Record of Decision

Maryland Offshore Wind Project
Construction and Operations Plan

September 4, 2024

U.S. Department of the Interior
Bureau of Ocean Energy Management

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

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List of Abbreviations and Acronyms

ACHP	Advisory Council on Historic Preservation
ADLS	Aircraft Detection Lighting System
AOC	Area(s) of Concern
BiOp	Biological Opinion
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CEQ	Council on Environmental Quality
COP	Construction and Operations Plan
CR	Conservation recommendation(s)
CSE	Council of Science Editors
CWA	Clean Water Act
DOI	US Department of the Interior
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESP	Environmental Studies Program
ESPIS	Environmental Studies Program Information System
HRG	High-resolution geophysical
ITR	Incidental Take Regulations
ITS	Incidental Take Statement
km	kilometer(s)
KOP	Key Observation Points
kV	kilovolt
LEDPA	least environmentally damaging practicable alternative
LOA	Letter of Authorization
LSZ	landscape similarity zones
MDE	Maryland Department of the Environment
Met	Meteorological
Mi	miles
MMPA	Marine Mammal Protection Act
MOA	Memorandum of Agreement
MPRSA	Marine Protection, Research, and Sanctuaries Act
MW	megawatts
NARW	North Atlantic right whale
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
nmi	nautical mile(s)
NOI	Notice of Intent
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
O&M	Operations and maintenance

OREC	Offshore Wind Renewable Energy Credit
OSS	Offshore substations
PAM	Passive Acoustic Monitoring
PSO	Protected Species Observers
RHA	Rivers and Harbors Act of 1899
ROD	Record of Decision
ROW	Rights-of-Way
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WTG	Wind turbine generators

1 Introduction

This document constitutes the Bureau of Ocean Energy Management's (BOEM) and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service's (NMFS)[1] joint Record of Decision (ROD) for the final Environmental Impact Statement (EIS) prepared for the Maryland Offshore Wind Project (Project) proposed by US Wind Inc. (US Wind), in its construction and operations plan (COP). The ROD addresses BOEM's action to approve the COP under Subsection 8(p)(4) of the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. § 1337(p)(4), and NMFS' action to issue a Letter of Authorization (LOA) to US Wind Inc. under Section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA), as amended, 16 U.S.C. § 1371(a)(5)(A). This ROD was prepared following the requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 *et seq.*, and 40 CFR §§ 1500-1508.[2]

BOEM prepared the final EIS with the assistance of a third-party contractor, CSA Ocean Sciences, Inc. NMFS, the U.S. Army Corps of Engineers (USACE), the U.S. Coast Guard (USCG), the Bureau of Safety and Environmental Enforcement (BSEE), the U.S. Environmental Protection Agency (USEPA), and the National Park Service (NPS) were cooperating agencies during the development and review of the document. Cooperating state agencies included the Delaware Department of Natural Resources and Environmental Control (DNREC). The U.S. Fish and Wildlife Service (USFWS), the Advisory Council on Historic Preservation (ACHP), and the U.S. Navy 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' issuance of an MMPA incidental take authorization in the form of a LOA issued pursuant to the promulgation of Incidental Take Regulations (ITRs) 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 NMFS' action — which is based on US Wind's request for authorization to take small numbers of marine mammals incidental to specified activities associated with the Project (i.e., pile driving and high-resolution geophysical (HRG) site and characterization surveys) — is to evaluate US Wind's request pursuant to specific requirements of the MMPA and its implementing regulations administered by NMFS, consider impacts of US Wind'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' responsibilities under the MMPA (16 U.S.C. § 1371(a)(5)(A)) and its implementing regulations.

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

[1] For purposes of this ROD, NMFS is exercising its authority under the Marine Mammal Protection Act to promulgate marine mammal incidental take regulations.

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

action that are relevant to USACE permitting actions under Section 10 of the Rivers and Harbors Act of 1899 (RHA), 33 U.S.C. § 403; Section 14 of the RHA, 33 U.S.C. § 408; Section 404 of the Clean Water Act (CWA), 33 U.S.C. § 1344; Section 103 of the Marine Protection, Research and Sanctuaries Act (MPRSA), 33 U.S.C. § 1413; and NMFS' action of promulgating regulations and issuing an LOA for incidental harassment of small numbers of marine mammals during construction activities to US Wind under the MMPA, 16 U.S.C. § 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.[3] The Energy Policy Act provisions implemented by BOEM provide a framework for issuing renewable energy leases, easements, and rights-of-way (ROWs) 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. The history of BOEM's planning and leasing activities offshore Maryland is summarized in Table 1-1.

[3] Public Law No. 109-58, 119 Stat. 594 (2005).

