30 CFR § 285.633(a). The Lessee may propose to BOEM and BSEE to fully fund the amounts in the first year of the program in which case the total amount may be modified to reflect present value and may incorporate a discount rate that allows reserve amounts in investment vehicles to anticipate growth in funds over the period for which funds are required to be available. However, if the actual funds are less than the required reserve amounts for a given period, the Lessee will be required to fund the difference. BOEM may require the growth projections in order to approve this alternative.

6.1.1.2 Except for the calculation of Fund amounts for commercial and for-hire fishermen in Rhode Island and Massachusetts, where final mitigation agreements have been approved by the respective states, the compensation calculations described above must be normalized using the latest annual gross domestic product (GDP) Implicit Price Deflator (U.S. Bureau of Economic Analysis,[22] "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product") to the year construction begins and thereafter for the 5-years post-construction. The reserve amounts for mitigation during decommissioning must also be normalized.

6.1.1.3 In recognition of agreements between the Lessee and Rhode Island and the Lessee and Massachusetts, the Lessee must establish the following compensation/mitigation funds for compensation of income losses by commercial or for-hire fishermen from other states directly related to the Project. However, if the requirements in an agreement between the Lessee and a state for compensation/mitigation listed in this section exceed the revenue for certain commercial fishermen in a state as derived from Table B-24 in the New England Wind Project Final EIS, the Lease Area Average Annual Revenue as derived from Table B-24 for that specific state may be omitted from the calculation described in Section 6.1.3.

6.1.1.3.1 Rhode Island – The Lessee must establish a Fund which includes $4,373,638 as direct financial mitigation for Rhode Island commercial and for-hire charter fishermen

[22] https://apps.bea.gov/iTable/?reqid=19&step=3&isuri=1&1921=survey&1903=11#eyJhcHBpZCI6MTksInN0ZXBzIjpbMSwyLDMsM10sImRhdGEiOltbIk5JUEFfVGFibGVfTGlzdCIsIjEzIl0sWyJDYXRlZ29yaWVzIiwiU3VydmV5Il0sWyJGaXJzdF9ZZWFyIiwiMjAyMCJdLFsiTGFzdF9ZZWFyIiwiMjAyMyJdLFsiU2NhbGUiLCIwIl0sWyJTZXJpZXMiLCJBIl1dfQ==

and an additional $500,000 to support Rhode Island commercial and charter/for-hire for operations.

6.1.1.3.2 Massachusetts – The Lessee must establish a $5,859,471 Compensatory Mitigation Fund and a $1,500,000 Massachusetts Fisheries Innovation Fund.

6.1.1.3.3 Other States – The Lessee must follow processes identified throughout Section 6.1 for determining the fund amount for other states.

6.1.2 Shoreside Support Services. At least 90 days prior to establishment of the Direct Compensation Program described in Section 6.1.1, the Lessee must submit to BOEM a Shoreside Support Services report for a 60-day review and approval. If a state agreement for compensatory mitigation includes support for shoreside services, such as through a community fund, the amount allocated to shoreside services in the state agreement(s) may be removed from the calculation in 6.1.3 if such amount is greater than BOEM's required amounts, as stated in 6.1.1.3. The report must include a description of the structure of the Direct Compensation Fund and an analysis of the impacts of the Project to shoreside support services (such as seafood processing and vessel repair services) within communities near the ports listed below:

- Point Judith, RI
- New Bedford, MA
- Montauk, NY
- Fairhaven, MA
- Chatham, MA
- Little Compton, RI
- Westport, MA
- Beaufort, NC
- New London, CT
- Newport, RI

6.1.3 Compensation Calculations. Once the values at Sections 6.1.1 and 6.1.2 are determined, the Lessee must use Table 6.1.3-1 and Table 6.1.3-2 to calculate the total fund amount required by Section 6.1. The required fund amount must be normalized to current real prices from a base year as described in Section 6.1.1.2. The Lessee may use the most recent complete year's GDP Implicit Price Deflator to estimate Direct Compensation Fund requirements after COP approval if the current year is unavailable (n_i).

As described in 6.1.1.1, the Lessee must ensure the reserve amount allows for, at a minimum, 100 percent of annual revenue exposure during the projected construction years and, pending BSEE approval of a decommissioning plan, decommissioning years. The Lessee must use the GDP Implicit Price Deflator to adjust the annual average commercial fisheries revenue as derived from Table B-24 (Appendix B, page B-46) of the New England Wind Project Final EIS.

Before rolling forward any unclaimed funds, the total fund reserve requirements for Construction, Decommissioning, and Operating Years 1–5[23] (as shown in Table 6.1.3-2) are calculated using the following formula:

$$\boldsymbol{k}\left(\$531{,}645.86 \times \frac{\boldsymbol{n_i}}{110.213}\right)(\mathbf{1}+\mathbf{M}) + \boldsymbol{j}\left(\$531{,}642.86 \times \frac{\boldsymbol{n_i}}{110.213}\right)(\mathbf{1}+\mathbf{M}) + \left(\$1{,}913{,}914.29\frac{\boldsymbol{n_i}}{110.213}\right)(\mathbf{1}+\mathbf{M}).$$

[23] Rolling forward unclaimed funds from prior years may lower this total value.

Table 6.1.3-1. Calculation Subcomponents for Construction and Decommissioning

Project Status	Base Annual Average Fishing Revenue Exposed to the Wind Farm Area[1]	Shoreside Support Services Multiplier[2]	Exposure Ratio	Adjusted Base Annual Average Fishing Revenue Exposed to the Wind Farm Area	Reserve Requirements
Construction	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	M	1	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)(1 + \mathrm{M})$
Decommissioning[3]	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	M	1	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	

Notes:

[1] Inflation-adjusted revenues are derived from Table B-24 (Appendix B, page B-46) of the New England Wind Project Final EIS. The inflation-adjusted base equation is:

$$\frac{\boldsymbol{Total\ 14-year\ Revenue}}{\mathbf{14}} \times \frac{n_i}{110.213}.$$

[2] The Lessee's calculations of the Impacts to Shoreside Businesses Multiplier may use BOEM's draft *Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585* or future versions, but BOEM must, in all events, review the calculations.

[3] Decommissioning funds may be required pending BSEE's approval of Lessee's decommissioning application. If Construction is expected to last *k* years and Decommissioning *j* years, the Lessee must calculate the reserve requirements as follows:

$$\boldsymbol{k}\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)(\mathbf{1} + \mathbf{M}) + \boldsymbol{j}\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)(\mathbf{1} + \mathbf{M}).$$

Table 6.1.3-2. Calculation Subcomponents by Operating Year

Project Status	Base Annual Average Fishing Revenue Exposed to the Wind Farm Area[1]	Exposure Ratio	Adjusted Base Annual Average Fishing Revenue Exposed to the Wind Farm Area	Shoreside Support Services Multiplier[2]	Reserve Requirements
Operating Year 1	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	1	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	M	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)(1+\mathrm{M})$
Operating Year 2	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	0.8	$\left(\$425{,}314.29 \times \frac{n_i}{110.213}\right)$	M	$\left(\$425{,}314.29 \times \frac{n_i}{110.213}\right)(1+\mathrm{M})$
Operating Year 3	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	0.7	$\left(\$372{,}150.00 \times \frac{n_i}{110.213}\right)$	M	$\left(\$372{,}150.00 \times \frac{n_i}{110.213}\right)(1+\mathrm{M})$
Operating Year 4	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	0.6	$\left(\$318{,}985.71 \times \frac{n_i}{110.213}\right)$	M	$\left(\$318{,}985.71 \times \frac{n_i}{110.213}\right)(1+\mathrm{M})$
Operating Year 5	$\left(\$531{,}642.86 \times \frac{n_i}{110.213}\right)$	0.5	$\left(\$265{,}821.43 \times \frac{n_i}{110.213}\right)$	M	$\left(\$265{,}821.43 \times \frac{n_i}{110.213}\right)(1+\mathrm{M})$
Operating Total[3]	-	-	$\left(\$1{,}913{,}914.29 \times \frac{n_i}{110.213}\right)$	-	$\left(\$1{,}913{,}914.29 \times \frac{n_i}{110.213}\right)(1+M)$

Notes:

[1] Inflation-adjusted revenues are derived from Table B-24 (Appendix B, page B-46) of the New England Wind Project Final EIS. The inflation-adjusted base equation is:

$$\left(\frac{\boldsymbol{Total\ 14-year\ Revenue}}{\mathbf{14}} \times \frac{n_i}{110.213}\right)$$

[2] The Lessee's calculations of the Impacts to Shoreside Businesses Multiplier may use BOEM's draft *Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585* or future versions, but BOEM must, in all events, review the calculations.

[3] Rolling forward unclaimed funds from prior years may lower this total value.

6.1.4 Reporting. By January 31 of each year, the Lessee must submit to BOEM and BSEE an annual report demonstrating implementation of the Direct Compensation Program. The report must include the following: the Fund charter, including the governance structure, audit and public reporting procedures; documentation regarding the funding account, including the dollar amount, establishment date, financial institution, and owner of the account; and the standards used for paying compensatory mitigation for direct impacts to commercial and for-hire fishers and related shoreside businesses resulting from all phases of the Project development on the Lease Area (post-ROD pre-construction, construction, operation, and decommissioning); and the number of claims processed, approved and denied. The Lessee must publicly report an annual audit. Where there is a compensation agreement between a state and the Lessee, the Lessee must submit to BOEM and BSEE verification that any agreed-upon compensatory fisheries mitigation fund is established and funded.

6.1.5 Notification. The Lessee must notify BOEM and BSEE of any compensation and mitigation fund agreements into which the state and the lessee have entered. Specifically, the Lessee has entered into establishment and funding of the Compensatory Mitigation Fund, Massachusetts Innovation Fund, and the Rhode Island Future Viability Trust with the Commonwealth of Massachusetts and State of Rhode Island to provide appropriate compensation measures for fisheries resources and fishing industry uses impacted by the authorized Project. The Lessee must request that the Administrator(s) of the direct compensation program(s) listed above, and any others established for other states, notify BOEM when the direct compensation program(s) has been established and is processing claims. Notification can be accomplished by the Administrator(s) transmitting to BOEM an annual financial statement of the direct compensation program(s). The Administrator(s) must submit the required notification by January 31 of each year, beginning on the second anniversary of the Project's Commercial Operations Date as defined by Addendum "B" of the Lease. The notification must be signed by the Administrator(s).

6.2 Fisheries Gear Loss Compensation. The Lessee must maintain throughout the life of the Project, a fisheries gear loss claims procedure to implement the financial compensation policy proposed by the Lessee in Appendix III-E of the COP, Fisheries Communication Plan. The fisheries gear loss claims procedure must be available to all fishermen impacted by Project activities or infrastructure, regardless of homeport.

6.3 Federal Survey Mitigation Program. There are 14 NMFS scientific surveys that are impacted by overlap with wind energy development in the northeast region. Ten of these surveys overlap with the Project. Consistent with NMFS and BOEM survey mitigation strategy actions 1.3.1, 1.3.2, 2.1.1, and 2.1.2 in the NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region,[24] within 120 days of

[24] Hare, J.A., Blythe, B.J., Ford, K.H., Godfrey-McKee, S., Hooker, B.R., Jensen, B.M., Lipsky, A., Nachman, C., Pfeiffer, L., Rasser, M. and Renshaw, K., 2022. NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region. NOAA Technical Memorandum 292. Woods Hole, MA. 33 pp.

COP approval, the Lessee must submit to BOEM a survey mitigation agreement between NMFS and the Lessee. The survey mitigation agreement must describe how the Lessee will mitigate the Project impacts on the ten NMFS surveys. The Lessee must conduct activities in accordance with such agreement. If the Lessee and NMFS fail to reach a survey mitigation agreement, then the Lessee must submit a Survey Mitigation Plan to BOEM and NMFS that is consistent with the mitigation activities, actions, and procedures described in the content for the survey mitigation agreement (see Sections 6.3.1 and 6.3.2 below), within 180 days of COP approval. BOEM will review the Survey Mitigation Plan in consultation with NMFS Northeast Fisheries Science Center (NEFSC). The Lessee must resolve comments to BOEM's satisfaction and must conduct activities in accordance with the plan.

6.3.1 As soon as reasonably practicable, but no later than 30 days after the issuance of the Project's COP approval, the Lessee must initiate coordination with NMFS NEFSC at nefsc.survey.mitig@noaa.gov to develop the survey mitigation agreement described above. Mitigation activities specified under the agreement must be designed to mitigate the Project impacts on the following NMFS NEFSC surveys: (a) Spring Multi-species Bottom Trawl survey; (b) Autumn Multi-species Bottom Trawl survey; (c) Ecosystem Monitoring survey; (d) Aerial marine mammal and sea turtle survey; (e) Shipboard marine mammal and sea turtle survey; (f) ocean quahog survey; (g) Atlantic sea scallop survey; (h) Seal survey; (i) NARW survey; and (j) Sea Turtle Ecology survey. At a minimum, the survey mitigation agreement must describe actions and the means to address impacts on the affected surveys due to the preclusion of sampling platforms and impacts on statistical designs. NMFS has determined that the project area is a discrete stratum for surveys that use a random stratified design. This agreement may also consider other anticipated Project impacts on NMFS surveys, such as changes in habitat and increased operational costs due to loss of sampling efficiencies.

6.3.2 The survey mitigation agreement must identify activities that will result in the generation of data equivalent to data generated by NMFS's affected surveys for the duration of the Project. The survey mitigation agreement must describe the implementation procedures by which the Lessee will work with NEFSC to generate, share, and manage the data required by NEFSC for each of the surveys impacted by the Project, as mutually agreed upon between the Lessee and NMFS NEFSC. The survey mitigation agreement must also describe the Lessee's participation in the NMFS NEFSC Northeast Survey Mitigation Program to support activities that address regional-level impacts for the surveys listed above. The agreement must include provisions that provide criteria for changing mitigation activities over time, or timeframes for review and reconsideration of the agreement, based on updated information, or both.

7 CULTURAL AND VISUAL RESOURCE CONDITIONS

7.1 Section 106 MOA Conditions.

7.1.1 No Impact Without Approval. The Lessee may not knowingly impact a potential archaeological resource without BOEM's and BSEE's prior concurrence. If a possible impact to a potential archaeological resource occurs, the Lessee must immediately halt operations; report the incident within 24 hours to BOEM and BSEE; and provide a written report within 72 hours to BOEM and BSEE.

7.1.2 Reporting. The Lessee must submit all monitoring, reporting (annual, immediate, or post-discovery), and survey requirements related to cultural resources to BOEM and BSEE (via TIMSWeb with a notification email sent to env-compliance-arc@bsee.gov).

7.1.3 Avoidance of Known and Potential Shipwrecks, Debris Fields, and Ancient Submerged Landform Features. The Lessee must avoid known and potential shipwrecks, potentially significant debris fields, and ASLFs as described below. The Lessee must identify avoidance requirements on proposed anchoring plats, as-placed plats, and drawings associated with seabed disturbances (e.g., relevant FDR/FIR documents for export cables, inter-array cables, WTGs, etc.). If the Lessee determines that avoidance is not possible, the Lessee must notify BOEM and BSEE prior to disturbing the seabed in the excluded area. In such instances, BOEM will notify the Lessee of any additional requirements, which may include additional measures to resolve adverse effects. If any vessel conducting work on behalf of the Lessee or any other activity associated with the planning, construction, operation, or decommissioning disturbs the seabed within the avoidance areas noted below, the Lessee must submit an incident report to BOEM and BSEE within 24 hours.

7.1.4 Avoidance of Known Shipwrecks or Sunken Craft Sites and Potentially Significant Debris Fields. The Lessee must avoid eight potential submerged cultural resources and potentially significant debris fields identified during marine archaeological surveys. Targets PSW-01, PSW-02, and PSW-03 in the Southern Wind Development Area (SWDA) must be avoided by a 50-m radius buffer from the extent of the site or magnetic field. Targets PSW-04 and PSW-05 must be avoided by a 50 m radius buffer from the sonar target boundary. Target PSW-06 in the offshore export cable corridor (OECC) must be avoided by a 100 m radius buffer from the sonar target boundary. Targets PSW-07 and PSW-08 in the South Coast Variant (SCV), if used, must be avoided by a 60-m radius buffer from the sonar target boundary. The Lessee must identify avoidance stipulations and requirements on proposed anchoring plots, as-placed plats, and drawings associated with seafloor disturbances (e.g., relevant FDR/FIR documents for export cables, inter-array cables, WTGs, etc.).

7.1.5 Avoidance of Ancient Submerged Landform Features. The Lessee identified 51 ASLFs in the project APE (COP Volume II-D). The Lessee must avoid 2 of the

ASLFs (i.e., SAL-04 and SAL-05). No additional avoidance buffer is required for these ASLFs because they are located below the proposed vertical APE and outside the horizontal extents of the WTG work zones. The Lessee must identify avoidance stipulations and requirements on proposed anchoring plots, as-placed plats, and drawings associated with seafloor disturbances (e.g., relevant FDR and FIR documents for export cables, inter-array cables, WTG, etc.). The remaining 49 ASLFs within the Lease Area (Targets SAL-06 through SAL-19 in the SWDA; Channel Groups 8-30 [non-sequential] in the OECC; Channel Groups 18, 19, and 20 in the Western Muskeget Variant; and SCV-OECC-SAL1 through SCV-OECC-SAL17 in the SCV) cannot be avoided and will be affected by the Proposed Action.

7.1.6 Implementation of Mitigation Measures to Resolve Adverse Effects to ASLFs. The Lessee must mitigate adverse effects to 49 ASLFs (Targets SAL-06 through SAL-19 in the SWDA; Channel Groups 8-30 [non-sequential] in the OECC; Channel Groups 18, 19, and 20 in the Western Muskeget Variant; and SCV-OECC-SAL1 through SCV-OECC-SAL17 in the SCV) as identified in the Marine Archaeological Resource Assessment (COP, Volume II-D) that remain in the Area of Potential Effects (APE) and that cannot be avoided. These mitigation measures include the Post-construction Geoarchaeological Assessment, ASLF Post-construction Seafloor Assessment, and Tribal Focused Mitigation comprised of detailed presentations, digital database and mapping, and training in GIS. The Lessee must work with Tribal Nations to provide them an opportunity to participate as monitors during the investigation and provide reasonable compensation for participation in the implementation of the measures. The Lessee must execute all aspects of this condition, consistent with the Section 106 MOA (Stipulation IV.A; Attachment 14, New England Wind Mitigation Funding Options; Attachment 4, Historic Property Treatment Plan for Ancient Submerged Landforms and Features).

7.1.7 Minimization Measures within the Terrestrial Area of Potential Effects. The Lessee must minimize adverse effects by primarily siting the Onshore Export Cable Route (OECR) and grid interconnection cable routes within existing roadway and/or public utility rights-of-way unless infeasible or impracticable to do so. In coordination with Tribal Nations, the Lessee must conduct archaeological monitoring of construction activities in the areas of moderate or high archaeological sensitivity where intensive archaeological testing has not occurred in the Phase 1 terrestrial APE. In coordination with Tribal Nations, the Lessee must conduct archaeological monitoring of construction activities within the staging areas required for the horizontal directional drilling in the landfall area and during installation of OECR and other components (i.e., duct banks, splice vaults) within the identified zone of moderate and high archaeological sensitivity where intensive archaeological testing has not occurred in the Phase 2 terrestrial APE. The Lessee must execute all aspects of this condition of COP approval consistent with the Section 106 MOA (Stipulation III.B).

7.1.8 Apply Paint Color No Lighter than RAL (Reichs-Ausschuß für Lieferbedingungen und Gütesicherung) 9010 Pure White and No Darker than RAL 7035 Light Grey to the WTGs. The Lessee must color the WTGs an off white/grey color (no lighter than RAL 9010 Pure White and no darker than RAL 7035 Light Grey) prior to installation. The Lessee must confirm the planned paint color as part of the FDR and confirm the WTG was painted consistent with this condition as part of the final FIR.

7.1.9 Additional Offshore Minimization Measures. The Lessee must use uniform WTG design, speed, height, and rotor diameter to reduce visual contrast and decrease visual clutter. Uniform WTG spacing of 1 nmi by 1 nmi in the north-to-south and east-to-west direction will be used to decrease visual clutter. The Lessee must equip all WTGs and ESPs with ADLS to reduce the duration of nighttime lighting. The WTGs and ESPs will be lit and marked in accordance with FAA and USCG lighting standards to reduce light intrusion.