Table 1-1. History of BOEM Planning and Leasing Offshore Maryland Related to Lease OCS-A 0490

Year	Milestone
2010	On November 9, 2010, BOEM initiated the leasing process offshore Maryland by issuing a Request for Interest (RFI) to gauge industry's interest in obtaining commercial wind leases in an area offshore of Maryland (75 *Fed. Reg.* 68,824).
2010 - 2013	BOEM coordinates OCS renewable energy activities offshore Maryland with its federal, state, local, and tribal government partners through its Intergovernmental Renewable Energy Task Force. BOEM coordinated six Task Force Meetings for Maryland, including on April 14, 2010, July 14, 2010, March 23, 2011, June 24, 2011, January 29, 2013, and June 27, 2013.
2012	On February 3, 2012, BOEM published a Call for Information and Nominations for Commercial Leasing for Wind Power (Call) on the OCS Offshore Maryland in the *Federal Register*. The public comment period for the Call closed on March 19, 2012. In response, BOEM received six commercial indications of interest (77 *Fed. Reg.* 5552).
2012	On February 3, 2012, BOEM published in the *Federal Register* a Notice of Availability of a final Environmental Assessment and Finding of No Significant Impact for commercial wind lease issuance and site assessment activities on the Atlantic OCS offshore New Jersey, Delaware, Maryland, and Virginia (77 *Fed. Reg.* 5560).
2013	On December 18, 2013, BOEM published a Proposed Sale Notice requesting public comments on the proposal to auction two leases offshore Maryland for commercial wind energy development (78 *Fed. Reg.* 76,643).
2014	On July 3, 2014, BOEM announced that it published a Final Sale Notice, which stated that a commercial lease sale would be held August 19, 2014, for the Wind Energy Area offshore Maryland. The Maryland Wind Energy Area was auctioned as two leases (OCS-A 0489 and OCS-A 0490). US Wind won both leases (79 *Fed. Reg.* 38,060).
2016–2018	On April 7, 2016, US Wind submitted a Site Assessment Plan for Renewable Energy Lease Number OCS-A 0490. BOEM approved the plan on March 22, 2018.
2018	On January 26, 2018, BOEM received a request from US Wind to merge Renewable Energy Lease Numbers OCS-A 0489 and OCS-A 0490 into a single lease, retaining the lease number OCS-A 0490. BOEM approved the request on March 1, 2018.
2020–2021	On October 22, 2020, US Wind submitted a new Site Assessment Plan for Renewable Energy Lease Number OCS-A 0490. BOEM approved the plan on May 5, 2021.
2020–2024	On August 11, 2020, US Wind submitted its COP for the construction, operations, and conceptual decommissioning of the Project within the Lease Area. Updated versions of the COP were submitted on November 23, 2021, March 3, 2022, May 27, 2022, November 30, 2022, May 27, 2023, July 28, 2023, February 19, 2024, May 10, 2024, June 25, 2024, and July 1, 2024.
2022	On June 8, 2022, BOEM published a Notice of Intent (NOI) to Prepare an EIS for US Wind's Proposed Wind Energy Facility Offshore Maryland (87 *Fed. Reg.* 34,901).
2023	On October 6, 2023, BOEM published a Notice of Availability of a draft EIS initiating a 45-day public comment period for the draft EIS (88 *Fed. Reg.* 69,658).
2024	On May 31, 2024, USFWS issued a BiOp for ESA-listed species within its jurisdiction. On June 18, 2024, NMFS issued a BiOp for ESA-listed species and designated critical habitat within its jurisdiction
2024	On August 2, 2024, BOEM published a Notice of Availability for the final EIS (89 *Fed. Reg.* 63,221) initiating a minimum 30-day mandatory waiting period, during which BOEM is required to pause before issuing a ROD.
2024	On August 22, 2024, BOEM published an errata on its website that included certain edits to Chapter 2, Chapter 3, and Appendix G. None of these edits are substantive or affect the analysis or conclusions in the final EIS.

Notes: BiOp = Biological Opinion; EA = Environmental Assessment; ESA = Endangered Species Act; FONSI = Finding of No Significant Impact; SAP = Site Assessment Plan; NOA = notice of availability.