7.1.10 Implementation of Mitigation Measures to Resolve Visual Adverse Effects to Historic Properties. The Lessee must fund mitigation measures consistent with Section 106 MOA, Attachment 14, New England Wind Mitigation Funding Options, to resolve the adverse effects to the following 6 historic properties: Gay Head Lighthouse, Edwin Vanderhoop Homestead (Aquinnah Cultural Center), Gay Head-Aquinnah Shops Area, Chappaquiddick Island Traditional Cultural Property (TCP), Moshup's Bridge and Vineyard Sound TCP, and Nantucket Sound TCP.

7.1.11 The Lessee must execute all aspects of the resolution of visual adverse effects to historic properties consistent with the Section 106 MOA (Stipulation IV.B; Attachment 14, New England Wind Mitigation Funding Options; Attachment 5, Historic Property Treatment Plan for the Edwin Vanderhoop Homestead and Gay Head – Aquinnah Shops Area; Attachment 6, Historic Property Treatment Plan for Chappaquiddick Island TCP; Attachment 7, Historic Property Treatment Plan for Gay Head Lighthouse; Attachment 8, Historic Property Treatment Plan for Vineyard Sound and Moshup's Bridge TCP; Attachment 9, Historic Property Treatment Plan for Nantucket Sound TCP).

7.1.12 The Lessee must conduct phased identification to identify historic properties, assess effects, and resolve adverse effects within selected areas of the terrestrial APE in Massachusetts, the SCV (if selected), and the Phase 2 Old Falmouth Road onshore substation (if selected). The phased identification and evaluation of historic properties will occur after publication of the Final EIS and ROD consistent with Stipulation V and Attachment 10 of the Section 106 MOA. BOEM will use the MOA to ensure potential historic properties are identified, effects assessed, and adverse effects are resolved prior to construction on the OCS lease; review the sufficiency of the technical reports that address the identification of historic properties and sites of religious and cultural significance and include an evaluation of effects applying the criteria of adverse effect; and consult on the post-ROD finding of effects.

7.1.13 Annual Monitoring and Reporting on the Section 106 MOA. By July 31 of each calendar year, the Lessee must submit for BOEM's review a summary report detailing work undertaken pursuant to the Section 106 MOA during the preceding year. The Lessee must address any BOEM comments, and, after BOEM's review and agreement, the Lessee must share the summary report with all participating consulting parties identified in Attachment 2 of the Section 106 MOA. The report must include a description of how the stipulations relating to avoidance and minimization measures (Section 106 MOA Stipulations II and III) were implemented; any scheduling changes proposed; any problems encountered; and any disputes and objections received in BOEM's efforts to carry out the terms of the Section 106 MOA. The Lessee may satisfy this reporting requirement by providing the relevant portions of the Annual Certification required under 30 CFR § 285.633.

7.1.14 Implementation of Post-Review Discovery Plans. If properties are discovered that may be historically significant or unanticipated effects on historic properties are found, the Lessee must implement the Post-Review Discovery Plans found in Section 106 MOA Attachment 11, New England Wind Terrestrial Unanticipated Discovery Plan, and Attachment 12, New England Wind Unanticipated Discoveries Plan for Submerged Archaeological Resources.

7.1.15 All Post-Review Discoveries. In the event of a post-review discovery of a historic property or unanticipated effects to a historic property prior to or during construction, operation, maintenance, or decommissioning of the Project, the Lessee must implement the following actions:

7.1.15.1 Immediately halt all ground- or seabed-disturbing activities within the area of discovery while considering whether stabilization and further protections are warranted to keep the discovered resource from further degradation and impact.

7.1.15.2 As soon as practicable and no later than 72 hours after the discovery, the Lessee must notify BOEM and BSEE (at env-compliance-arch@bsee.gov and via TIMSWeb) with a written report, describing the discovery in detail, including a narrative description of the manner of discovery (e.g., date, time, heading, weather, information from logs); a narrative description of the potential resource, including measurements; images that may have been captured of the potential resource; portions of raw and processed datasets relevant to the discovery area; and any other information considered by the Lessee to be relevant to DOI's understanding of the potential resource. BOEM and BSEE may request additional information and/or request revisions to the report.

7.1.15.3 Keep the location of the discovery confidential and take no action that may adversely affect the potential resource until BOEM has made an evaluation and instructs the Lessee on how to proceed.

7.1.15.4 Conduct any additional investigations and submit documentation as directed by BOEM to determine if the resource is eligible for listing in the National Register of Historic Places (NRHP) (30 CFR § 585.702(b)). The Lessee must satisfy this requirement only if (1) the site has been impacted by the Lessee's Project activities; and/or (2) impacts to the site from the Project activities cannot be avoided. If investigations indicate that the resource is potentially eligible for listing in the NRHP, BOEM, and BSEE with the assistance of the Lessee, will work with the other relevant signatories and consulting parties to this MOA who have a demonstrated interest in the affected historic property on the further avoidance, minimization, or mitigation of adverse effects. If there is any evidence that the discovery is from an indigenous society or appears to be a burial site, the Lessee must contact the Tribal Nations as identified in the notification lists included in the post-review discovery plans within 72 hours of the discovery with details of what is known about the discovery and consult with the Tribal Nations pursuant to the post-review discovery plan.

7.1.15.5 If BOEM or BSEE incurs costs in addressing the discovery, under Section 110(g) of the NHPA, BOEM, and BSEE may charge the Lessee reasonable costs for carrying out preservation responsibilities under OCSLA (30 CFR § 585.702(c)-(d)).

7.1.16 Emergency Situations and Section 106 Consultation. In the event of an emergency or disaster that is declared by the President or the Governor of Massachusetts, which represents an imminent threat to public health or safety or creates a hazardous condition due to impacts from the Project's infrastructure damaged during the emergency and affecting historic properties in the APEs, the Lessee must immediately notify BOEM. BOEM, with the assistance of the Lessee, will notify the consulting federally recognized Tribal Nations, the MA SHPO, and the ACHP, of the condition that has initiated the situation and the measures taken to respond to the emergency or hazardous condition in accordance with the Section 106 MOA. BOEM will make this notification as soon as reasonably possible, but no later than 48 hours from when BOEM becomes aware of the emergency or disaster. Should the consulting federally recognized Tribal Nations, MA SHPO, or the ACHP desire to provide technical assistance to BOEM, they will submit comments within 7 days from notification if the nature of the emergency or hazardous condition allows for such coordination.

7.2 Other Visual and Cultural Conditions.

7.2.1 PAM Placement Review. The Lessee may only place PAM systems in locations where an analysis of the results of geophysical surveys has been completed. This analysis must include a determination by a Qualified Marine Archaeologist (QMA) as to whether any potential archaeological resources are present in the

area. This analysis may have been performed already as part of the Lessee's submission of archaeological resources reports in support of its approved COP. Except as allowed by BOEM under Stipulation 4.2.6 of Addendum C of the Lease and Section 7.1.1 above, the PAM placement activities must avoid potential archaeological resources by a minimum of 100 m (328 ft), and the avoidance distance must be calculated from the maximum discernible extent of the archaeological resource. As-placed PAM system plats must be submitted to BSEE within 90 days of placement.

7.2.1.1 If PAM placement activities impact potential historic properties, the Lessee must take the actions described in Section 7.1.15.

7.2.1.2 If PAM placement activities impact potential historic properties identified in the archaeological surveys without BOEM's prior authorization, the Lessee and the QMA who prepared the archaeological resources report must provide a statement documenting the extent of these impacts. This statement must be made to BOEM and BSEE consistent with Stipulation 4.2.7 of Addendum C of the Lease and Section 7.1.15, above. BOEM may require the Lessee to implement additional mitigation measures as appropriate based on a review of the results and supporting information.

7.2.2 Scenic and Visual Impact Monitoring Plan. In coordination with BOEM, the Lessee must prepare and implement a scenic and visual resource monitoring plan that monitors and compares the visual effects of the Project during construction and operations and maintenance (daytime and nighttime) to the findings in the COP Visual Impact Assessment and verifies the accuracy of the visual simulations (photo and video). The monitoring plan must include monitoring and documenting the meteorological influences on actual WTG visibility over a consecutive 3-year period, starting when the Project's final WTG is commissioned, from selected onshore key observation points, as determined by BOEM and the Lessee. In addition, the Lessee must include monitoring the operation of the ADLS in the monitoring plan. The Lessee must monitor the frequency that the ADLS is operative, documenting when (dates and time) the aviation warning lights are in the on position and the duration of each event. The Lessee must include details for monitoring and reporting procedures in the plan.

8 FEDERALLY RECOGNIZED TRIBAL NATIONS CONDITIONS

8.1 Environmental Data Sharing with Federally Recognized Tribal Nations. No later than 90 days after COP approval, the Lessee must make a request to both the BSEE Tribal Liaison Officer and the Eastern Seaboard Tribal Liaison at the same email address, tribalengagement@bsee.gov, to coordinate with federally recognized Tribal Nations with geographic, cultural, or ancestral ties to the project area (hereinafter "interested Tribal Nation"), including, but not limited to the: Delaware Nation, Delaware Tribe of Indians, Mashantucket (Western) Pequot Tribal Nation, Mashpee Wampanoag Tribe of

Massachusetts, Mohegan Tribe of Indians of Connecticut, Narragansett Indian Tribe, The Shinnecock Indian Nation, and Wampanoag Tribe of Gay Head (Aquinnah). The purpose of this coordination is to (1) solicit Tribal Nation interest in participating as an environmental liaison during construction and/or maintenance activities, so the environmental liaison can safely monitor, and participate in postmortem examinations of mortality events, as a result of these activities; and (2) provide open access to the following: reports of NARW sightings; injured or dead protected species reporting (sea turtles, NARW, sturgeon); NARW PAM monitoring; PSO reports (e.g., pile-driving reports); pile-driving schedules and schedule changes; and any interim and final SFV reports, and their associated data. If an interested Tribal Nation expresses interest in participating as an environmental liaison, the Lessee must provide the interested Tribal Nation information regarding training(s), certification(s), and safety measures, required for participation. Environmental liaisons must be invited to monitor/participate from a safe platform, such as a vessel. The Lessee must provide to the interested Tribal Nation, in a manner suitable to the Tribal Nation, access to all ESA reports (e.g., the NMFS BiOp reports), Post Review Discovery Plans, and other documents listed in this paragraph no later than 30 days after the information becomes available. The Lessee may redact or withhold a document(s) listed in this paragraph when it includes information that the Lessee would not generally make publicly available and the disclosure of which the Lessee considers to be contrary to the Lessee's commercial interests. The Lessee must submit a justification for the request to redact/withhold in writing to the BSEE Tribal Liaison Officer and the Eastern Seaboard Tribal Liaison at tribalengagement@bsee.gov. Only upon approval of such request may the document be redacted/withheld.

9 AIR QUALITY CONDITIONS

9.1 Reporting. The Lessee must submit all monitoring, reporting, and survey requirements related to air quality to BOEM, to BSEE via TIMSWeb with a notification email sent to renewableenergyoperations@bsee.gov, and the EPA. The Lessee must confirm the relevant point of contact prior to reporting and confirmation of reporting receipt.

9.2 Sulfur Hexafluoride (SF_6) Leak Rate Monitoring and Detection. The Lessee must follow International Electrotechnical Commission and requirements in EPA's OCS air permits for SF_6 leak detection and monitoring requirements. The Lessee must also follow manufacturer recommendations for service and repair of the affected breakers and switches and conduct visual inspections of the switchgear and monitoring equipment according to manufacturer recommendations.

9.2.1 The Lessee must use enclosed-pressure SF_6 circuit breakers (or switches) and create alarms based on the pressure readings in the breakers and switches, so leaks can be detected when substantial sulfur hexafluoride leakage occurs. Upon a detectable pressure drop that is greater than 10 percent of the original pressure (accounting for ambient air conditions), the Lessee must execute a plan of action within 30 days or within EPA permit requirements (whichever is earlier) of the leakage event to correct the situation. The Lessee must, within 14 days of such correction, provide to BOEM details concerning the corrective measures that were required to fix the compliance deficiency. If an event requires the removal

of SF_6, the affected major component(s) must be replaced with new component(s).

9.2.2 The Lessee must report to BOEM and BSEE any detectable pressure drop that is greater than 10 percent as soon as practicable and no later than 72 hours after the discovery and provide an estimated timeframe for corrective maintenance or replacement.

9.2.3 The Lessee must provide a summary in the Lessee's Annual Certification under 30 CFR § 285.633 of observed SF_6 leak rates in the past year and a summary of any leaks greater than 0.1 percent by weight (for the 13.8 kV switches) and 0.5 percent by weight (for all other switches) and the associated corrective maintenance or repair actions taken and their timeframe from detection to completion.

9.2.4 National Ambient Air Quality Standards and Prevention of Significant Deterioration (PSD) Class I and Class II Air Quality Increments. The Lessee is required under the Clean Air Act to obtain a permit for OCS sources and as a consequence must demonstrate that the air quality impacts from emissions of both the construction, and operation and maintenance phases, must be within the National Ambient Air Quality Standards and PSD of Air Quality Increments. This demonstration must be submitted and approved by EPA prior to the issuance of the draft OCS Air Quality Permit. If any requirement in Section 9 of these conditions is inconsistent with the terms of EPA's permit, the language in EPA's permit will prevail.

ATTACHMENT 1: LIST OF ACRONYMS

ABPCMP	Avian and Bat Post-Construction Monitoring Plan
AC	Advisory Circular
ACHP	Advisory Council on Historic Preservation
ADLS	Aircraft Detection Lighting System
ALARP	As Low as Reasonably Practical
APE	Area of Potential Effects
ASLF	Ancient Submerged Landform Feature
BHMP	Benthic Habitat Monitoring Plan
BiOp	Biological Opinion
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CBRA	Cable Burial Risk Assessment
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
CVA	Certified Verification Agents
CZMA	Coastal Zone Management Act
dB	decibels
DMA	Dynamic Management Area
DoD	Department of Defense
DOFS	Distributed Optical Fiber Sensing
DOI	Department of the Interior
DON	Department of the Navy
DTS	Desktop Study
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
ESP	electrical service platform
FAA	Federal Aviation Administration
FDR	Facility Design Report
FIR	Fabrication and Installation Report
ft	feet
GARFO	Greater Atlantic Regional Fisheries Office
GDP	Gross Domestic Product
GIS	Geographic Information System
g/m^2	grams per meter squared
HESD	Habitat and Ecosystem Services Division
HF	high frequency
HRG	high resolution geophysical
IC	Incident Commander
ICS	

IFC	issued for construction
IMT	Incident Management Team
IOOS®	U.S. Integrated Ocean Observing System
ITA	Incidental Take Authorization(s)
kHz	kilohertz
km	kilometer(s)
kts	knots
kV	kilovolt(s)
Lease	commercial lease OCS-A 0534
LERA	Least Expensive Radar
LNM	Local Notice(s) to Mariners
LOA	Letter of Agreement
m	meter(s)
MA	Commonwealth of Massachusetts
MEC	Munitions and Explosive of Concern
MMPA	Marine Mammal Protection Act
MOA	Memorandum of Agreement
Motus	Motus Wildlife Tracking System
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NARW	North Atlantic right whale
NAS	Naval Air Station or Noise Attenuation System
NCEI	National Centers for Environmental Information
NEFSC	Northeast Fisheries Science Center
NHPA	National Historical Preservation Act
nmi	nautical miles
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NORAD	North American Aerospace Defense Command
NRHP	National Register of Historic Places
NY	State of New York
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
OECC	offshore export cable corridor
OECR	Onshore Export Cable Route
OEM	Original Equipment Manufacturer
OPR	Office of Protected Resources
OSPD	Oil Spill Preparedness Division
OSRO	Oil Spill Removal Organization
OSRP	Oil Spill Response Plan
PAM	Passive Acoustic Monitoring or Passive Acoustic Monitor(s)
PATON	Private Aids to Navigation
POWERON	Partnership for an Offshore Wind Energy Regional Observation Network
PPP	Piping Plover Protection

Project	New England Wind Offshore Commercial Wind and Export Cable Project
PSD	Prevention of Significant Deterioration
PSO	Protected Species Observer
QA/QC	quality assurance/quality control
QI	Qualified Individual
QMA	Qualified Marine Archaeologist
RAL	Reichs-Ausschuß für Lieferbedingungen und Gütesicherung
RAM	Radar Adverse Impact Management
RI	State of Rhode Island
RPM	reasonable and prudent measure
ROD	Record of Decision
RWSC	Regional Wildlife Science Collaborative
SCV	South Coast Variant
SF_6	Sulfur Hexafluoride
SFV	Sound Field Verification
SHPO	State Historic Preservation Officer
SMA	Seasonal Management Area
SMS	Safety Management System
SROT	Spill Response Operating Team
SWDA	Southern Wind Development Area
TCP	Traditional Cultural Property
TTS	temporary threshold shift
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USFFC	United States Fleet Forces Command
USFWS	United States Fish and Wildlife Service
UTC	Coordinated Universal Time
UXO	unexploded ordnance
VHF	Very High Frequency
WCD	worst-case discharge
WHOI	Woods Hole Oceanographic Institution
WTG	wind turbine generator

ATTACHMENT 2: RHODE ISLAND AND MASSACHUSETTS STRUCTURE LABELING PLOT

AK 20	AK 21	AK 22	AK 23	AK 24	AK 25	AK 26	AK 27	AK 28	AK 29	AK 30	AK 31	AK 32	AK 33	AK 34	AK 35	AK 36	AK 37	AK 38	AK 39	AK 40	AK 41	AK 42	AK 43
AL 20	AL 21	AL 22	AL 23	AL 24	AL 25	AL 26	AL 27	AL 28	AL 29	AL 30	AL 31	AL 32	AL 33	AL 34	AL 35	AL 36	AL 37	AL 38	AL 39	AL 40	AL 41	AL 42	AL 43
AM 20	AM 21	AM 22	AM 23	AM 24	AM 25	AM 26	AM 27	AM 28	AM 29	AM 30	AM 31	AM 32	AM 33	AM 34	AM 35	AM 36	AM 37	AM 38	AM 39	AM 40	AM 41	AM 42	AM 43
AN 20	AN 21	AN 22	AN 23	AN 24	AN 25	AN 26	AN 27	AN 28	AN 29	AN 30	AN 31	AN 32	AN 33	AN 34	AN 35	AN 36	AN 37	AN 38	AN 39	AN 40	AN 41	AN 42	AN 43
AP 20	AP 21	AP 22	AP 23	AP 24	AP 25	AP 26	AP 27	AP 28	AP 29	AP 30	AP 31	AP 32	AP 33	AP 34	AP 35	AP 36	AP 37	AP 38	AP 39	AP 40	AP 41	AP 42	AP 43
AQ 20	AQ 21	AQ 22	AQ 23	AQ 24	AQ 25	AQ 26	AQ 27	AQ 28	AQ 29	AQ 30	AQ 31	AQ 32	AQ 33	AQ 34	AQ 35	AQ 36	AQ 37	AQ 38	AQ 39	AQ 40	AQ 41	AQ 42	AQ 43
AR 20	AR 21	AR 22	AR 23	AR 24	AR 25	AR 26	AR 27	AR 28	AR 29	AR 30	AR 31	AR 32	AR 33	AR 34	AR 35	AR 36	AR 37	AR 38	AR 39	AR 40	AR 41	AR 42	AR 43
AS 20	AS 21	AS 22	AS 23	AS 24	AS 25	AS 26	AS 27	AS 28	AS 29	AS 30	AS 31	AS 32	AS 33	AS 34	AS 35	AS 36	AS 37	AS 38	AS 39	AS 40	AS 41	AS 42	AS 30
AT 20	AT 21	AT 22	AT 23	AT 24	AT 25	AT 26	AT 27	AT 28	AT 29	AT 30	AT 31	AT 32	AT 33	AT 34	AT 35	AT 36	AT 37	AT 38	AT 39	AT 40	AT 41	AT 42	AT 43
AU 20	AU 21	AU 22	AU 23	AU 24	AU 25	AU 26	AU 27	AU 28	AU 29	AU 30	AU 31	AU 32	AU 33	AU 34	AU 35	AU 36	AU 37	AU 38	AU 39	AU 40	AU 41	AU 42	AU 43
AV 20	AV 21	AV 22	AV 23	AV 24	AV 25	AV 26	AV 27	AV 28	AV 29	AV 30	AV 31	AV 32	AV 33	AV 34	AV 35	AV 36	AV 37	AV 38	AV 39	AV 40	AV 41	AV 42	AV 43
AW 20	AW 21	AW 22	AW 23	AW 24	AW 25	AW 26	AW 27	AW 28	AW 29	AW 30	AW 31	AW 32	AW 33	AW 34	AW 35	AW 36	AW 37	AW 38	AW 39	AW 40	AW 41	AW 42	AW 43
AX 20	AX 21	AX 22	AX 23	AX 24	AX 25	AX 26	AX 27	AX 28	AX 29	AX 30	AX 31	AX 32	AX 33	AX 34	AX 35	AX 36	AX 37	AX 38	AX 39	AX 40	AX 41	AX 42	AX 43
AY 20	AY 21	AY 22	AY 23	AY 24	AY 25	AY 26	AY 27	AY 28	AY 29	AY 30	AY 31	AY 32	AY 33	AY 34	AY 35	AY 36	AY 37	AY 38	AY 39	AY 40	AY 41	AY 42	AY 43
AZ 20	AZ 21	AZ 22	AZ 23	AZ 24	AZ 25	AZ 26	AZ 27	AZ 28	AZ 29	AZ 30	AZ 31	AZ 32	AZ 33	AZ 34	AZ 35	AZ 36	AZ 37	AZ 38	AZ 39	AZ 40	AZ 41	AZ 42	AZ 43
BA 20	BA 21	BA 22	BA 23	BA 24	BA 25	BA 26	BA 27	BA 28	BA 29	BA 30	BA 31	BA 32	BA 33	BA 34	BA 35	BA 36	BA 37	BA 38	BA 39	BA 40	BA 41	BA 42	BA 43
BB 20	BB 21	BB 22	BB 23	BB 24	BB 25	BB 26	BB 27	BB 28	BB 29	BB 30	BB 31	BB 32	BB 33	BB 34	BB 35	BB 36	BB 37	BB 38	BB 39	BB 40	BB 41	BB 42	BB 43
BC 20	BC 21	BC 22	BC 23	BC 24	BC 25	BC 26	BC 27	BC 28	BC 29	BC 30	BC 31	BC 32	BC 33	BC 34	BC 35	BC 36	BC 37	BC 38	BC 39	BC 40	BC 41	BC 42	BC 43
BD 20	BD 21	BD 22	BD 23	BD 24	BD 25	BD 26	BD 27	BD 28	BD 29	BD 30	BD 31	BD 32	BD 33	BD 34	BD 35	BD 36	BD 37	BD 38	BD 39	BD 40	BD 41	BD 42	BD 43
BE 20	BE 21	BE 22	BE 23	BE 24	BE 25	BE 26	BE 27	BE 28	BE 29	BE 30	BE 31	BE 32	BE 33	BE 34	BE 35	BE 36	BE 37	BE 38	BE 39	BE 40	BE 41	BE 42	BE 43
BF 20	BF 21	BF 22	BF 23	BF 24	BF 25	BF 26	BF 27	BF 28	BF 29	BF 30	BF 31	BF 32	BF 33	BF 34	BF 35	BF 36	BF 37	BF 38	BF 39	BF 40	BF 41	BF 42	BF 43
BG 20	BG 21	BG 22	BG 23	BG 24	BG 25	BG 26	BG 27	BG 28	BG 29	BG 30	BG 31	BG 32	BG 33	BG 34	BG 35	BG 36	BG 37	BG 38	BG 39	BG 40	BG 41	BG 42	BG 43
BH 20	BH 21	BH 22	BH 23	BH 24	BH 25	BH 26	BH 27	BH 28	BH 29	BH 30	BH 31	BH 32	BH 33	BH 34	BH 35	BH 36	BH 37	BH 38	BH 39	BH 40	BH 41	BH 42	BH 43
BJ 20	BJ 21	BJ 22	BJ 23	BJ 24	BJ 25	BJ 26	BJ 27	BJ 28	BJ 29	BJ 30	BJ 31	BJ 32	BJ 33	BJ 34	BJ 35	BJ 36	BJ 37	BJ 38	BJ 39	BJ 40	BJ 41	BJ 42	BJ 43
BK 20	BK 21	BK 22	BK 23	BK 24	BK 25	BK 26	BK 27	BK 28	BK 29	BK 30	BK 31	BK 32	BK 33	BK 34	BK 35	BK 36	BK 37	BK 38	BK 39	BK 40	BK 41	BK 42	BK 43
BL 20	BL 21	BL 22	BL 23	BL 24	BL 25	BL 26	BL 27	BL 28	BL 29	BL 30	BL 31	BL 32	BL 33	BL 34	BL 35	BL 36	BL 37	BL 38	BL 39	BL 40	BL 41	BL 42	BL 43

ATTACHMENT 2: RHODE ISLAND AND MASSACHUSETTS STRUCTURE LABELING PLOT (COORDINATES)

Lease Number	Lessee	Longitude	Latitude	Row	Column
OCS-A 0534	Park City Wind LLC	-70.48595048	41.13673366	AL	37
OCS-A 0534	Park City Wind LLC	-70.37321795	41.02135636	AT	42
OCS-A 0534	Park City Wind LLC	-70.59301855	41.0018452	AU	32
OCS-A 0534	Park City Wind LLC	-70.61503147	41.00153881	AU	31
OCS-A 0534	Park City Wind LLC	-70.63704405	41.00122822	AU	30
OCS-A 0534	Park City Wind LLC	-70.54860131	40.9857682	AV	34
OCS-A 0534	Park City Wind LLC	-70.57060936	40.98547039	AV	33
OCS-A 0534	Park City Wind LLC	-70.59261707	40.98516838	AV	32
OCS-A 0534	Park City Wind LLC	-70.61462444	40.98486217	AV	31
OCS-A 0534	Park City Wind LLC	-70.63663148	40.98455177	AV	30
OCS-A 0534	Park City Wind LLC	-70.65863817	40.98423716	AV	29
OCS-A 0534	Park City Wind LLC	-70.6806445	40.98391835	AV	28
OCS-A 0534	Park City Wind LLC	-70.52620841	40.96938442	AW	35
OCS-A 0534	Park City Wind LLC	-70.54821124	40.96909098	AW	34
OCS-A 0534	Park City Wind LLC	-70.57021375	40.96879335	AW	33
OCS-A 0534	Park City Wind LLC	-70.59221592	40.96849151	AW	32
OCS-A 0534	Park City Wind LLC	-70.61421776	40.96818548	AW	31
OCS-A 0534	Park City Wind LLC	-70.63621926	40.96787526	AW	30
OCS-A 0534	Park City Wind LLC	-70.65822041	40.96756083	AW	29
OCS-A 0534	Park City Wind LLC	-70.68022121	40.96724222	AW	28
OCS-A 0534	Park City Wind LLC	-70.50382658	40.95299605	AX	36
OCS-A 0534	Park City Wind LLC	-70.5258242	40.95270698	AX	35
OCS-A 0534	Park City Wind LLC	-70.5478215	40.95241371	AX	34
OCS-A 0534	Park City Wind LLC	-70.56981847	40.95211625	AX	33
OCS-A 0534	Park City Wind LLC	-70.59181511	40.95181459	AX	32
OCS-A 0534	Park City Wind LLC	-70.61381142	40.95150874	AX	31
OCS-A 0534	Park City Wind LLC	-70.63580738	40.9511987	AX	30
OCS-A 0534	Park City Wind LLC	-70.657803	40.95088446	AX	29
OCS-A 0534	Park City Wind LLC	-70.67979827	40.95056602	AX	28
OCS-A 0534	Park City Wind LLC	-70.70179318	40.9502434	AX	27
OCS-A 0534	Park City Wind LLC	-70.72378774	40.94991658	AX	26
OCS-A 0534	Park City Wind LLC	-70.50344822	40.93631839	AY	36

Lease Number	Lessee	Longitude	Latitude	Row	Column
OCS-A 0534	Park City Wind LLC	-70.52544031	40.93602948	AY	35
OCS-A 0534	Park City Wind LLC	-70.54743208	40.93573639	AY	34
OCS-A 0534	Park City Wind LLC	-70.56942352	40.9354391	AY	33
OCS-A 0534	Park City Wind LLC	-70.59141463	40.93513762	AY	32
OCS-A 0534	Park City Wind LLC	-70.61340541	40.93483195	AY	31
OCS-A 0534	Park City Wind LLC	-70.63539585	40.93452208	AY	30
OCS-A 0534	Park City Wind LLC	-70.65738594	40.93420803	AY	29
OCS-A 0534	Park City Wind LLC	-70.67937568	40.93388978	AY	28
OCS-A 0534	Park City Wind LLC	-70.70136507	40.93356734	AY	27
OCS-A 0534	Park City Wind LLC	-70.7233541	40.93324071	AY	26
OCS-A 0534	Park City Wind LLC	-70.52505674	40.91935194	AZ	35
OCS-A 0534	Park City Wind LLC	-70.54704299	40.91905901	AZ	34
OCS-A 0534	Park City Wind LLC	-70.56902891	40.9187619	AZ	33
OCS-A 0534	Park City Wind LLC	-70.59101449	40.9184606	AZ	32
OCS-A 0534	Park City Wind LLC	-70.61299975	40.9181551	AZ	31
OCS-A 0534	Park City Wind LLC	-70.63498466	40.91784542	AZ	30
OCS-A 0534	Park City Wind LLC	-70.65696923	40.91753155	AZ	29
OCS-A 0534	Park City Wind LLC	-70.67895345	40.91721349	AZ	28
OCS-A 0534	Park City Wind LLC	-70.70093732	40.91689124	AZ	27
OCS-A 0534	Park City Wind LLC	-70.72292082	40.9165648	AZ	26
OCS-A 0534	Park City Wind LLC	-70.74490397	40.91623417	AZ	25
OCS-A 0534	Park City Wind LLC	-70.76688675	40.91589935	AZ	24
OCS-A 0534	Park City Wind LLC	-70.52467349	40.90267434	BA	35
OCS-A 0534	Park City Wind LLC	-70.54665422	40.90238159	BA	34
OCS-A 0534	Park City Wind LLC	-70.56863462	40.90208465	BA	33
OCS-A 0534	Park City Wind LLC	-70.59061469	40.90178352	BA	32
OCS-A 0534	Park City Wind LLC	-70.61259443	40.90147821	BA	31
OCS-A 0534	Park City Wind LLC	-70.63457382	40.9011687	BA	30
OCS-A 0534	Park City Wind LLC	-70.65655287	40.90085501	BA	29
OCS-A 0534	Park City Wind LLC	-70.67853157	40.90053714	BA	28
OCS-A 0534	Park City Wind LLC	-70.70050992	40.90021508	BA	27
OCS-A 0534	Park City Wind LLC	-70.72248791	40.89988883	BA	26
OCS-A 0534	Park City Wind LLC	-70.74446554	40.89955839	BA	25

Lease Number	Lessee	Longitude	Latitude	Row	Column
OCS-A 0534	Park City Wind LLC	-70.7664428	40.89922377	BA	24
OCS-A 0534	Park City Wind LLC	-70.56824067	40.88540735	BB	33
OCS-A 0534	Park City Wind LLC	-70.59021522	40.88510639	BB	32
OCS-A 0534	Park City Wind LLC	-70.61218944	40.88480126	BB	31
OCS-A 0534	Park City Wind LLC	-70.63416332	40.88449194	BB	30
OCS-A 0534	Park City Wind LLC	-70.65613686	40.88417843	BB	29
OCS-A 0534	Park City Wind LLC	-70.67811005	40.88386074	BB	28
OCS-A 0534	Park City Wind LLC	-70.70008288	40.88353887	BB	27
OCS-A 0534	Park City Wind LLC	-70.72205536	40.88321281	BB	26
OCS-A 0534	Park City Wind LLC	-70.74402748	40.88288257	BB	25
OCS-A 0534	Park City Wind LLC	-70.76599923	40.88254814	BB	24
OCS-A 0534	Park City Wind LLC	-70.7879706	40.88220953	BB	23
OCS-A 0534	Park City Wind LLC	-70.56784704	40.86872999	BC	33
OCS-A 0534	Park City Wind LLC	-70.58981609	40.86842922	BC	32
OCS-A 0534	Park City Wind LLC	-70.6117848	40.86812426	BC	31
OCS-A 0534	Park City Wind LLC	-70.63375317	40.86781512	BC	30
OCS-A 0534	Park City Wind LLC	-70.6557212	40.86750179	BC	29
OCS-A 0534	Park City Wind LLC	-70.67768888	40.86718429	BC	28
OCS-A 0534	Park City Wind LLC	-70.6996562	40.8668626	BC	27
OCS-A 0534	Park City Wind LLC	-70.72162317	40.86653674	BC	26
OCS-A 0534	Park City Wind LLC	-70.74358978	40.86620669	BC	25
OCS-A 0534	Park City Wind LLC	-70.76555602	40.86587246	BC	24
OCS-A 0534	Park City Wind LLC	-70.78752189	40.86553405	BC	23
OCS-A 0534	Park City Wind LLC	-70.80948739	40.86519146	BC	22
OCS-A 0534	Park City Wind LLC	-70.61138049	40.8514472	BD	31
OCS-A 0534	Park City Wind LLC	-70.63334336	40.85113824	BD	30
OCS-A 0534	Park City Wind LLC	-70.65530588	40.8508251	BD	29
OCS-A 0534	Park City Wind LLC	-70.67726806	40.85050779	BD	28
OCS-A 0534	Park City Wind LLC	-70.69922988	40.85018629	BD	27
OCS-A 0534	Park City Wind LLC	-70.72119135	40.84986061	BD	26
OCS-A 0534	Park City Wind LLC	-70.74315245	40.84953076	BD	25
OCS-A 0534	Park City Wind LLC	-70.76511319	40.84919672	BD	24
OCS-A 0534	Park City Wind LLC	-70.78707356	40.84885851	BD	23

Lease Number	Lessee	Longitude	Latitude	Row	Column
OCS-A 0534	Park City Wind LLC	-70.80903355	40.84851612	BD	22
OCS-A 0534	Park City Wind LLC	-70.83099316	40.84816955	BD	21
OCS-A 0534	Park City Wind LLC	-70.61097653	40.8347701	BE	31
OCS-A 0534	Park City Wind LLC	-70.63293389	40.83446132	BE	30
OCS-A 0534	Park City Wind LLC	-70.65489092	40.83414836	BE	29

Appendix B. OCSLA Compliance Review of the Construction and Operations Plan for the New England Wind Farm and New England Wind Export Cable Project

United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT
WASHINGTON, DC 20240-0001

Information Memorandum

To: Elizabeth Klein
Director, Bureau of Ocean Energy Management

From: Karen Baker
Chief, Office of Renewable Energy Programs

KAREN BAKER Digitally signed by KAREN BAKER Date: 2024.03.29 08:54:49 -04'00'

Subject: Compliance Review of the Construction and Operations Plan for the New England Wind Project for Commercial Lease OCS-A 0534

1 SUMMARY

Subsection 8(p)(4) of the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. § 1337(p)(4), requires the Secretary of the Interior (Secretary) to approve activities in a manner that provides for 12 enumerated factors under subsection 8(p) of OCSLA. This memorandum documents the Bureau of Ocean Energy Management's (BOEM) consideration of the 12 factors enumerated in subsection 8(p)(4) of OCSLA (hereinafter "8(p)(4) factors"),[1] and BOEM's compliance review of the Construction and Operations Plan (COP)[2] for the New England Wind Project and New England Wind Offshore Export Cable Corridor (OECC) (hereinafter "Project")[3] on Commercial Lease OCS-A 0534.

BOEM has determined that the Project will comply with the Bureau's regulations and that the proposed activities will be carried out in a manner that provides for safety, protection of the environment, prevention of waste, and the other factors listed in subsection 8(p)(4) of OCSLA.

[1] *See* M-Opinion 37067, entitled, "Secretary's Duties under Subsection 8(p)(4) of the Outer Continental Shelf Lands Act When Authorizing Activities on the Outer Continental Shelf," which provides that subsection 8(p)(4) of OCSLA "does not require the Secretary to ensure that the goals are achieved to a particular degree, and she retains wide discretion to determine the appropriate balance between two or more goals that conflict or are otherwise in tension." Solicitors' M-Opinions are legal interpretations that are binding on DOI as a whole. Department of the Interior, Departmental Manual, 209 DM 3.1, 3.2A(11) (2020).

[2] New England Wind Construction and Operations Plan (July 2020), https://www.boem.gov/renewable-energy/state-activities/new-england-wind-ocs-0534-construction-and-operations-plan

[3] This memo considers the Project as modified by the preferred alternative in the Final Environmental Impact Statement. *See* Bureau of Ocean Energy Mgmt., New England Wind Final EIS, https://www.boem.gov/renewable-energy/state-activities/new-england-wind-final-eis [hereinafter Final EIS].

2 BACKGROUND AND PROJECT OVERVIEW

Subsection 8(p)(7) of OCSLA, as amended by the Energy Policy Act of 2005 (EPAct), directs the Department of the Interior (DOI), through BOEM, to provide for coordination and consultation with the Governor of any state or the executive of any local government that may be affected by a lease, easement, or right-of-way authorizing renewable energy activities on the Outer Continental Shelf (OCS). Efforts to consider whether to lease areas offshore Massachusetts and Rhode Island and assess the feasibility of allowing wind energy activities therein began in 2009. BOEM formed the Massachusetts Renewable Energy Task Force in 2009 to help fulfill its 8(p)(7) obligation in its consideration of potential leasing activities on the OCS offshore Massachusetts. The Task Force allowed for coordination among affected federal agencies and tribal, state, and local governments throughout the leasing process. The first Massachusetts Renewable Energy Task Force meeting was held on November 19, 2009; subsequent meetings were held on January 27, September 8, and December 10, 2010; May 2, June 3, June 7, and October 17, 2011; August 8, 2012; May 15, 2013; January 16, 2014; April 29, 2015; May 16, 2017; and April 24, 2018. The meetings held on December 10, 2010, May 2, 2011, June 3, 2011, August 8, 2012, May 16, 2017, and April 24, 2018, were joint meetings with the Rhode Island Renewable Energy Task Force. Fourteen meetings were held in total with the last meeting occurring on April 24, 2018.

2.1 Planning, Analysis, and Leasing

On December 29, 2010, BOEM issued a Request for Interest (RFI) in the *Federal Register* to assess whether there were parties interested in developing commercial wind facilities off the coast of Massachusetts beginning approximately 12 nautical miles (nm) south of Martha's Vineyard and Nantucket and extending approximately 31 nm seaward, south to the 60 meter depth contour, then east approximately 65 nm, then north approximately 31 nm.[4] The area is approximately 2,224 square nm and contains 321 whole OCS lease blocks as well as 163 partial blocks. This area was delineated in consultation with the Massachusetts Renewable Energy Task Force. Based on the responses received to the RFI, BOEM determined there to be competitive interest in the location identified and continued with the competitive leasing process.

On February 6, 2012, BOEM published a Call for Information and Nominations (Call) to seek additional nominations from entities interested in commercial wind energy leases within the Call Area offshore Massachusetts.[5] BOEM sought public input on the potential for wind development

[4] *See* Commercial Wind Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Massachusetts—Request for Interest, 75 Fed. Reg. 82,055 (Dec. 29, 2010), https://www.federalregister.gov/documents/2010/12/29/2010-32853/commercial-leasing-for-wind-power-on-the-outer-continental-shelf-ocs-offshore-massachusetts-request

[5] *See* Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts—Call for Information and Nominations, 77 Fed. Reg. 5820 (Feb. 6, 2012), https://www.federalregister.gov/documents/2012/02/06/2012-2645/commercial-leasing-for-wind-power-on-the-outer-continental-shelf-offshore-massachusetts-call-for

in the Call Area, including comments on site conditions, resources, and existing uses of the area that would be relevant to BOEM's wind energy development authorization process.[6]

BOEM also published a Notice of Intent (NOI) to prepare an Environmental Assessment (EA) on February 6, 2012.[7] The EA's purpose was to assess reasonably foreseeable impacts resulting from the site characterization activities (including geophysical, geotechnical, archeological, and biological surveys) and site assessment activities (e.g., the installation of a meteorological tower and/or buoys) within the proposed area. Through the NOI, BOEM sought public input on the environmental and socioeconomic issues to be considered, as well as alternatives and mitigation measures.