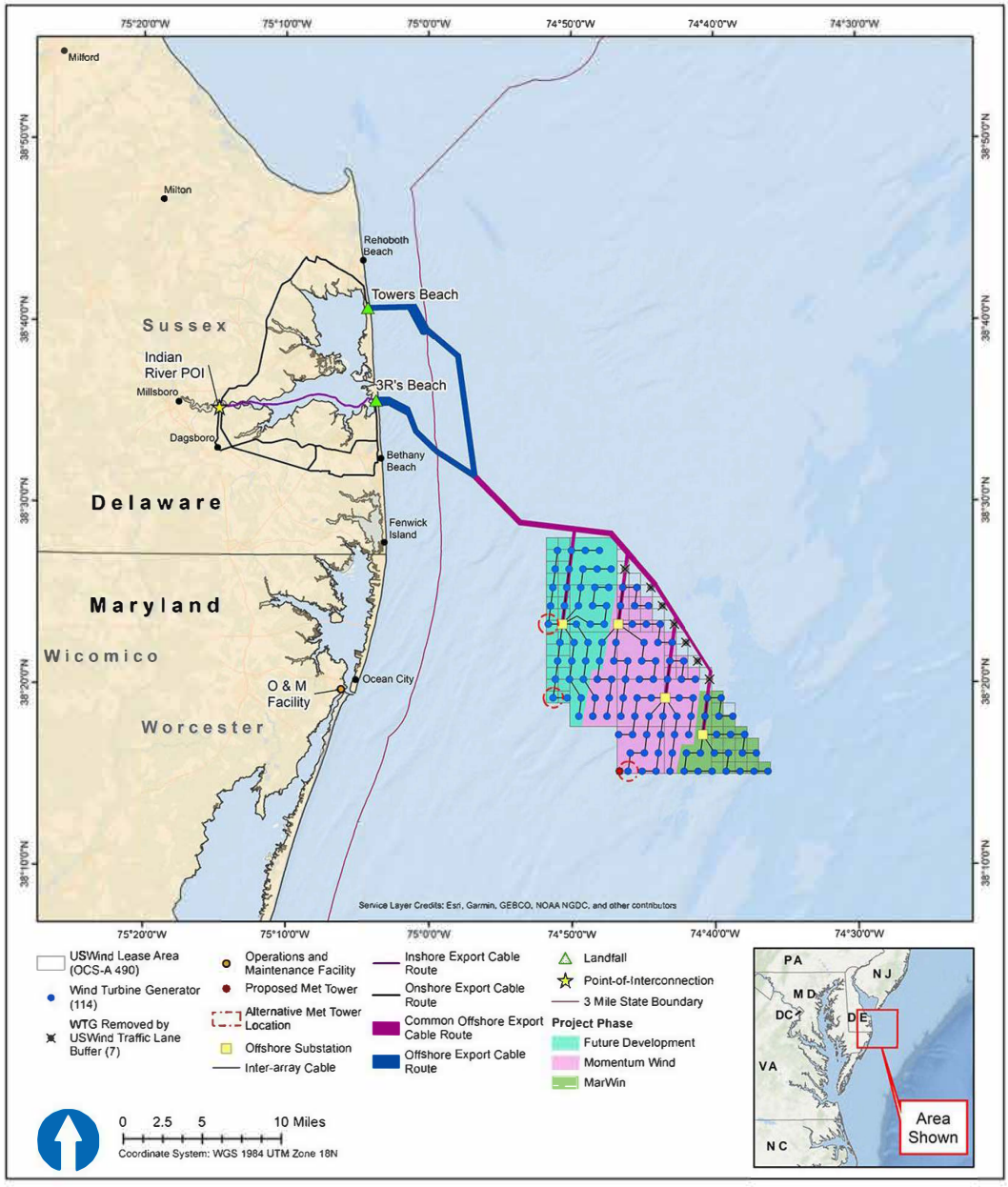

Figure 1-1. Proposed Project Overview

1.2 Authorities

The following summarizes BOEM's authority regarding the approval of the proposed Project, and NMFS' authority to authorize the take, by harassment, of marine mammals, that is incidental to the proposed Project. The final EIS includes a list of approvals, authorizations, and permits for the Project in Appendix A, Table A-1, and a description of consultations in Appendix A, Section A.3. 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 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 involve 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. Aside from BOEM and NMFS, additional cooperating agencies participated in the NEPA process and will sign their ROD and make their permitting decisions at a later time (e.g., USACE).

1.2.1 BOEM Authority

The Energy Policy Act of 2005, Pub. L. No. 109-58, amended OCSLA (43 U.S.C. §§ 1331 *et seq*.) by adding a new Subsection 8(p) to authorize the Secretary of the Interior (Secretary) to issue leases, easements, and ROWs 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 OCSLA were promulgated by DOI on April 29, 2009 (74 Fed. Reg. 19,637).[4] These regulations describe BOEM's process for determining whether to approve, approve with modifications, or disapprove US Wind's COP. In accordance with Council on Environmental Quality (CEQ) NEPA regulations (40 CFR Part 1501), BOEM served as the lead federal agency for the preparation of the EIS.