On May 30, 2012, BOEM designated a Wind Energy Area (WEA), consisting of 132 OCS blocks and 19 sub-blocks, approximately 12 nm south of Martha's Vineyard and 13 nm southwest of Nantucket.[8] BOEM received several comments as a result of the WEA designation, and decided to exclude certain areas identified as important habitats that could be adversely affected if ultimately developed with the installation of wind turbine generators. Specifically, BOEM excluded an area of high sea duck concentration, as well as an area of high value fisheries to reduce conflict with commercial and recreational fishing activities.

On June 18, 2014, BOEM published a Proposed Sale Notice (PSN) for an area located offshore Massachusetts. [9] On November 26, 2014, BOEM announced the publication of the Final Sale Notice (FSN) for a lease sale offshore Massachusetts and the availability of a revised EA for site assessment and site characterization activities in the area.[10] The WEA was auctioned as four leases (OCS-A 0500, OCS-A 0501, OCS-A 0502, OCS-A 0503). Lease OCS-A 0501 covered approximately 166,886 acres (ac) (32,112 hectares (ha)) and is located approximately 14 statute miles (mi) (12 nm, 22 kilometers (km)) south of Martha's Vineyard, Massachusetts and 14 mi (12 nm, 22 km) southwest of Nantucket, Massachusetts.

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[6] https://www.regulations.gov/document/BOEM-2011-0097-0001

[7] *See* Commercial Wind Leasing and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts, 77 Fed. Reg. 5830 (Feb. 6, 2012), https://www.federalregister.gov/documents/2012/02/06/2012-2649/commercial-wind-leasing-and-site-assessment-activities-on-the-atlantic-outer-continental-shelf

[8] Announcement of Area Identification, Commercial Wind Energy Leasing on the Outer Continental Shelf Offshore Massachusetts (May 30, 2012), https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/MA_AreaID_Announcement_052412_Final.pdf

[9] *See* Atlantic Wind Lease Sale 4 (ATLW4) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts—Proposed Sale Notice, 79 Fed. Reg. 34,771 (June 18, 2014), https://www.federalregister.gov/documents/2014/06/18/2014-14116/atlantic-wind-lease-sale-4-atlw4-commercial-leasing-for-wind-power-on-the-outer-continental-shelf

[10] *See* Atlantic Wind Lease Sale 4 (ATLW4) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts—Final Sale Notice, 79 Fed. Reg. 70,545 (Nov. 26, 2014), https://www.federalregister.gov/documents/2014/11/26/2014-27965/atlantic-wind-lease-sale-4-atlw4-commercial-leasing-for-wind-power-on-the-outer-continental-shelf

On January 29, 2015, BOEM held a competitive lease sale pursuant to 30 C.F.R. § 585.211 for certain lease areas within the Massachusetts WEA. The auction lasted 2 rounds and was won by Offshore MW LLC, with a winning bid $166,866.[11] This lease sale resulted in BOEM's issuance of Commercial Lease OCS-A 0501 to Offshore MW LLC, which subsequently changed its name to Vineyard Wind LLC (Vineyard Wind).[12] Lease OCS-A 0501 became effective on April 1, 2015.

2.2 Lease Assignment and Segregation

In June 2021, Vineyard Wind LLC assigned the northernmost 65,296 acres of Lease OCS–A 0501 to a subsidiary, Vineyard Wind 1 LLC, and BOEM segregated the remaining 101,590 acres into Lease OCS–A 0534 (see Figure 1 below for more details).[13] The segregated lease is located about 23 mi (20 nm, 37 km) south of Martha's Vineyard, Massachusetts, and about 28 mi (24 nm, 44 km) southwest of Nantucket, Massachusetts. On December 14, 2021, BOEM approved the assignment of Lease OCS-A 0534 from Vineyard Wind LLC to Park City Wind LLC (the Lessee).[14]

Park City Wind LLC retained the exclusive right to submit a COP for activities within Lease OCS–A 0534.[15] The Project is proposed within the area defined by Lease OCS–A 0534, and a small portion of the area within Lease OCS–A 0501 may also be used for potential development (collectively, the Lease Area). However, any development of the area within lease OCS-0501 would require additional (future) lease assignment.

Lease OCS-A 0534 does not authorize Park City Wind LLC to conduct construction activities within the leased area. Under Lease OCS-A 0534 and 30 C.F.R. part 585, Park City Wind LLC must first submit and receive approval of a COP before any construction activities may take place on the OCS.[16] Submittal and processing of the COP is governed by the provisions set forth in 30 C.F.R. §§ 585.620 through 585.629.

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[11] *See* Bureau of Ocean Energy Mgmt., Bids Received for Lease Sale ATLW-4 Offshore Massachusetts, https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/MA/Bids-Received-for-Lease-Sale-ATLW4.pdf

[12] *See* Bureau of Ocean Energy Mgmt., Change of Name Recognized (Aug. 29, 2017), https://www.data.bsee.gov/PDFDocs/Scan/RENLEASES/0/230.pdf

[13] *See* Bureau of Ocean Energy Mgmt., OCS-A-0501 Assignment Approved, https://www.boem.gov/sites/default/files/documents/renewable-energy/OCS-A-0501-Assignment-Approved.pdf

[14] *See* Bureau of Ocean Energy Mgmt., OCS-A-0534 OCS-A-501 Lease Segregation, https://www.boem.gov/sites/default/files/documents/renewable-energy/OCS-A-0534_OCS-A-0501-Lease-Segregation.pdf

[15] *See* Bureau of Ocean Energy Mgmt., Park City Wind LLC OCS-A-0534, https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Park-City-Wind-LLC-OCS-A.pdf

[16] *See* 30 C.F.R. § 585.600(b).

2.3 Site Assessment

On March 31, 2017, Park City Wind LLC submitted a Site Assessment Plan (SAP) for Lease OCS-A-0534. The plan was subsequently revised in July, October, and November 2017. BOEM determined that the SAP was complete on November 21, 2017, and approved the SAP on May 10, 2018. The plan detailed the methods and procedures Park City Wind LLC would use to collect and analyze data and information on the meteorological and oceanographic conditions of the Lease Area. The SAP approval allowed for the deployment of two Fugro SEAWATCH Wind LiDAR meteorological ocean buoys.[17]

2.4 Construction and Operations

Park City Wind LLC submitted a COP to BOEM on July 2, 2020, with subsequent revisions, including the revision submitted on August 5, 2023, that was used to develop the Final EIS.[18] A final revised COP was submitted on February 28, 2024, that included various minor administrative updates, and aligned the COP with BOEM coordination since the August 5, 2023, revision. The COP proposes the construction and operation of one wind farm, New England Wind, with two phases known as Park City Wind (Phase 1) and Commonwealth Wind (Phase 2). BOEM's regulation at 30 C.F.R. § 585.238 allows a lessee to request phased development of its lease. As part of BOEM's COP review, BOEM is approving Park City Wind's phased development request. The wind farm will connect via offshore substations to a Point (or Points) of Interconnection at onshore locations by way of export cable routes and onshore substations. The Project Overview is shown in Figure 1. The offshore components of the Project will consist of up to 129 wind turbines (41-62 for Phase 1, 64-88 for Phase 2) and supporting tower structures, and five offshore substations (up to 2 for Phase 1, up to 3 for Phase 2) using up to 130 foundations at any of up to 130 locations. In addition, there will be up to 121 nm (225 km) of inter-array cable (up to 116 nm (214 km) for Phase 1 and up to 175 nm (325 km) for Phase 2, all of which will be located on the OCS within the Lease Area.

[17] *See* Bureau of Ocean Energy Mgmt., New England Wind (formerly Vineyard Wind South), https://www.boem.gov/renewable-energy/state-activities/new-england-wind-formerly-vineyard-wind-south
[18] *See* New England Wind (OCS-A 0534) Construction and Operations Plan, https://www.boem.gov/renewable-energy/state-activities/new-england-wind-ocs-0534-construction-and-operations-plan

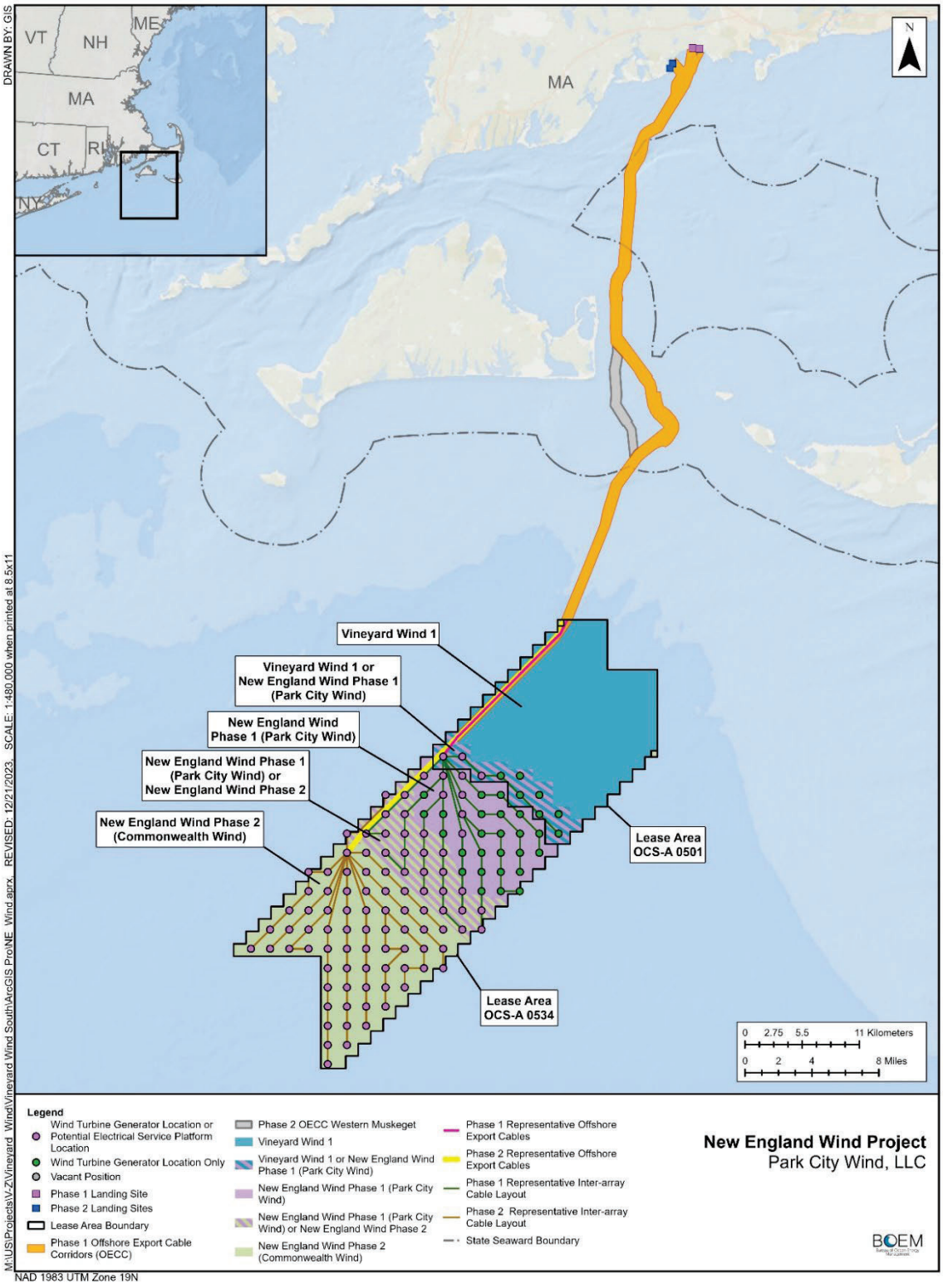

Figure 1: Lease Overview – Lease Segregation and Phase Details

BOEM conducted its analysis under the National Environmental Policy Act (NEPA) in its Final Environmental Impact Statement (EIS) to assesses the reasonably foreseeable impacts on physical, biological, socioeconomic, and cultural resources that could result from the construction and installation (construction), operations and maintenance (operations), and conceptual decommissioning (decommissioning) of the project. BOEM considered a reasonable range of alternatives during the EIS development process that emerged from scoping, interagency coordination, and internal BOEM deliberations. The Preferred Alternative, which falls within the Project Design Envelope (PDE), would adopt aspects of alternatives B and C-1 of the Final EIS.[19] The Preferred Alternative would seek to limit the number of export cables installed in the Eastern Muskeget route as in Alternative C-1, allowing for use of the Western Muskeget contingent (Alternative B) only after a demonstrated need to preserve project feasibility. If the Project requires use of the Western Muskeget Contingency Option, the Lessee will be required to provide BOEM with justification that use of the Western Muskeget is necessary to preserve project viability, as described in Appendix H, Mitigation and Monitoring. As described in the mitigation measure, BOEM will independently review the Lessee's justification and verify that use of the Western Muskeget Contingency Option is an essential requirement to preserve Project viability. The Preferred Alternative would not allow for the co-location of Electrical Service Platform (ESPs) on identified locations. The cable placements being the distinctive features of the Project alternatives, other proposed Project components, are the same in the Preferred Alternative as those in Alternatives B, C-1 and C-2.

Specifically, the Preferred Alternative would entail the construction, operation, maintenance, and eventual decommissioning of 125 to 129 WTGs and 1 to 5 ESPs to be installed in a total of 130 positions[20] over two Project Phases. The project would generate at least 2,036 MW and up to 2,600 MW of electricity within Lease Area OCS-A 0534 to meet existing and potential future offtake demands for New England states. Phase 1 would have a total generating capacity of up to 804 MW and consist of 41 to 62 WTGs and up to 2 ESPs. Phase 1 export cables would make landfall at Craigville Public Beach Landfall Site or the Covell's Beach Landfall Site in the Town of Barnstable. Phase 2 would deliver at least 1,232 MW of power to the New England grid and consist of up to 88 WTGs and 3 ESPs. Phase 2 export cables would make landfall within paved parking areas at either the Dowses Beach Landfall Site or the Wianno Avenue Landfall Site in the Town of Barnstable. BOEM does not have authority under OCSLA to approve proposed facilities that would be located within the state of Massachusetts, and BOEM would coordinate with cooperating agencies regarding this aspect of the Preferred Alternative.

The Preferred Alternative cable alignment would be identical to Alternative C-1 cable alignment if the Contingency Option were not exercised, resulting in impacts from cable placement the same as those described above for Alternative C-1.

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[19] *See* Final EIS, ES.4.4.

[20] Each position would accommodate one WTG or one ESP.

The Preferred Alternative cable alignment would be identical to the cable alignment of Alternative B (Scenario 2) if the Contingency Option were exercised, resulting in impacts from the cable placement the same as those described above for Alternative B.

The Preferred Alternative would not allow for the co-location of ESPs at up to two locations, resulting in 130 WTG or ESP placements, as opposed to the potential of up to 132 WTG or ESP placements (see Appendix H, Mitigation and Monitoring). This would reduce the potential impacts to benthic resources by a negligible increment, resulting in impacts as described in alternative C-1 if the Contingency Option is avoided or Alternative B if the Contingency Option is exercised.

2.5 Project Easements

The regulation at 30 C.F.R. § 585.200(b) states that a lease issued under Part 585 confers on the lessee the right to one or more project easements without further competition for the purpose of installing gathering, transmission, and distribution cables; pipelines; and appurtenances on the OCS as necessary for the full enjoyment of the lease. In accordance with 30 C.F.R. § 585.622(b), Park City Wind LLC requested project easements as part of its COP. As proposed in the COP, the Project will include up to 192 nm (356km) of submarine export cables, consisting of up to three routes to Massachusetts. The COP further proposes that both the Phase 1 and Phase 2 export cables will interconnect at the same substation in Barnstable, MA. The project easement for New England Wind Phase 1 contains two High Voltage Alternating Current (HVAC) export cables, and ranges from a maximum width of 1145.0 ft (349 m) to a minimum width of 725.1 ft (221 m). The proposed New England Wind Phase 2 project easement contains three HVAC export cables, and ranges from a maximum width of 2014.4 ft (614 m) to a minimum width of 1427.4 ft (435 m). Park City Wind LLC requested an easement width greater than 200 ft to allow for safe cable maintenance operations and installation of repair and construction jointing and omega bights, which may require an installation width up to five times water depth. Water depths range from approximately 7.45 ft (2.27m) to 162.5 ft (49.53 m) mean lower low water (MLLW) within the proposed project easements.

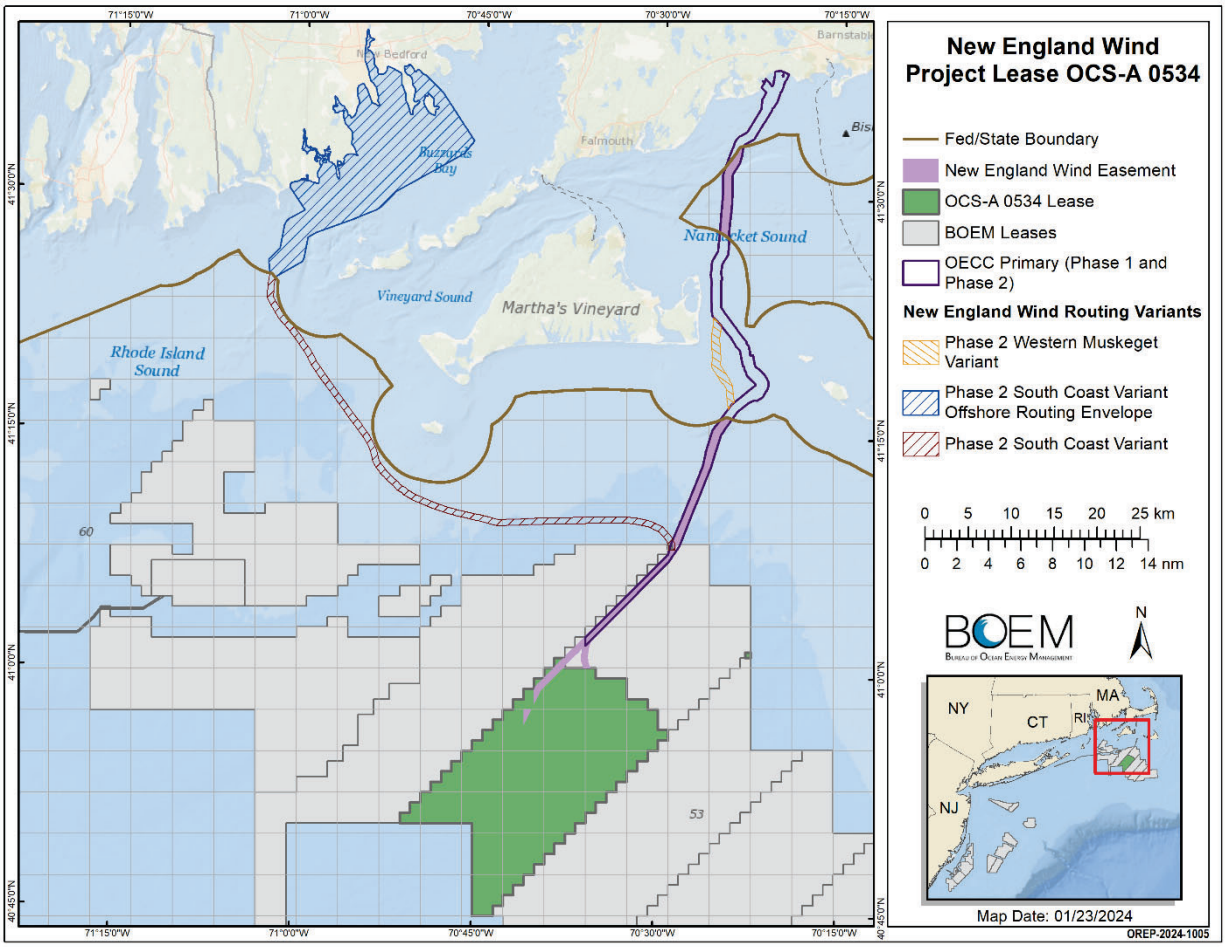

Figure 2: Project Overview – Lease Area and Submarine Export Cable Routes

3 SECTION 585.628 REVIEW

As noted in Section 2, the regulations at 30 C.F.R. §§ 585.620 through 585.628 govern BOEM's review and processing of COPs. The regulations, at 30 C.F.R § 585.628, require BOEM to review the COP and all information provided therein pursuant to 30 C.F.R. §§ 585.626 and 585.627, to determine whether the COP contains all the information necessary to be considered complete and sufficient for BOEM to conduct technical and environmental reviews. Once BOEM determines that the COP is complete and sufficient, BOEM and the Bureau of Safety and Environmental Enforcement (BSEE) conduct a technical review, and BOEM conducts an environmental review. As described below, BOEM's Office of Renewable Energy Programs (OREP) has completed the sufficiency, technical, and environmental reviews of the New England Wind COP.

3.1 Completeness and Sufficiency Review

Regarding the regulations pertaining to COPs, 30 C.F.R. § 585.620 provides the general requirements of what must be described in a COP. Pursuant to 30 C.F.R. § 585.627, the Lessee

must submit information and certifications necessary for BOEM to comply with NEPA and other relevant laws.

In a letter submitted on October 15, 2020, the then-Lessee, Vineyard Wind LLC, requested a regulatory departure from 30 C.F.R. § 585.626(a)(4)(ii), which requires that detailed in situ geotechnical data at each proposed foundation location be provided at the time of COP submittal. Instead of submitting the in situ geotechnical data with the COP, the Lessee proposed to provide the data no later than with its submittal of the Facility Design Report and the Fabrication and Installation Report (FDR/FIR), when the Project design and associated Project design envelope was more mature. OREP's Engineering and Technical Review Branch (ETRB) evaluated the departure request and concluded that the geotechnical information submitted by the Lessee at that point was sufficient to allow for review of the COP. Therefore, on April 22, 2021, BOEM approved the departure request, allowing the Lessee to submit geotechnical investigations at final foundation locations with or prior to the FDR along with results of geotechnical analyses and foundation design parameters.

In a separate letter submitted on March 17, 2022, Park City Wind LLC requested a regulatory departure to defer submission of a limited amount of geophysical data collected from part of Lease Area OCS-A 0501. Park City Wind LLC proposed to submit the data with the FDRs/FIRs for the inter-array cables. The area covered by the request falls within the overlapping area between lease OCS-A 0501 (Vineyard Wind 1) and OCS-A 0534 (New England Wind). ETRB reviewed the departure request and determined that the reasoning provided for the departure request was insufficient. BOEM also determined that the incomplete and deferred analyzed data would not provide adequate information in accordance with 30 C.F.R. §§ 585.601(c) and C.F.R. 585.626, and the request did not meet the criteria of 30 C.F.R. § 585.103 for departure consideration. After discussions with Park City Wind LLC, the Lessee submitted the necessary geophysical data, rendering the departure request obsolete.

On July 2, 2020, Park City Wind LLC submitted a COP to BOEM for review and approval. On July 14, 2020, OREP's Projects and Coordination Branch (PCB), in coordination with ETRB and Environment Branch for Renewable Energy (EBRE), verified that the COP included an adequate level of information, as required in 30 C.F.R. §§ 585.626 and 585.627, for BOEM to begin reviewing the sufficiency of that information. PCB coordinated BOEM's sufficiency review of the New England Wind COP. Throughout the review process, BOEM evaluated the information provided in response to its requests for additional information, as well as the updated COPs Park City Wind LLC submitted, and finally determined that the information provided was sufficient in accordance with the regulations.

BOEM has determined that the COP includes all the information required in 30 C.F.R. §§ 585.626 and 585.627, except the information described in 30 C.F.R. § 585.626(a)(4)(ii), for

which BOEM approved a regulatory departure. Following COP approval, Park City Wind LLC must submit the following information no later than when it submits its FDR/FIR):

- Updated information required in 30 C.F.R. § 585.626(a)(4)(ii); the results of deep borings within the Project Area, as needed.

3.2 Technical Review

ETRB reviewed the proposed facilities, project design, project activities, shallow hazards, geological conditions, physical and oceanographic conditions, cables, and fabrication and installation details in the COP, and coordinated with the following agencies:

- BSEE, for safety (Safety Management System (SMS) and Oil Spill Response Plan);
- National Oceanic and Atmospheric Administration (NOAA), for aviation and radar interference; and
- Federal Aviation Administration (FAA), for aviation and radar interference; and
- United States Coast Guard (USCG), for vessel navigation.

Furthermore, ETRB and BSEE reviewed the statement of work and qualifications submitted in the COP for the Certified Verification Agent (CVA) nomination. On July 1, 2022, BOEM approved the nomination of Lloyd's Register North America, Inc., to be the CVA for the Project. Lloyd's Register will review Park City Wind LLC's submitted FDR and FIR and must certify that the project facilities are designed, fabricated, and installed in conformance with accepted engineering practices.

As a result of these reviews, ETRB has determined both the technical information and supporting data provided with the COP meet the requirements of 30 C.F.R. § 585.626 and are sufficient to allow the safe installation of the Project on the OCS. ETRB has also concluded that the COP proposes the use of properly trained personnel and the best available and safest technology, pursuant to 30 C.F.R. § 585.621. ETRB provided a memorandum (ETRB Review Memo; Appendix B.1 to the Record of Decision (ROD)), which recommends the approval of the COP subject to ETRB's proposed conditions (See Anticipated Conditions of COP Approval; Appendix A to the ROD).

3.3 Environmental Review

OREP's EBRE conducted an environmental review of the COP. On June 30, 2021, BOEM published the NOI to prepare an EIS for New England Wind's COP[21] (then named the Vineyard Wind South Offshore Wind project), which started BOEM's formal scoping process pursuant to NEPA. The Notice of Availability (NOA) of the Draft EIS for the Project was published on

[21] *See* Notice of Intent to Prepare an EIS, 86 Fed. Reg. 34,782 (June 30, 2021), https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/86-FR-34782.pdf

December 23, 2022.[22] The following Federal agencies participated as cooperating agencies under NEPA in the preparation of the Final EIS: BSEE; U.S. Environmental Protection Agency (USEPA); National Marine Fisheries Service (NMFS); U.S. Army Corps of Engineers (USACE); USCG; U.S. Fish and Wildlife Service (USFWS). Cooperating state agencies were the New York Department of State (NYSDOS), Massachusetts Office of Coastal Zone Management, Rhode Island Coastal Resources Management Council, Massachusetts State Energy Research and Development Authority (NYSERDA), Massachusetts State Department of Environmental Conservation (NYSDEC), and City of Massachusetts Economic Development Commission.

BOEM initiated consultation under Section 106 of the National Historic Preservation Act (NHPA) prior to the NOI. BOEM elected to use the NEPA substitution procedures allowed under 36 C.F.R. § 800.8(c). BOEM included a draft Finding of Adverse Effect and draft agreement to resolve effects with the Draft EIS, and BOEM included updated versions of those documents with the Final EIS. On March 1, 2024, the final Memorandum of Agreement (MOA) resolving adverse effects on historic properties was executed.

Moreover, BOEM consulted with federally recognized tribes regarding renewable energy leasing and development on the OCS. The following federally recognized tribes were invited to consult: the Delaware Nation, the Delaware Tribe of Indians, the Mashantucket (Western) Pequot Tribal Nation, the Mashpee Wampanoag Tribe of Massachusetts, the Mohegan Tribe of Indians of Connecticut, the Narragansett Indian Tribe, the Shinnecock Indian Nation, and the Wampanoag Tribe of Gay Head (Aquinnah). Of the federally recognized tribes, the Mashpee Wampanoag Tribe of Massachusetts, the Mashantucket (Western) Pequot Tribal Nation, and the Wampanoag Tribe of Gay Head (Aquinnah) accepted BOEM's invitation to consult. BOEM held five government-to-government meetings with federally recognized Tribes on August 13, 2021; November 4, 2021; May 2, 2022; May 26, 2022; and June 2, 2022.

On March 1, 2024, BOEM published the NOA of the Final EIS in the *Federal Register*.[23] The Preferred Alternative was selected using elements of the Proposed Action (Alternative B) and Alternative C-1. The Final EIS included in Appendix O BOEM's responses to comments on the Draft EIS. The Final EIS found that the Alternatives B, C, and the Preferred Alternative would have negligible to moderate adverse impacts on most resources and the potential for major adverse impacts on (i) marine mammals, (ii) cultural resources, environmental justice, (iii) scenic and visual resources, (iv) commercial fisheries and for-hire recreational fisheries, (v) scientific research and (vi) some other uses, such as cumulative impacts on national security and military

[22] *See* Notice of Availability of a Draft EIS, 87 Fed. Reg. 78,993 (Dec. 23, 2022), https://www.federalregister.gov/documents/2022/12/23/2022-27826/notice-of-availability-of-a-draft-environmental-impact-statement-for-park-city-wind-llcs-proposed

[23] Notice of Availability of a Final EIS, 89 Fed. Reg. 15,216 (March 1, 2024). https://www.federalregister.gov/documents/2024/03/01/2024-04303/notice-of-availability-of-a-final-environmental-impact-statement-for-park-city-wind-llcs-proposed

uses. The Final EIS also found that the Project could have beneficial impacts on the following resources: (i) sea turtles, (ii) benthic resources, (iii) coastal habitats and fauna, (iv) finfish, (v) invertebrates, (vi) essential fish habitat, (vii) marine mammals, (viii) birds, (ix) air quality, (x) land use and coastal infrastructure, (xi) recreation and tourism, (xii) demographics, (xiii) employment, (xiv) economics, (xv) commercial fisheries, (xvi) environmental justice, (xvii) air quality, and (xviii) water quality.

Regarding impacts from future planned actions, including the Project, the Final EIS found that the following resources could be subject to major impacts if future planned actions materialize and no further actions are taken to mitigate their impacts: marine mammals, scenic and visual resources, cultural resources, environmental justice, commercial fisheries and for-hire recreational fisheries, national security and military uses, scientific research and surveys, and navigation and vessel traffic. The Final EIS also found that future planned actions, including the Project, could have beneficial impacts on the following resources: (i) sea turtles, (ii) benthic resources, (iii) coastal habitats and fauna, (iv) finfish, (v) invertebrates, (vi) essential fish habitat, (vii) marine mammals, (viii) birds, (ix) air quality, (x) land use and coastal infrastructure, (xi) recreation and tourism, (xii) demographics, (xiii) employment, (xiv) economics, (xv) commercial fisheries, (xvi) environmental justice, (xvii) air quality, and (xviii) water quality. Cumulative impacts on all resources range from negligible to major. Publication of the Final EIS on March 1, 2024, began the minimum 30-day "waiting period," in which NEPA requires BOEM to wait 30 days before issuing the ROD for the Proposed Action. The 30-day waiting period for the Final EIS closed on April 1, 2024.

Several consultations were conducted as part of the environmental review process. On February 16, 2024, NMFS issued a Biological Opinion (BiOp)[24] for the Project under Section 7 of the Endangered Species Act (ESA).[25] The BiOp concluded that the Project is likely to adversely affect but is not likely to jeopardize the continued existence of blue, fin, sei, sperm, or North Atlantic right whales or the Northwest Atlantic DPS of loggerhead sea turtles, North Atlantic DPS of green sea turtles, Kemp's ridley or leatherback sea turtles, shortnose sturgeon, or any of the five DPSs of Atlantic sturgeon. The proposed action is not likely to adversely affect giant manta rays, hawksbill sea turtles, oceanic whitetip sharks, or critical habitat designated for the New York Bight DPS of Atlantic sturgeon. BOEM determined and NMFS concurred in the BiOp that the project will have no effect on the Gulf of Maine DPS of Atlantic salmon or critical habitat designated for the North Atlantic right whale. To be exempt from the prohibitions of Section 9 of the ESA, BOEM, BSEE, USACE, and NMFS' Office of Protected Resources must

[24] *See* Biological Opinion Letter from Michael Pentony, Regional Administrator, Greater Atlantic Regional Fisheries Office, U.S. Dept of Commerce, National Oceanic and Atmospheric Administration, NMFS, to Karen Baker, Chief Office of Renewable Energy Programs, BOEM. National Marine Fisheries Service, Endangered Species Act, Section 7, Biological Opinion (February 16, 2024).
[25] https://www.fws.gov/law/endangered-species-act

comply with the Reasonable and Prudent Measures and implementing Terms and Conditions issued as part of the BiOp.

On September 23, 2023, USFWS transmitted a BiOp and concluded consultation and conference for the Project. The BiOp concluded the Project is not likely to jeopardize the continued existence of the federally listed piping plover, rufa red knot, roseate tern, and northern long eared and tricolored bats.[26]

BOEM also completed an Essential Fish Habitat (EFH) consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA)[27] and received conservation recommendations from NMFS on October 20, 2023, pursuant to Section 305(b)(4)(A) of the MSA.[28] According to Section 304(b)(4)(B) of the MSA, BOEM is required to provide NMFS a detailed response to each EFH conservation recommendation within 30 days of receipt. BOEM issued a detailed response letter to NMFS on January 22, 2024. The detailed response to the conservation recommendations provided draft conditions of COP approval that adopt or partially adopt NMFS's conservation recommendations, which BOEM has included in Appendix A of the ROD.

BOEM also conducted a NHPA[29] Section 106 review of the Project and, through that review, identified historic properties that may be adversely affected by COP approval, and measures to resolve those adverse effects. BOEM identified one National Historic Landmark (NHL) property (Nantucket Historic District) that may be visually adversely affected by the Project. BOEM followed the requirements for compliance with NHPA Section 110(f) (36 C.F.R. § 800.10) and consulted with the National Park Service (NPS), Massachusetts State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) to assess and undertake planning and actions as may be necessary to minimize harm to NHLs. BOEM addressed this process and finding in Appendix J, Section J.6, National Historic Landmarks, and the NHPA Section 106 Process of the Final EIS. Consultation under Section 106 of the NHPA concluded with the execution of the MOA, which was signed by the Lessee, BOEM, the Massachusetts SHPO, and the ACHP, and fully executed on March 1, 2024.

Park City Wind LLC submitted requests for Federal Consistency Certification to the States of Massachusetts and Rhode Island under the Coastal Zone Management Act (CZMA).[30] Acting under Section 307 of the Federal CZMA (Pub. L. No. 92-583), as amended, the coastal management programs for the States of Massachusetts and Rhode Island concurred with New

[26] *See* Letter from Audrey Mayor, Field Supervisor, New England Field Office, Fish and Wildlife Serv., to Karen Baker, OREP, BOEM (September 28, 2023).
[27] https://www.fisheries.noaa.gov/resource/document/magnuson-stevens-fishery-conservation-and-management-act.
[28] *See* EFH Letter from Louis A. Chiarella, Assistant Regional Administrator For Habitat and Ecosystem Services, US Dept of Commerce National Oceanic and Atmospheric Administration NMFS GARFO, to OREP EBRE, BOEM (Oct. 20, 2023) [hereinafter EFH Letter].
[29] https://www.nps.gov/subjects/archeology/national-historic-preservation-act.htm
[30] *See* 16 U.S.C. §§ 1451 *et seq*.

England Wind's consistency certification, finding the Project is consistent to the maximum extent practicable with the enforceable policies of each state's coastal management plan. Park City Wind LLC provided BOEM with the CZMA concurrence letters issued by Massachusetts and Rhode Island on December 14, 2023, and November 9, 2023, respectively.

4 COMPLIANCE REVIEW[31]

The regulations at 30 C.F.R. part 585 set forth responsibilities for both BOEM and the Lessee that are similar to those imposed by the 8(p)(4) factors.[32] The regulations, at 30 C.F.R. § 585.102, require BOEM to ensure that any activities authorized under part 585 are carried out in a manner that provides for 12 enumerated goals. Similarly, 30 C.F.R. § 585.621 requires the COP to demonstrate that Park City Wind LLC has planned and is prepared to conduct the proposed activities in a manner that conforms to its responsibilities listed in 30 C.F.R. § 585.105(a), as well as 7 other goals listed therein. BOEM and Park City Wind LLC share some of the responsibilities (e.g., ensuring that activities are carried out in a safe manner), while others are the responsibility of either BOEM (e.g., ensuring a fair return to the United States) or Park City Wind LLC (e.g., using properly trained personnel). The discussion in the following sections, 4.1 to 4.12, provides an overview of how BOEM has assessed the Project in accordance with the 8(p)(4) factors and the regulations at 30 C.F.R. part 585. Because many of these goals are related to the same topic or overlap one another, some are analyzed together.

4.1 The COP Conforms to All Applicable Laws, Regulations, and Lease Provisions of Park City Wind LLC's Commercial Lease[33]

Consultations and reviews for the Project under NEPA, ESA, CZMA, MSA, and NHPA are complete. However, even after approval of the COP, Park City Wind LLC cannot commence construction activities until it obtains required additional permits and authorizations, including permits and permissions requested by Park City Wind LLC under Section 10 of the Rivers and Harbors Act of 1899 (RHA), Section 404 of the Clean Water Act, and Section 14 of the RHA from USACE, and Incidental Take Regulations and an associated Letter of Authorization under the Marine Mammal Protection Act from NMFS. Section 5.1 of the COP (Regulatory Framework) lists all expected federal, Massachusetts State, regional (county), and local-level reviews and permits that will be required for the Project.[34]

[31] *See* 43 U.S.C. § 1337(p)(4) (OCSLA Subsection 8(p)(4)); 30 C.F.R. §§ 585.102, 585.621.
[32] *See* 30 C.F.R. §§ 585.102, 585.621.
[33] *See* id. §§ 585.102(b), 585.621(a).
[34] New England Wind (OCS-A 0534) Construction and Operations Plan, vol. I, sec. 5.1, https://www.boem.gov/renewable-energy/state-activities/new-england-wind-ocs-0534-construction-and-operations-plan

4.2 Safety, Best Available and Safest Technology, Best Management Practices, and Properly Trained Personnel[35]

The New England Wind COP proposes the following major offshore components:

- Up to 129 WTGs (41-62 for Phase 1, 64-88 for Phase 2);
- Each WTG would be supported by a monopile, jacket, or bottom-frame foundation (monopile or jacket for Phase1, monopile, jacket, or bottom-frame foundation for Phase 2);
- Inter-array cables with an operating voltage of 66-132 kilovolts (kV);
- Up to 5 offshore substations on a monopile or jacket foundation (up to 2 for Phase 1, up to 3 for Phase 2);
- Interconnection cables with a voltage of 220-275 kV (Phase 1) and 220-345 kV (phase 2); and
- The export cables would consist of 5 buried (2 for Phase 1 and 3 for Phase 2) submarine high-voltage alternating-current cables.

As documented in Appendix B.1, BOEM expects the Lessee to use the most current technology available for commercial production that meets or exceeds current industry standards. In some cases, this could include technologies currently in prototyping and/or working toward type certification by a recognized certification body but not yet commercially available. ETRB has determined that the information on the proposed major components provided in the COP is sufficient to determine that the Project proposes to use the best available and safest technology pursuant to 30 C.F.R. § 585.621(e) which will meet or exceed the current international industry standards. The approved CVA will confirm as much by certifying that the facility is designed, fabricated, and installed in accordance with the COP and approved industry standards. BOEM and BSEE will also confirm that the design is in accordance with the COP through review of the FDR and FIR.

The engineering design of the WTGs and their ability to sufficiently withstand weather events—which include hurricane-level events—are independently evaluated by a CVA when reviewing the FDR and FIR according to international standards. One of these standards calls for the WTG structure to be able to withstand a 50-year return interval event. An additional standard also includes withstanding 3-second gusts of a 500-year return interval event. WTGs and ESPs are designed to withstand the oceanographic and meteorological conditions expected in the Lease Area, including hurricane force winds.

Further, OREP consulted with BSEE and the USCG on safety requirements during the COP review process. BSEE's and USCG's recommendations and relevant requirements have been

[35] *See* 43 U.S.C. § 1337(p)(4)(A); 30 C.F.R. §§ 585.102(a)(1), 585.621(b), 585.621(e)-(g).

incorporated into the proposed conditions of approval for the COP to ensure the Project is carried out in a safe manner.[36] Additionally, oversight of the review of future submissions (e.g., FDR and FIR activities) will allow BSEE to evaluate if the "facilities are designed, fabricated, and installed in conformance with accepted engineering practices."[37]

The COP also provides a description of the Project's proposed Safety Management System (SMS),[38] as required by 30 C.F.R. § 585.627(d). The proposed SMS, which will be finalized following COP approval, includes a description of the processes and procedures listed in 30 C.F.R. § 285.810(a)-(f), and Park City Wind LLC's proposed implementation thereof. Furthermore, the finalized SMS must describe the methods that are used and maintained to control the identified risks. BOEM determined that Park City Wind LLC's proposals are consistent with acceptable industry practices and standards. Specifically, the SMS provides that all contractors will be legally qualified to perform the roles for which they are contracted, including implementing prescribed safety standards and attending awareness training. Park City Wind LLC will be responsible for overseeing that contractors comply with these obligations.

4.3 Protection of the Environment and Prevention of Undue Harm or Damage to Natural Resources; Life (including human and wildlife); Property; the Marine, Coastal, or Human Environment; or Sites, Structures, or Objects of Historical or Archaeological Significance[39]

Minimizing environmental impacts through the assessment of their effects on environmental resources is integral to BOEM's planning and leasing phase of offshore wind development. The Final EIS (BOEM, 2024) determined that the majority of the potential adverse impacts from the Project to the environment and natural resources are negligible to moderate. The Final EIS concluded that the Project would potentially result in major impacts to: (i) marine mammals, (ii) cultural resources, environmental justice, (iii) scenic and visual resources, (iv) commercial fisheries and for-hire recreational fisheries, (v) scientific research, and (vi) other uses, such as cumulative impacts on national security and miliary uses.[40] The Final EIS identified a range of adverse impacts to environmental, socioeconomic, and cultural resources, which are summarized in the ROD. In addition, as the Final EIS concluded, the Preferred Alternative could have beneficial impacts on the following resources: (i) sea turtles, (ii) benthic resources, (iii) coastal habitats and fauna, (iv) finfish, (v) invertebrates, (vi) essential fish habitat, (vii) marine mammals, (viii) birds, (ix) air quality, (x) land use and coastal infrastructure, (xi) recreation and tourism, (xii) demographics, (xiii) employment, and (xiv) economics, (xv) commercial fisheries,

[36] *See* infra. Anticipated Terms and Conditions of COP Approval, Appendix A to the ROD.
[37] *See* 30 C.F.R. § 285.705(a)(1).
[38] *See* New England Wind (OCS-A 0534) Construction and Operations Plan, Appendix I-B, https://www.boem.gov/renewable-energy/state-activities/new-england-wind-ocs-0534-construction-and-operations-plan
[39] *See* 43 U.S.C. § 1337(p)(4)(B); 30 C.F.R. §§ 585.102(a)(2), 585.621(d).
[40] *See* Bureau of Ocean Energy Mgmt., New England Wind Final EIS, https://www.boem.gov/renewable-energy/state-activities/new-england-wind-final-eis

(xvi) environmental justice, (xvii) air quality, and (xviii) water quality. The numerous consultations performed under various federal statutes, and the analysis in the Final EIS, indicate that approval of the Preferred Alternative would not result in undue harm to environmental resources. For all adverse impacts, mitigation measures were identified and will be incorporated in the terms and conditions of COP approval. This includes measures identified during consultations.

As described in Section 3.3 above, BOEM analyzed in the Final EIS the potential environmental effects of the proposed activities described in the COP. Appendix H of the Final EIS specifically references measures to be taken or mitigation measures recommended to protect the environment. BOEM has also engaged in consultations under the ESA, the MSA, and the NHPA. As a result of the ESA consultation, NMFS issued the BiOp for the Project on February 16, 2024, and USFWS on September 28, 2023. BiOp conclusions are discussed above in Section 3.3. To minimize impacts, both the USFWS and NMFS BiOps include Reasonable and Prudent Measures and implementing Terms and Conditions that must be made conditions of approval. BOEM also consulted with NMFS in accordance with Section 305(b)(2) of the MSA. BOEM analyzed potential adverse impacts of the Project on EFH in an EFH Assessment deemed complete by NMFS on July 28, 2023.[41] NMFS issued a letter on October 20, 2023, in which the agency provided 39 conservation recommendations to avoid and minimize impacts to EFH for activities within the OCS and state waters. Seven of the 39 recommendations--those that applied to activities within state submerged lands--are under USACE's sole jurisdiction for implementation. BOEM provided a detailed response to NMFS via a March 8, 2024, letter regarding how each of the conservation recommendations would be applied to the Project. BOEM fully or partially adopted 23 of the 32 conservation recommendations under BOEM's jurisdiction. As described in the response letter, BOEM did not adopt measures that relate solely to activity that does not require any authorization under OCSLA, as they are beyond BOEM's regulatory authority. Likewise, BOEM did not fully adopt, or only partially adopted, some measures based on technical and economic feasibility concerns.

BOEM also conducted NHPA Section 106 consultation with the 20 consulting parties who accepted the invitation to consult, made up of 6 federal agencies (including the ACHP), 3 federally-recognized Tribes, 2 state agencies (including the Massachusetts State Historic Preservation Officer), 5 local governments, 1 state-recognized Tribe, 2 nongovernmental organizations and/or groups, and Park City Wind LLC, all of whom had a demonstrated interest in the affected historic properties. BOEM held 5 consulting party meetings.[42] Through that consultation, BOEM identified historic properties that may be adversely affected by activities resulting from COP approval, as well as measures to resolve those adverse effects. BOEM also identified one NHL that may be visually adversely affected by activities resulting from COP

[41] *See* Bureau of Ocean Energy Mgmt., OREP, New England Wind Essential Fish Habitat Assessment (2023).
[42] The list of those parties accepting participation and declining to participate by either written response or no response to direct invitations are listed in Attachment 2 of the Section 106 MOA.

approval and followed the requirements for compliance with NHPA Section 110(f). On March 1, 2024, an MOA was executed stipulating how the adverse effects of the Project on historic properties will be resolved. As discussed in section 3.3, BOEM also conducted government-to-government meetings with federally recognized Tribes in which potential impacts to the environment and archaeological resources were discussed.

The COP proposed impact avoidance, minimization, and mitigation measures, which BOEM included as elements of the Project in its environmental analysis and consultations. Measures proposed by Park City Wind LLC can be found in Volume III, Section 4.2 of the COP, and include measures to avoid, minimize, and mitigate impacts to resources such as air quality, birds, and bats, among others.[43] As described in the ROD, BOEM will incorporate Park City Wind LLC's proposed measures as COP conditions of approval and require Park City Wind LLC to comply with all measures and commitments resulting from consultations.

BOEM's Preferred Alternative also includes mitigation and monitoring measures to avoid or reduce impacts on existing ocean uses and on environmental and socioeconomic resources associated with construction, operation, and maintenance activities across the various resources analyzed in the Final EIS. Appendix H of the Final EIS contains a comprehensive list of mitigation and monitoring measures, which are analyzed in the respective Chapter 3 resource section.

4.4 Prevention of Waste and Conservation of Natural Resources[44]

Natural resources are defined in 30 C.F.R. § 585.113 to "include, without limiting the generality thereof, renewable energy, oil, gas, and all other minerals (as defined in Section 2(q) of the OCSLA), and marine animal and marine plant life." In this Section 4.4 analysis, BOEM is focused on the prevention of waste and the conservation of natural resources only in the context of wind energy resources, oil and gas, and marine minerals. While reviewing the New England Wind COP, BOEM considered how the Project would prevent such waste via the location, installation, and operation of wind energy facilities proposed in the COP. Discussion of the conservation of marine animal and plant life can be found in Section 6.0, Volume III of the New England Wind COP and the Final EIS, Chapter 3, Affected Environment and Environmental Consequences, both of which consider how BOEM addresses the Project's impacts on the marine environment. For the reasons discussed in the Final EIS, BOEM has determined that the Project conserves marine animal and plant life consistent with 43 U.S.C. § 1337(p)(4)(B), 30 C.F.R. §§ 585.102(a)(2), and 585.621(d). See Section 4.3, above.

[43] *See* New England Wind (OCS-A 0534) Construction and Operations Plan, vol. III, sec. 4.2 (August 2023), https://www.boem.gov/renewable-energy/state-activities/new-england-wind-ocs-0534-construction-and-operations-plan

[44] *See* 43 U.S.C. §§ 1337(p)(4)(C)-(D); 30 C.F.R. §§ 585.102(a)(3)-(4), 585.105(a).

Lease OCS-A 0534 was the result of a comprehensive planning process, as discussed in Section 1.1 and Appendix A of the Final EIS. The multiple stages of the planning process evaluated natural resources in the region and removed from consideration areas that would be incompatible with renewable energy activities on Lease OCS-A 0534. The analysis conducted in Section 3.14 of the Final EIS concluded that the Project would be unlikely to impact marine minerals because there are no sand resource areas or federal OCS sand and mineral lease areas or significant sand resource blocks located within the geographic analysis area. There are no existing oil gas leases in the Atlantic at this time and the Atlantic is not included in the next national OCS oil and gas leasing program, which was approved on December 14, 2023.[45] Therefore, there is no evidence that the Project will waste oil, gas, or other mineral resources.

The proposed COP reflects current industry practices (e.g., equipment, design, and orientation) for the Project Area. The mitigation measures to be adopted with the Preferred Alternative's selection strike a rational balance between prevention of waste and maximizing the use of wind energy in the proposed Project Area.

4.5 Coordination with Relevant Federal Agencies[46]

Documentation of coordination with federal agencies through BOEM's Intergovernmental Renewable Energy Task Force meetings and public meetings, from the early pre-lease planning stages to the Area Identification process (which resulted in the WEAs before modification at the Proposed Sale Notice stage), can be found in Section 1.5.2 of the Massachusetts EA[47] and on BOEM's website.[48] Throughout the environmental and technical review of the COP, BOEM met with various federal agencies, including BSEE, Department of Defense (DoD), EPA, USACE, USFWS, NOAA-NMFS, NPS, and USCG.

Through the NOI to prepare the EIS, BOEM invited federal agencies with jurisdiction and/or special expertise to become Cooperating or Participating Agencies. BOEM provided Cooperating Agencies with the preliminary Draft EIS on September 7, 2022, for review and comment. BOEM considered and addressed agency comments received, and provided a revised preliminary Draft EIS with a request that Cooperating and Participating agencies confirm that their comments were adequately addressed. On December 23, 2022, BOEM published the Draft EIS.

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[45] *See* Bureau of Ocean Energy Mgmt., National OCS Oil and Gas Leasing Program, https://www.boem.gov/oil-gas-energy/national-program/national-ocs-oil-and-gas-leasing-program

[46] Throughout the COP review and approval process, DOI engaged in meaningful consultation with federally recognized Tribes. For more detail see Final EIS Appendix A, Section A.2.2.3 and Appendix N. See also 43 U.S.C. § 1337(p)(4)(E); 30 C.F.R. § 585.102(a)(5).

[47] BOEM, OCS EIS/EA BOEM 2012-087, Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts (2012), https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/BOEM_Newsroom/Library/Publications/2012/BOEM-2012-087.pdf

[48] *See* Bureau of Ocean Energy Mgmt., Massachusetts Activities, https://www.boem.gov/renewable-energy/state-activities/massachusetts-activities

The Cooperating Agencies also supported preparation of the Final EIS. BOEM provided Cooperating Agencies with the preliminary Final EIS on July 24, 2023, for review and comment. Before publishing the Final EIS, BOEM considered and addressed comments received, and provided a revised preliminary Final EIS with a request that Cooperating Agencies confirm that their comments were adequately addressed. During the EIS process, BOEM met with all the Cooperating and Participating agencies together three times (December 2, 2020, February 14, 2022, and July 25, 2022), met with agencies individually on multiple occasions, and hosted two sets of three public meetings (scoping and Draft EIS). NOAA has indicated its intention to adopt the Final EIS and sign a joint ROD with BOEM, and USACE has indicated its intention to adopt the Final EIS and sign a separate ROD concurrent with the issuance of its permit.

4.6 Protection of National Security Interests of the United States[49]

At each stage of the regulatory process involving Lease OCS-A 0534, BOEM has consulted with DoD for the purpose of assessing national security considerations in BOEM's decision-making processes. The Call Area was identified through consultation with BOEM's Massachusetts Renewable Energy Task Force, which included federal, state, and tribal government partners, including DoD, USCG, and the State of Massachusetts. Furthermore, BOEM consulted with DoD on the EA,[50] which examined the potential environmental effects of issuing commercial wind energy leases and approving site assessment activities, as well as potential impacts to military activities in the Massachusetts WEA. Following BOEM's consultation with DoD on the proposed action to issue leases in the entire WEA, DoD concluded that site-specific stipulations, designed in consultation with DoD, could mitigate the impact of site characterization surveys and the installation, operation, and decommissioning of meteorological towers and buoys on DoD testing, training, and operations in the WEA. When addressed through coordination with the DoD, impacts would be negligible and avoidable.

While reviewing the COP, BOEM coordinated with DoD to develop measures necessary to safeguard against potential liabilities and impacts on DoD activities. BOEM requested that the Military Aviation and Installation Assurance Siting Clearinghouse (DoD Clearinghouse) coordinate within the DoD a review of the COP. As a result of this review, DoD identified potential impacts on the North American Aerospace Defense Command (NORAD) and the Department of the Navy (DON).

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[49] *See* 43 U.S.C. § 1337(p)(4)(F); 30 C.F.R. §§ 585.102(a)(6), 585.621(c).

[50] BOEM, OCS EIS/EA BOEM 2012-087, Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts (2012), https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/BOEM_Newsroom/Library/Publications/2012/BOEM-2012-087.pdf

DoD provided the following measures to mitigate potential impacts to NORAD:

- The Project owner will notify NORAD 30-60 days prior to Project completion and again when the Project is complete and operational for Radar Adverse Impact Management (RAM) scheduling.
- The Project owner will contribute funds ($80,000) toward the execution of the RAM.
- Curtailment of operations for National Security or Defense Purposes, as described in the leasing agreement.

DON also requested to be included in coordination on any proposal to utilize distributed acoustic sensing as part of the wind energy project or associated transmission cables.

To protect the security interests of the United States, BOEM has included the measures identified in communications with DoD as conditions of approval in Appendix A of the ROD.

During the process of drafting the anticipated conditions of COP approval, BOEM invited the DoD to review the draft to identify any feasibility concerns or errors. During that review, BOEM received the mitigation measures for another offshore wind project. In coordination with the DoD Clearinghouse, the DoD indicated that those same conditions were reasonable to include in the New England Wind project's anticipated conditions of COP approval. These updated conditions align with the original mitigation measures but provide more detailed information on how the Lessee is expected to implement these measures in coordination with the DoD.

The Lessee's lease also includes a provision allowing BOEM to suspend operations in accordance with Suspension of Operations for National Security or Defense Purposes as described in Section 3c of Lease OCS-A 0501.[51] When Lease OCS-A 0501 was segregated, creating Lease OCS-A 0534, this provision carried over into the new lease.[52]

4.7 Protection of the Rights of Other Authorized Users of the OCS[53]

BOEM must ensure that activities described in the COP provide for protection of the rights of other authorized users of the OCS. "Authorized users of the OCS" means other users authorized by BOEM to conduct OCS activities pursuant to any OCS lease, easement, or grant, including those authorized for renewable energy, oil and gas, and marine minerals.[54] BOEM's regulatory authority allows the agency to protect the rights of other authorized users by virtue of its right to determine the location of leases, easements, and grants issued and, thereafter, to approve,

[51] *See* Bureau of Ocean Energy Mgmt., Commercial Wind Lease OCS-A 0501, https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/MA/Lease-OCS-A-0501.pdf
[52] *See* Bureau of Ocean Energy Mgmt., https://www.boem.gov/sites/default/files/documents/renewable-energy/OCS-A-0501-Assignment-Approved.pdf
[53] *See* 43 U.S.C. § 1337(p)(4)(G); 30 C.F.R. § 585.102(a)(7).
[54] BOEM's Marine Minerals Program manages Outer Continental Shelf mineral leasing (primarily sand and gravel) for coastal restoration, and commercial leasing of gold, manganese, and other hard minerals.

disapprove, or require modification of plans to conduct activities on such leases, easements, and grants. Approval of the Preferred Alternative, including the project easement, will not result in adverse impacts to rights granted by BOEM pursuant to any other OCS lease or grant, including leases or grants for renewable energy, oil and gas, or marine minerals. The activities that would be authorized by the COP do not restrict equitable access and sharing of the seabed in a manner that significantly interferes with other parties' authorized uses.

Specifically, there are no nearby oil and gas leases or grants, or deposits of sand, gravel, and shell resources subject to 43 U.S.C. § 1337(k)(2) (OCSLA) that would be affected by the activities proposed in the COP. The Proposed Action in the COP includes six turbine locations located on the border of the lease that would result in portions of the rotor swept area with blade overhang outside of the Lease Area. In addition, the proximity of the turbines to the boundary of the lease area could necessitate temporary placement of equipment outside the lease area for construction or maintenance of the turbines. The holder of the adjoining leases (OCS-A 0500 and OCS-A 0520) does not plan to locate WTGs in proximity to the New England Wind WTGs overhanging its lease. Still, BOEM recognizes that the overhang of New England Wind's WTGs on another lessee's lease could impact the full enjoyment of the neighboring lease, by possibly creating the need to temporarily locate repair and maintenance equipment in such other lease due to safety considerations. Therefore, to mitigate that potential issue, BOEM has included a condition of COP approval that requires a Repair and Maintenance Agreement between Park City Wind LLC and the neighboring Lessees (OCS-A-0500 and OCS-A 0520) prior to the date that activities which would be located on the adjoining lease are scheduled to commence.[55] Inclusion of this condition of COP approval also prevents unreasonable interference with the use of the OCS by the adjoining lessee. Moreover, BOEM has included a condition of approval that requires Park City Wind LLC to specifically notify BSEE and BOEM of the temporary placement of any equipment outside the lease and provides that BSEE will review such activity in coordination with BOEM. That condition also provides that any placement of equipment outside the lease must be within the area that was analyzed in BOEM's review of the COP.

4.8 A Fair Return to the United States[56]

BOEM has determined that the high bid resulting from the lease auction and terms of the lease provide a fair return to the United States. As described in Section 2.2, BOEM auctioned the Massachusetts WEA on January 29, 2015. The Lease Area, referred to as OCS-A 0501, consists of 166,866 acres located approximately 12 nm (14 mi) south of Martha's Vineyard, Massachusetts and 12 nm (14 mi) southwest of Nantucket, Massachusetts.

Prior to holding the lease sale, BOEM determined that the minimum bid for these Lease Areas constituted a fair return to the United States. As published in the *Federal Register* notice for this

[55] *See infra* Anticipated Terms and Conditions of COP Approval, Appendix A to the ROD.
[56] *See* 43 U.S.C. § 1337(p)(4)(H); 30 C.F.R. § 585.102(a)(8).

lease sale, the minimum bid for the Massachusetts Lease Area was $1 per acre, or $166,866.[57] Offshore MW LLC's winning monetary bid met this minimum bid at $1 per acre and thereby constituted fair return to the United States.

Lease payments are enumerated in Lease OCS-A 0534, Addendum B, and describe annual rent payment requirements that are calculated per acre or fraction thereof. Rental payments compensate the public for lease development rights and serve as an incentive to timely develop the lease during the period before operations. According to the assignment and segregation letter, this annual rent for Lease OCS-A 0534 after assignment is $304,770. Once a project begins commercial generation of electricity, a lessee must pay an operating fee, calculated in accordance with the formula found in Addendum B of Lease OCS-A-0534 and BOEM's regulations.[58] The operating fee compensates the public for offshore wind development on OCS submerged lands and the associated electricity generated and sold. Upon COP approval, and annually thereafter, Park City Wind LLC would be required to submit its first project easement rent payment, calculated based on the acreage of the easement and the formula provided at 30 C.F.R. § 585.500(c)(5) and Addendum D of Commercial Lease OCS-A 0534.

4.9 Prevention of Interference with Reasonable Uses of the OCS, the Exclusive Economic Zone, the High Seas, and the Territorial Seas; Does Not Unreasonably Interfere with Other Uses of the OCS, Including National Security and Defense[59]

Under OCSLA and its implementing regulations, the Secretary ensures that any authorized activities are carried out in a manner that provides for the prevention of interference with reasonable uses (as determined by the Secretary) of the Exclusive Economic Zone, the high seas, and the territorial seas;[60] and that activities authorized by the Secretary will "not unreasonably interfere with other uses of the OCS."[61]

Throughout the planning and leasing process for Lease OCS-A 0534, as well as the NEPA process for the COP review, BOEM considered numerous other OCS uses in order to minimize or eliminate interference. To develop the Massachusetts WEA, BOEM worked closely with the Massachusetts Renewable Energy Task Force, federal agencies, federally recognized Tribes, the public, and other stakeholders between 2009 and October 2011.

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[57] *See* Atlantic Wind Lease Sale 4 (ATLW4) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts—Final Sale Notice, 79 Fed. Reg. 70,545 (Nov. 26, 2014), https://www.federalregister.gov/documents/2014/11/26/2014-27965/atlantic-wind-lease-sale-4-atlw4-commercial-leasing-for-wind-power-on-the-outer-continental-shelf

[58] *See* 30 C.F.R. § 585.506.

[59] *See* 43 U.S.C. § 1337(p)(4)(I); 30 C.F.R. §§ 585.102(a)(9), 585.621(c). It is worth noting that approval of a COP would not restrict the legal rights of others to conduct reasonable uses of the Exclusive Economic Zone, the high seas, and the territorial sea (e.g., innocent passage, fishing).

[60] *See* 43 U.S.C. § 1337(p)(4)(I); 30 C.F.R. § 585.102(a)(9).

[61] *See* 30 C.F.R. § 585.621(c).

Before lease issuance, BOEM removed areas to strike a rational balance between identifying an area as suitable for wind energy development and preventing interference with other reasonable uses of the OCS.

During the NEPA process for the COP, BOEM assessed alternatives and mitigation measures that could further avoid, minimize, or mitigate impacts to other OCS uses, including sea lanes and navigation, radar systems and aviation, national security and military uses, fishing activities, and NOAA scientific research and surveys. The discussion below summarizes how BOEM considered these other OCS uses in the Lease Area[62] and the actions taken to ensure that the proposed activities, if approved, would be carried out in a manner that provides for the prevention of unreasonable interference with those uses.

- **Navigation and Vessel Traffic[63]**

  The Proposed Project will use a combination of North Atlantic ports in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and/or Canada (COP Vol. III-Appendix-I). These ports serve the commercial fishing industry, passenger cruise lines, cargo, and other maritime activities and are the proposed construction hubs for components of the Proposed Project as well as the hubs for operations and maintenance. The primary vessel traffic and commercial shipping lanes to these ports are outside the Project Area.

  The navigation risk assessment prepared for the Project shows that it is technically feasible to navigate and maneuver fishing vessels and mobile gear through the Lease Area.[64] The foregoing is consistent with USCG's determination that, if the Massachusetts/Rhode Island WEA turbine layout is developed along a standard and uniform grid pattern, formal or informal vessel routing measures would not be required, and, as such, a grid pattern will result in the functional equivalent of numerous navigation corridors that can safely accommodate both transits through and fishing within the WEA.[65] The USCG has indicated that no navigation-related measures within their jurisdiction conflict with the Proposed Project. This includes any formal routing measures (e.g., Traffic Separation Schemes,

[62] Here, BOEM intends the "Lease Area" to encompass both the existing lease boundaries and the requested project easement. As discussed above in section 4.7, the COP includes several turbine locations located on the border of the lease that would result in portions of the rotor swept area that results in blade overhang outside of the Lease Area. BOEM considered this in the analysis described in this section, and in particular, BOEM examined how the overhang may impact other uses, particularly navigation, and concluded that the air gap between the bottom of the rotor swept zone and average sea surface height allows safe vessel transit.
[63] *See* Final EIS, Section 3.13.
[64] *See* Final EIS, Section 3.13.2.
[65] *See* Port Access Route Study: The Areas Offshore of Mass. and R.I., Notice of Availability, 85 Fed. Reg. 31,792 (May 27, 2020) (MARIPARS). By letter dated June 29, 2020, the Responsible Offshore Development Alliance (RODA) requested corrections to MARIPARS, citing five perceived errors in the study. The USCG reviewed RODA's request for corrections and, by letter dated October 27, 2020, advised RODA of its conclusion that neither retraction nor correction of information was warranted. BOEM's subject matter expert reviewed the USCG response and observed no facial errors that would indicate that the USCG was incorrect. Therefore, BOEM has no reason to believe that the conclusions in MARIPARS are incorrect.

Precautionary Areas, Fairways). In addition, the USCG's Final MARIPARS evaluated vessel traffic through the lease areas and concluded that: "(1) lanes for vessel transit should be oriented in a northwest to southeast direction, 0.6 [nautical miles] NM to 0.8 NM wide. This width will allow vessels the ability to maneuver in accordance with the International Regulations for Preventing Collisions at Sea while transiting through the Rhode Island/Massachusetts WEA; (2) lanes for commercial fishing vessels actively engaged in fishing should be oriented in an east to west direction, 1 nm. wide; and (3) lanes for USCG search and rescue operations should be oriented in a north to south and east to west direction, 1 NM wide. This will ensure two lines of orientation for USCG helicopters to conduct search and rescue operations."[66] The Preferred Alternative in the Final EIS is consistent with these recommendations. It disallows the co-location of ESPs or WTGs resulting in 130 WTG or ESP positions, as opposed to 132 positions as described in Alternative B. Such co-location would have disturbed the standard and uniform grid pattern. Ultimately, there will be up to 125 to 129 WTGs and 1 to 5 ESPs within Lease Area OCS-A 0534 and potentially a portion of Lease Area OCS-A 0501.[67]

As described in the Final EIS alternatives, Park City Wind LLC has committed to employ a Marine Operations Liaison Officer to engage and coordinate with USCG, the DON, port authorities, state and local law enforcement, marine patrol, commercial operators, etc. Upon COP approval, BOEM will require Park City Wind LLC to obtain USCG approval for private aids to navigation to be installed and to coordinate with the USCG District 1 (D1), to the extent possible, so that the FDR is consistent with the approved Lighting, Marking, and Signaling Plan.

- **Aviation and Air Traffic[68]**

  There are numerous public and private use airports in the region. Major airports include Boston Logan International Airport approximately 90 miles north, and T.F. Green Airport in Providence, Rhode Island, approximately 65 miles northwest. The closest public airports are the Nantucket Memorial Airport on Nantucket and the Katama Airfield and Martha's Vineyard Airport, both located on Martha's Vineyard. Private airports or airstrips in the area are located on Tuckernuck Island and Martha's Vineyard (Trade Wind Airport).

  The addition of up to 129 WTGs in the project areas would increase navigational complexity and could necessitate changes to air navigation patterns given the maximum blade tip heights of up to 1,171 feet (357 m) above mean sea level (AMSL). The FAA establishes Minimum Vectoring Altitudes (MVA) charts that define the lowest altitude for which air traffic

[66] U.S. Coast Guard, USCG 2019-0131, The Areas Offshore of Massachusetts and Rhode Island Port Access Route Study (2020), https://www.navcen.uscg.gov/sites/default/files/pdf/PARS/FINAL_REPORT_PARS_May_14_2020.pdf
[67] *See* Final EIS. Section ES.4.4.
[68] *See* Final EIS Section 3.14.

controllers can issue radar vectors to aircraft based on obstacle clearance. The FAA mandates that sectors have a minimum obstacle clearance of 1,000 feet (305 m) in non-mountainous areas. At 1,171 feet (357 m) AMSL the WTGs would exceed some surface heights and require an increase to the MVA to Boston Consolidated and Providence Terminal Radar Approach Control sectors.[69] Any changes to air traffic patterns in the region would be initiated by the FAA.

Smaller aircraft that operate using Visual Flight Rules (VFR), which do not require designated routes or altitudes over open ocean near the New England Wind project would have to alter routes to avoid potential collisions with WTGs.[70]

The project will use an Aircraft Detecting Lighting System (ADLS) and the FAA has established methods for marking potential obstructions, mitigating potential impacts, and notifying aviation interests about any changes to airspace management. Implementation of these standard procedures is required within FAA jurisdiction and would reduce risks associated with impacts from structures on aviation and air traffic. BOEM recommends consistency with FAA conditions for WTGs beyond FAA jurisdiction. If the COP is approved, BOEM would require, to the extent possible, New England Wind to be consistent with the recommendations in the *Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development*.[71]

- **Commercial Fisheries and For-Hire Recreational Fishing[72]**

Federally permitted fishing occurs in the Lease Area. NMFS has issued permits for approximately 4,300 vessels that are currently engaged in various commercial and for-hire recreational fisheries in the Northeast Region (Maine to Virginia). In 2021, NMFS reported that there were 217 fishing vessels operating in the SWDA.[73] The revenue for small businesses[74] that fished inside the RI/MA Lease Areas generated 0.20 percent of their total revenue from the lease areas, while large businesses that fished inside the RI/MA Lease Areas generated 0.02 percent of their total revenue from the lease areas. The Final EIS found that the alternative selected in the ROD would result in moderate adverse impacts to commercial fisheries and for-hire recreational fishing, depending on the fishery or fishing operation. Minor beneficial impacts from the presence of structures for commercial and for-hire recreational fishing operations could also occur. The Final EIS states that future planned

[69] *See* New England Wind Construction and Operations, Appendix III-J Aviation Impact Assessment.
[70] *See* Final EIS. Section 3.14.2.3.
[71] *See* Bureau of Ocean Energy Mgmt., Office of Renewable Energy Programs, Guidelines for Lighting and Marking of Structures, https://www.boem.gov/2021-lighting-and-marking-guidelines
[72] *See* Final EIS. Section 3.9.
[73] *See* Final EIS. Section 3.9.
[74] The analysis defined a small business as a business that is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual receipts not in excess of $11 million for all its affiliated operations worldwide.

actions, including future offshore wind approvals, could result in moderate impacts to commercial fisheries and for-hire recreational fishing, depending on the fishery or fishing operation. The offshore wind-related factors that contributed to these impact determinations were primarily anchoring and gear utilization, cable emplacement and maintenance, noise, vessel traffic and the presence of structures and the resulting navigational hazards and space-use conflicts.

It is important to clarify that approval of the Project would not limit the right to navigate or fish within the Project Area. That said, some Project activities and components (e.g., foundations, cable protection measures) are expected to impact some types of fishing within the Project Area.[75] For example, temporary safety zones may be established in coordination with the USCG around active construction. During this time, all fishing and transit would need to avoid the safety zone. During the operational period, fishing and transit would be permitted; however, some larger vessel size classes and/or vessels towing fishing gear may choose to avoid the Project Area due to operational concerns. It is anticipated that vessel operators that choose to avoid the area will fish or transit in other locations. Static gear fishing including hook and line, lobster and crab traps, and gillnets are not anticipated to have the same operational constraints as mobile gear fishing, although fishing methodology (e.g., direction of setting the gear and/or length of set gear) may need to be adjusted for fishing within the Project Area.

While BOEM expects that, with time, many fishermen will adapt to the spacing and be able to fish successfully in the Project Area,[76] the Lessee has identified ways to reduce the Project's level of interference with commercial fisheries.[77] For instance, WTGs would be placed in a grid-like array within the Lease Area, with minimum spacing of no less than 1 nm between WTGs in a north-south orientation. The rows will also be oriented southeast to northwest to accommodate the predominant trawling direction of commercial fishing. The USCG has determined that the layout will meet the requirement for navigation safety and Search and Rescue (SAR) operations for the Project Area.

BOEM is including as conditions two fisheries mitigation programs which consist of a gear claim procedure under which requests for reimbursement related to lost and/or damaged gear would be processed and a Direct Compensation Program for reimbursement of lost revenues. The Direct Compensation Program must include losses to shoreside business and requires Park City Wind LLC to conduct a shoreside seafood business analysis that would be used to further supplement funds available for settling claims of lost revenue as a result of the Project. The Direct Compensation Fund includes a reserve amount to be used to pay claims brought by both commercial and for-hire fishermen according to BOEM's *Guidelines for*

[75] *See* Final EIS, Section 3.9.2.
[76] *See* Final EIS, Section 3.9.2.3-Section 3.9.2.4.
[77] *See* Final EIS, App. H.

Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 C.F.R. Part 585 (BOEM's Mitigation Guidance)[78] and must be based on the annual average commercial fisheries landings values and for-hire fishing revenue stated in the Final EIS (Tables 3.9-12 and 3.9-20). The reserve amount must be determined by the formula specified in the conditions of COP approval. The reserve amount will be augmented by the lessee to pay claims in amounts determined through an analysis of impacts of the Project to shoreside support services. Including all the measures described above would mitigate impacts that the Project is expected to have on commercial fisheries and for-hire fisherman and will prevent unreasonable interference with said fishing interests.

- **Scenic and Visual**

  During the lease sale process, BOEM worked to produce visual simulations of a hypothetical project within the Call Area. After Park City Wind LLC submitted its COP, BOEM conducted a thorough analysis of the impacts of the Proposed Action on visual and scenic resources. Geographic Information System (GIS) viewshed calculations defined the Zone of Visual Influence (ZVI) for the New England Wind Project. The ZVI identifies the geographic area within which there is a relatively high probability that some portion of the Project's offshore facilities would be visible above the horizon from land-based vantage points. A quantified inventory of the physical elements and features and the aesthetic, perceptual, and experiential aspects of the visual and scenic resources was conducted and analyzed for impacts to the ocean, seascape, and landscape character areas within the ZVI on Martha's Vineyard, Nantucket, Elizabeth's Islands, and in the immediate coastal areas of Cape Cod in the State of Massachusetts.

  Eight key observation points (KOP) in Massachusetts were selected from the affected areas defined in the computer-generated viewshed model. Multiple photo simulations were produced showing the views from eight selected KOPs and depicting the potential changes to the existing visual setting by the Project's proposed components. The distance from the KOPs to the closest wind turbine ranges from 22 miles to 43 miles. The level of impacts is minor, with approximately 7 percent of the land area within the maximum theoretical area of nacelle visibility having potential views of a portion of the Project. The limited visibility is the result of the distance of the Project from the shore (21.2 miles off the coast of Martha's Vineyard and 23.7 miles off the coast of Nantucket), forest land being the dominant land cover, and the region's often hazy atmospheric conditions.

[78] *See* Bureau of Ocean Energy Mgmt., Office of Renewable Energy Programs, Draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the OCS Pursuant to 30 C.F.R. Part 585 (June 23, 2022), https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf#:~:text=As%20reflected%20in%20the%20Guidelines,prior%20to%20engaging%20in%20any

Aviation warning lighting affixed to the wind turbines would be visible from Martha's Vineyard or Nantucket beaches and coastlines within the ZVI with impacts on scenic and visual resources. Nighttime impacts would be reduced by implementing an ADLS on WTGs and offshore substations. The aviation warning lights would remain off until low flying aircraft enter the obstruction zone and are detected by surveillance radar, at which time the warning lights would activate. A report by Capitol Airspace Group estimated that with an ADLS system in place, the aviation warning lights would activate for a total of less than 13 minutes over a one-year period, or activated 0.1 percent of the time that traditional obstruction lights would be active.

Offshore export cable routes and grid interconnection cables would be installed entirely underground at landfall sites, and within road and existing utility rights-of-way, and would not be visible once construction is complete. As a result, these components are not evaluated for visual impacts. One substation site has been identified for Phase 1 and one for Phase 2. The COP (Appendix III-H.a; Epsilon 2023) includes simulations of the substations from various locations with future vegetative screening and sound attenuation walls added by the applicant to screen the substations from nearby residents. The Phase 1 substation is expected to be visible directly in front of the property at Shootflying Hill Road and from Shootflying Hill Road at the existing electric transmission corridor and will be briefly visible from Route 6 near the Route 132 interchange.

The Phase 2 onshore substation would be situated in a rural woodland area, which will provide near complete visual screening of the substation from adjacent properties and nearby vantage points. A 2-mile ZVI was established around the Phase 2 substation and the analysis demonstrated that within a half mile of the proposed Phase 2 onshore substation, views of the substation equipment would be limited. Beyond a half mile, a line of sight to electrical structures (30 feet or taller) and one or more lightning masts (80 feet tall) could occur in distant areas 1.25 miles to the north and 1 mile southeast.

Populations affected by the offshore and onshore actions include tourists visiting and residents living in coastal communities, including low income and minority neighborhoods; recreational users of the seascape, including those using ocean beaches and tidal areas; recreational users of the open ocean, including those involved in yachting, fishing, boating, and passage on ships; recreational users of the landscape, including those using landward beaches, golf courses, cycle routes, and footpaths; tourists, workers, visitors, or local people using transport routes; people working in the countryside, commerce, or dwellings; and people working in the marine environment, such as those on fishing vessels and crews of ships.

In coordination with BOEM, the Lessee must prepare and implement a scenic and visual resource monitoring plan that monitors and compares the visual effects of the wind farm

during construction and operations (daytime and nighttime) to the findings in the COP Visual Impact Assessment and verifies the accuracy of the visual simulations (photo and video). The monitoring plan must include monitoring and documenting the meteorological influences on actual WTG visibility over a duration of time from selected onshore key observation points, as determined by BOEM and the Lessee. In addition, the Lessee must include monitoring of the ADLS operation in the monitoring plan. The Lessee must monitor the frequency that the ADLS is operative, documenting when (dates and time) the aviation warning lights are in the on position and the duration of each event. Details for monitoring and reporting procedures must be included in the plan (see ROD Appendix A 7.2.2).

- **NOAA Scientific Research and Surveys**[79]

  As described in Section 3.14 of the Final EIS, the Project will have major adverse impacts on NMFS scientific surveys. As described in Section 3.14.1.6 of the Final EIS, the Lease Area overlaps with current fisheries management, protected species, and ecosystem monitoring surveys conducted by or in coordination with NOAA's Northeast Fisheries Science Center. NOAA Fisheries and BOEM have developed the *NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region* (Hare et al. 2022)[80] to address these adverse impacts.

  There are 14 NMFS scientific surveys that overlap with wind energy development in the northeast region. Ten of these surveys overlap with the Project. BOEM is including Term and Condition 6.3 in ROD Appendix A to address this issue. Consistent with NMFS and BOEM Survey Mitigation strategy actions 1.3.1, 1.3.2, 2.1.1, and 2.1.2 in the *NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region*, the Lessee must submit to BOEM a survey mitigation agreement between NMFS and the Lessee. The survey mitigation agreement must describe how the Lessee will mitigate the Project's impacts on the 10 NMFS surveys. The Lessee must conduct activities in accordance with such agreement. If the Lessee and NMFS fail to reach a survey mitigation agreement, then the Lessee must submit a survey mitigation plan to BOEM.

- **National Security and Defense**

  As explained in Section 4.6, BOEM has consulted extensively with the DoD. BOEM will include any mitigation measures identified during the consultations as part of the COP approval.

[79] *See* Final EIS, Section 3.14, https://www.boem.gov/renewable-energy/state-activities/new-england-wind-final-eis
[80] *See* Hare, J.A., Blythe, B.J., Ford, K.H., Godfrey-McKee, S., Hooker, B.R., Jensen, B.M., Lipsky, A., Nachman, C., Pfeiffer, L., Rasser, M. and Renshaw, K., 2022. NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region. NOAA Technical Memorandum 292. Woods Hole, MA. 33 pp.

4.10 Consideration of (i) the Location of, and any Schedule Relating to, a Lease or Grant under this Part for an Area of the OCS, and (ii) any Other Use of the Sea or Seabed, Including Use for a Fishery, a Sealane, a Potential Site of a Deepwater Port, Navigation[81]

For a discussion on how BOEM selected the Lease Area, see Section 2.1. The Preferred Alternative is consistent with the proposed 1 x 1-nm spacing in an east-west/north-south formation to prevent irregular transit corridors. Further, there are currently no scheduled lease sales or deepwater ports proposed in the vicinity of the Project Area.

For a discussion on how BOEM considered potential conflicts with fisheries, sealanes, deepwater ports, navigation, and aviation, see Section 4.9.

4.11 Public Notice and Comment on any Proposal Submitted for a Lease or Easement[82]

For a detailed discussion on public notice and comment opportunities associated with the issuance of the lease, please see Section 1 and Appendix A of the Final EIS[83] and Section 5.1 of the Massachusetts EA.[84]

Before preparing the Draft EIS, BOEM held three virtual public scoping meetings (on July 19, July 23, and July 26, 2021) to solicit feedback and to identify issues and potential alternatives for consideration. The topics most referenced in the scoping comments included birds, marine mammals, NEPA process and public engagement, and socioeconomics.[85] The Scoping Summary Report was made available to the public on BOEM's website, and all public scoping submissions received can be viewed online at http://www.regulations.gov under Docket Number BOEM-2021-0047.

On December 23, 2022, BOEM published an NOA for the Draft EIS in the *Federal Register* consistent with the regulations implementing NEPA to assess the potential impacts of the Proposed Action and alternatives.[86] The Draft EIS was made available to the public on BOEM's website. The NOA commenced the public review and comment period of the Draft EIS. BOEM held three virtual public hearings (on January 27, February 1, and February 6, 2023) to solicit

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[81] *See* 43 U.S.C. § 1337(p)(4)(J); 30 C.F.R. § 585.102(a)(10).
[82] *See* 43 U.S.C. § 1337(p)(4)(K); 30 C.F.R. § 585.102(a)(11).
[83] *See* Final EIS, https://www.boem.gov/renewable-energy/state-activities/new-england-wind-final-eis
[84] BOEM, OCS EIS/EA BOEM 2012-087, Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts (2012), https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/BOEM_Newsroom/Library/Publications/2012/BOEM-2012-087.pdf
[85] *See* Bureau of Ocean Energy Mgmt., New England Wind Project Scoping Summary Report, https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/New%20England%20Wind%20Project%20Scoping%20Summary%20Report%20.pdf
[86] *See* Notice of Availability of a Draft EIS, 87 Fed. Reg. 78,993 (Dec. 23, 2022), https://www.federalregister.gov/documents/2022/12/23/2022-27826/notice-of-availability-of-a-draft-environmental-impact-statement-for-park-city-wind-llcs-proposed

feedback and identify issues for consideration in preparing the Final EIS. Throughout the public review and comment period, federal agencies; tribal, state, and local governments; and the general public had the opportunity to provide comments on the Draft EIS. Topics frequently referenced during the Draft EIS comment period included air quality, climate change, commercial fisheries and for-hire recreational fishing, demographics, employment and economics, marine mammals, and scenic and visual resources. All Draft EIS comment submissions received can be viewed online at http://www.regulations.gov under Docket Number BOEM-2022-0070.

On March 1, 2024, BOEM published an NOA for the Final EIS in the *Federal Register*.[87] The Final EIS was also made available in electronic form at https://www.boem.gov/renewable-energy/state-activities/new-england-wind-final-eis. BOEM's 30-day waiting period for the Final EIS closed on April 1, 2024. BOEM's responses to comments on the Draft EIS are included in Appendix O of the Final EIS.

4.12 Oversight, Inspection, Research, Monitoring, and Enforcement Relating to a Lease, Easement, or Right-of-Way[88]

Secretarial Order 3299, which established BOEM and BSEE, assigned safety and environmental oversight for the OCS renewable energy program to BOEM until such time as the Assistant Secretary - Land and Minerals Management (ASLM) determined that an increase in activity justified the transfer of those functions to BSEE. In December 2020, the Principal Deputy Assistant Secretary - Land and Minerals Management, acting with the authority of the ASLM, directed the transfer of safety and environmental oversight for the OCS renewable energy program from BOEM to BSEE due to increased wind energy activity.[89] On September 14, 2022, DOI delegated relevant authorities to BSEE and BOEM in Departmental Manual Part 219, Chapter 1, and Part 218, Chapter 1, respectively.

On January 31, 2023, DOI published a final rule in the *Federal Register*[90] that moved portions of the existing OCS renewable energy regulations, consistent with the Secretary's order and the Departmental Manual. Following approval of the COP, BSEE maintains the authority to perform oversight, inspection, research, monitoring, and enforcement relating to Lease OCS-A 0534, as authorized under the lease, OCSLA, and its implementing regulations. BOEM retains its authority for enforcing compliance, including safety and environmental compliance, with all

[87] Notice of Availability of the Final EIS, 86 Fed. Reg. 15,216 (Mar. 1, 2024), https://www.federalregister.gov/documents/2024/03/01/2024-04303/notice-of-availability-of-a-final-environmental-impact-statement-for-park-city-wind-llcs-proposed
[88] *See* 43 U.S.C. § 1337(p)(4)(L); 30 C.F.R. § 585.102(a)(12).
[89] *See* "Memorandum from Principal Deputy Assistant Secretary - Land and Minerals Management on the Department of the Interior's Offshore Renewable Energy Program Roles and Responsibilities," December 22, 2020.
[90] *See* 88 Fed. Reg. 6376 (Jan. 31, 2023), https://www.federalregister.gov/documents/2023/01/31/2023-00871/reorganization-of-title-30-renewable-energy-and-alternate-uses-of-existing-facilities-on-the-outer

applicable laws, regulations, leases, grants, and approved plans through notices of noncompliance, cessation orders, civil penalties, and other appropriate means.

Under this authority, BSEE and BOEM will ensure that offshore renewable energy development in Lease OCS-A 0534 is conducted safely and maintains regulatory compliance. BSEE has reviewed the proposed COP and recommended technical conditions for the design, construction, operation, maintenance, and monitoring of the Project, and for periodic review and reporting. These proposed technical conditions are included in Appendix A of the ROD and are anticipated conditions of COP approval.

5 STATUS OF THE LEASE

Park City Wind LLC is currently in compliance with the terms of Lease OCS-A 0534. Park City Wind LLC maintains the lease in full force and effect by virtue of annual rent payments, all of which have been timely paid.

6 FINANCIAL ASSURANCE

As required by 30 C.F.R. § 585.625(b)(19), Section 1.5 of the COP[91] contains Park City Wind LLC's statement attesting that the activities and facilities proposed in the COP are or will be covered by an appropriate bond or security as required by 30 C.F.R. §§ 585.515 and 585.516. Park City Wind LLC has provided and currently maintains Surety Bond No. 019080828 in the amount of $404,770, to meet the initial lease-specific and SAP supplemental financial assurance requirements on lease OCS-A 0534 to guarantee compliance with all terms and obligations of the lease. BOEM's regulations at 30 C.F.R. § 585.516(a)(3) provide that, before BOEM will approve a COP, the lessee must provide a supplemental bond or other financial assurance in an amount determined by BOEM based on the complexity, number, and location of all facilities in the lessee's planned activities and commercial operation. Park City Wind LLC must provide supplemental financial assurance to cover the additional annual rental amount for the project easement where transmission lines to shore will be located. In addition, BOEM may increase the amount of supplemental financial assurance at any time if BOEM determines it is necessary to guarantee compliance with the terms and conditions of the lease.[92]

7 CONCLUSION

Minimizing environmental impacts and interference with other uses of the OCS is integral to OCS wind energy planning, leasing, and development. Over many years, the United States Government, on behalf of the American people has, through the DOI, BOEM, and other agencies, devoted significant time and resources to identifying, analyzing, and developing

[91]New England Wind (OCS-A 0534) Construction and Operations Plan, Section 1.5 (August 2023), https://www.boem.gov/renewable-energy/state-activities/new-england-wind-ocs-0534-construction-and-operations-plan

[92] *See* 30 C.F.R. § 585.517.

strategies to mitigate potential environmental impacts and interference with other OCS uses. In 2009, OREP established and began meeting with the Massachusetts Intergovernmental Renewable Energy Task Force, and with other stakeholders and ocean users, to introduce BOEM and offshore wind. Subsequently, BOEM initiated its planning and analysis process to determine competitive interest in the area and eventually identified a Wind Energy Area and conducted an EA. The EA and the associated FONSI concluded that reasonably foreseeable environmental effects associated with lease issuance, including those resulting from site characterization surveys in the WEA and the deployment of meteorological towers and/or buoys, would not significantly impact the environment.

In January of 2015, BOEM held a lease sale which led to the issuance of lease OCS-A 0501 to Offshore MW LLC, subsequently Vineyard Wind LLC. In June 2021, Vineyard Wind LLC assigned the northeastern portion of Lease OCS–A 0501 to a subsidiary, Vineyard Wind 1 LLC, and BOEM segregated and renamed the remaining area Lease OCS–A 0534. Vineyard Wind, now Park City Wind LLC, retained the exclusive right to submit a COP for activities within Lease OCS–A 0534. Park City Wind LLC submitted the COP for the New England Wind project in July of 2020, and BOEM conducted a project-specific NEPA analysis and other environmental consultations required by the ESA, MSA, and NHPA. Throughout its environmental and technical review of the COP, BOEM also coordinated with several federal agencies, including BSEE, DoD, DON, USEPA, USACE, USFWS, NOAA, EPA, NPS, and USCG. All of those reviews, consultations, and coordination efforts enabled BOEM to assess whether approval of the Preferred Alternative conforms with the 8(p)(4) factors and implementing regulations.

As reflected in the Record of Decision for the Project, the Preferred Alternative, which identifies the preference of Alternative C-1 (Eastern Muskeget cable route) and reserves Alternative B (Scenario 2; use of the Western Muskeget cable route) as a Contingency Option to be exercised in the event that the Eastern Muskeget cable route is not viable for all three Phase II cables, plus the measures required by BOEM, balance the need to prevent interference with OCS uses with BOEM's duty to further the U.S. policy to make OCS energy resources available for expeditious and orderly development, subject to environmental safeguards, including the consideration of natural resources and existing ocean uses. The Final EIS demonstrates that approving the Project as modified by the Preferred Alternative will have negligible to moderate adverse impacts on most resources and the potential for major adverse impacts on (i) marine mammals, (ii) cultural resources, environmental justice, (iii) scenic and visual resources, (iv) commercial fisheries and for-hire recreational fisheries, (v) scientific research, and (vi) other uses, such as cumulative impacts on national security and miliary uses. However, the Preferred Alternative could also have beneficial impacts on the following resources: (i) sea turtles, (ii) benthic resources, (iii) coastal habitats and fauna, (iv) finfish, (v) invertebrates, (vi) essential fish habitat, (vii) marine mammals, (viii) birds, (ix) air quality, (x) land use and coastal infrastructure, (xi) recreation and tourism, (xii) demographics, (xiii) employment, (xiv) economics, (xv) commercial fisheries, (xvi) environmental justice, and (xvii) water quality.

The numerous consultations performed under various federal statutes, and the analysis in the Final EIS, indicate that approval of the Preferred Alternative would not result in undue harm to environmental resources or in unreasonable interference with other OCS uses.[93]

In conclusion, OREP has evaluated all the information that Park City Wind LLC provided in its COP and has assessed it in relation to the enumerated factors in OCSLA Subsection 8(p)(4) and BOEM's implementing regulations at 30 C.F.R. part 585. Approval of the COP—as modified by the Preferred Alternative and the proposed Terms and Conditions included with the ROD—would be in accordance with the regulations at 30 C.F.R. part 585 and would ensure that all Project activities on the OCS are carried out in a manner that provides for the factors in Subsection 8(p)(4) of OCSLA.

[93] *See* Final EIS Appendix J.3, https://www.boem.gov/renewable-energy/state-activities/new-england-wind-final-eis

Appendix B.1. ETRB Review Memorandum

United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT
WASHINGTON, DC 20240-0001

Memorandum

To: David MacDuffee
Chief, Projects and Coordination Branch

From: Marilyn Sauls
Digitally signed by MARILYN SAULS
Date: 2024.02.23 15:23:17 -05'00'
Chief, Engineering and Technical Review Branch

Subject: Review of the New England Wind Offshore Wind Farm Construction and Operations Plan (COP) for Commercial Lease OCS-A 0534

Park City Wind LLC submitted a COP to the Bureau of Ocean Energy Management (BOEM) on July 21, 2020, for lease OCS-A 0534.[1] The COP for the New England Wind project proposes the installation of the following major offshore components:

- Up to 129 wind turbine generators (WTGs) (41-62 for Phase 1, 64-88 for Phase 2);
- Each WTG would be supported by a monopile foundation, jacket, or bottom-frame foundation (monopile or jacket for Phase 1, monopile, jacket, or bottom-frame foundation for Phase 2);
- A network of 66-132 kV inter-array cables;
- Up to 5 offshore substations on a monopile or jacket foundation (up to 2 for Phase 1, up to 3 for Phase 2);
- The export cables would consist of 5 buried (2 for Phase 1 and 3 for Phase 2) 220-275 kV for Phase 1 and 220-345 kV for Phase 2 submarine high-voltage alternating-current cables.

The Engineering and Technical Review Branch (ETRB) subject matter experts (SME) reviewed the proposed facilities, project design, project activities, and fabrication and installation details in the COP and coordinated with the following agencies:

- Bureau of Safety and Environmental Enforcement (BSEE), for safety (Safety Management System [SMS]) and Oil Spill Response Plan (OSRP);

[1] At the time of this submission, the COP was for the southern portion of lease OCS-A 0501 and Vineyard Wind LLC was the sole lease holder. In June 2021, Vineyard Wind LLC assigned the northernmost 65,296 acres of Lease OCS-A 0501 to a subsidiary, Vineyard Wind 1, LLC, and the remaining 101,590 acres became Lease OCS-A 0534. Vineyard Wind retained the exclusive right to submit a COP for activities within Lease OCS-A 0534, until December 14, 2021, when BOEM approved the assignment of Lease OCS-A 0534 from Vineyard Wind, LLC to Park City Wind LLC.

- Federal Aviation Administration (FAA) and National Oceanic and Atmospheric Administration (NOAA), for radar interference; and
- The United States Coast Guard (USCG), for vessel navigation.

The SME comments and the responses from New England Wind are logged in the COP review matrix on the Office of Renewable Energy Programs' shared drive AEAU: S:\State of Massachusetts\New England Wind (OCS-A 0534)\COP- Confidential

On July 1, 2022, BOEM approved the nomination of Lloyd's Register North America, Inc., to be the Certified Verification Agent for Phase 1 of the Park City Wind Project and February 8, 2024 for Phase 2 Commonwealth Wind, to review and to certify that the facilities would be designed, fabricated and installed in conformance with accepted engineering practices as described in the Facility Design Report and the Fabrication and Installation Report, pursuant to 30 CFR §585.705.

In review of the COP, ETRB SMEs used their knowledge and experience gained from past project reviews, research funded by BOEM, BSEE, and others, past projects built and operating in Europe, and individual expertise to assess the information provided in the COP. ETRB determined that the technical information and supporting data submitted by Park City Wind meets the requirements of 30 CFR §585.626 and is sufficient to allow the safe installation of the proposed project on the Outer Continental Shelf (OCS), does not unreasonably interfere with other uses of the OCS, and uses properly trained personnel, pursuant to 30 CFR §585.621(b), (c), and (f).

ETRB expects Park City Wind to use the most current technology available for commercial production that meets or exceeds current industry standards. In some cases, this could include technologies currently in prototyping and/or working toward type certification by a recognized industry standards organization but not yet commercially available. ETRB has determined that the technologies proposed within the Project Design Envelope (PDE) of the COP are the same as those currently being commercial utilized or prototyped around the world and constitute the most current and advanced technologies available. ETRB has determined that the information provided in the COP is sufficient to determine that the Project proposes to use the best available and safest technology pursuant to 30 CFR §585.621(e) which will meet or exceed the current international industry standards.

The COP also provides a description of its proposed Safety Management System (SMS),[2] as required by 30 CFR §585.627(d). The proposed SMS, which will be finalized following any COP approval, includes a description of the processes and procedures listed in 30 CFR § 285.810(a)-(f), and Park City Wind's proposed implementation thereof. BOEM determined that Park City Wind's proposals are consistent with acceptable industry practices and standards (i.e., best management practices). Specifically, the SMS provides that all contractors will be fully qualified to perform the roles for which they are contracted, including but not limited to, any prescribed safety standards and awareness training.

ETRB has consulted with BSEE and the USCG on safety requirements and best practices during the COP review process. BSEE's recommendations and relevant requirements have been

[2] See New England Wind, LLC Construction and Operation Plan, Appendix I-B

incorporated into the ETRB's recommended conditions of approval for the COP to ensure that the New England Wind project is carried out in a safe manner. Additionally, oversight of the review of future submissions (e.g., FDR and FIR activities) will allow BSEE to ensure that the "facilities are designed, fabricated, and installed in conformance with accepted engineering practices."[3]

As a result of these reviews, ETRB has determined both the technical information and supporting data provided with the COP meet the requirements of 30 CFR §585.626 and are sufficient to allow the safe installation of the Project on the OCS pursuant to 30 CFR 585.621(b), proposes the use of properly trained personnel pursuant to 30 CFR §585.621(f) and will utilize best management practices pursuant to 30 CFR §585.621(f).

ETRB recommends approval of the COP, along with the inclusion of the following terms and conditions (T&C), provided as Appendix A to the Record of Decision (ROD), developed in consultation with BSEE, FAA, NOAA, and USCG. The T&C are derived from the review of the information requirements in BOEM's regulations and the relevant mitigation measures identified in Appendix H of the Final Environmental Impact Statement (FEIS). The table below provides a cross-reference.

#	Terms and Conditions	Regulation	Information Requirement
2.1	Munitions and Explosives of Concern/Unexploded Ordnance Investigation	§585.627(a)(1)	Hazard information – manmade hazards
2.2	MEC/UXO Identification Survey Report	§585.627(a)(1)	Hazard information – manmade hazards
2.3	MEC/UXO ALARP Certification	§585.627(a)(1)	Hazard information – manmade hazards
2.4	MEC/UXO Discovery Notification	§585.627(a)(1)	Hazard information – manmade hazards
2.5	Munitions Response Plan for Confirmed MEC/UXO	§585.627(a)(1)	Hazard information – manmade hazards
2.6	Munitions Response After Action Report	§585.627(a)(1)	Hazard information – manmade hazards
2.7	Safety Management System	§585.627(d)	Safety Management System
2.8	Emergency Response Plan	§585.626(b)(12)(ii)	Operating procedures – accidents or emergencies
2.9	Oil Spill Response Plan	§585.627(c)	Oil Spill Response Plan
2.10	Cable Routings	§585.626(b)(7)	Cables
2.11	Cable Burial	§585.626(b)(7)	Cables
2.12	Cable Protection Measures	§585.626(b)(7)	Cables
2.13	Crossing Agreements	§585.626(b)(7)	Cables
2.14	Post-Installation Cable Monitoring	§585.626(b)(7)	Cables

[3] See 30 CFR §285.705(a)(1).

2.15	WTG and OSS Foundation Depths	§585.626(a)(4)	Geotechnical survey
2.16	Structural Integrity Monitoring	§585.626(b)(12) §285.824	Operating procedures, self-inspections
2.17	Foundation Scour Protection Monitoring	§585.626(a)(6)	Overall site investigation – scouring of the seabed
2.18	Post-Storm Event Monitoring Plan	§585.627(a)(1)	Hazard information – meteorology, oceanography
2.19	High Frequency Radar Interference Analysis and Mitigation	§585.626(b)(23); FEIS	Other information as required by BOEM
2.20	Critical Safety Systems and Equipment	§585.626(b)(20);	CVA nomination and reports
2.21	Engineering Drawings	§585.626(b)(20);	CVA nomination and reports
2.22	Construction Status	§585.626(b)(21);	Construction Schedule
2.23	Maintenance Schedule	§585.626(b)(12);	Operating procedures
2.24	Pre-lay Grapnel Run Plan	§585.626(b)(7); §585.626(b)(15)	Cables; Environmental Impacts
3	Navigational and Aviation Safety Conditions	§585.626(b)(23)	Other information as required by BOEM
5.4	Boulder Identification and Relocation Plan	§585.627(a)(1); §585.626(b)(15)	Hazard Information-Shallow Geological Hazards; Environmental Impacts
5.5	Boulder Relocation	§585.627(a)(1); §585.626(b)(15)	Hazard Information-Shallow Geological Hazards; Environmental Impacts
5.6	Boulder Relocation Report	§585.627(a)(1); §585.626(b)(15)	Hazard Information-Shallow Geological Hazards; Environmental Impacts
5.7	Micrositing Plan	§585.626(b)(15)	Environmental Impacts