The Secretary's actions must comply with OCSLA Subsection 8(p)(4) (43 U.S.C. § 1337(p)(4)), which "imposes a general duty on the Secretary to act in a manner providing for the subsection's [various] goals."[5] 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."[6]

1.2.2 NMFS 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 U.S.C. § 1371(a)(5)(A), (D). To authorize the incidental take of marine mammals, NMFS evaluates the best available scientific and commercial information to

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[4]On January 31, 2023, DOI issued the "Reorganization of Title 30-Renewable Energy and Alternative Uses of Existing Facilities on the Outer Continental Shelf" direct final rule, which transferred existing safety and environmental oversight and enforcement regulations governing OCS renewable energy activities from 30 CFR Part 585, under BOEM's purview, to 30 CFR Part 285, under the purview of BSEE. Finally, the DOI published the Renewable Energy Modernization Rule on May 15, 2024, which became effective on July 15, 2024. This final rule not only finalized amendments to DOI's existing renewable regulations administered by BOEM, but also finalized regulatory amendments previously proposed by BOEM that are now administered by BSEE.

[5] 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).

[6] M-Opinion 37067 at p. 5, http://doi.gov/sites/doi.gov/files/m-37067.pdf.

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 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 must also 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. Pursuant to Section 7(a)(2) of the Endangered Species Act (ESA), NMFS must also ensure that issuing the 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 per 16 U.S.C. § 1536(a)(2).

For those marine mammal species that are listed under the ESA, NMFS Office of Protected Resources (NMFS-OPR) must also consult with NMFS Greater Atlantic Regional Fisheries Office (GARFO) Protected Resources Division (GARFO-PRD) 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. The ESA Section 7 consultation for this action resulted in issuance of a Biological Opinion (BiOp) that concluded the proposed federal actions may adversely affect some ESA-listed species but 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 from the ESA Section 9 prohibitions on take subject to specified reasonable and prudent measures and implementing terms and conditions considered necessary and appropriate for the action agencies, including NMFS-OPR, to minimize the effects of take on ESA-listed species. 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 incidental take authorization 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).

NMFS promulgated regulations to implement the MMPA (50 CFR Part 216), including application instructions for incidental take authorizations. Applicants must comply with these regulations, 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.

2 Proposed Project

2.1 Project Description

The Proposed Action would construct, operate, maintain, and eventually decommission an up-to 2,200 megawatts (MW) wind energy facility, sited 10.1 statute miles (mi) (16.2 kilometers [km]) off the coast of Maryland, within the area of Renewable Energy Lease Number OCS-A 0490 (Lease Area). The Project (full build-out) is comprised of up to 121 wind turbine generators (WTGs), up to 4 offshore substations (OSSs), up to 4 offshore export cables, and a 100m tall

meteorological tower (Met Tower), with a total of up to 126 structures in a 0.77 by 1.02 nautical-mile (nmi) (east-west by north-south) gridded array pattern distributed across the Lease Area. Based on USCG recommendations in the New Jersey Port Access Route Study (PARS), US Wind's proposed layout included a 1 nmi (1.9 km) setback from the outer boundary of the south-eastbound traffic lane of the current Traffic Separation Scheme for the southeastern approach to the Delaware Bay or its proposed extension, which removed 7 of the 121 WTG positions, resulting in a total of up to 114 WTGs.[7] The offshore export cables are planned to make landfall in Sussex County, Delaware. The Project will be interconnected to the onshore electric grid by up to four new 230 kilovolt (kV) export cables to new US Wind onshore substations, with an anticipated connection to the existing Indian River substation near Millsboro, Delaware. Development of the wind energy facility would occur within the range of design parameters described in Volume I of the COP (US Wind 2023), as found on BOEM's webpage at https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan, subject to applicable mitigation measures.

2.2 Purpose and Need for the Proposed Action

Through a competitive leasing process under 30 CFR § 585.210, BOEM awarded US Wind with Renewable Energy Lease Number OCS-A 0490 in 2014. During the same competitive lease sale, BOEM also awarded US Wind with Renewable Energy Lease Number OCS-A 0489. By a lease amendment, made effective March 1, 2018, OCS-A 0489 and OCS-A 0490 were merged into a single lease, Renewable Energy Lease Number OCS-A 0490. Renewable Energy Lease Number OCS-A 0489 automatically terminated. US Wind has the exclusive right to submit a COP for activities within the consolidated Lease Area. US Wind submitted a COP to BOEM proposing the construction, installation, operations and maintenance (O&M), and conceptual decommissioning of an offshore wind energy facility in the Lease Area in accordance with BOEM's COP regulations under 30 CFR §§ 585.620-585.628.

The Project would generate up to 2,200 MW of wind energy for the Delmarva Peninsula, including Maryland, in fulfillment of state and federal clean energy standards and targets. The Project includes (1) MarWin, a wind farm of approximately 300 MW for which US Wind was awarded offshore renewable energy credits (ORECs) in 2017 by the State of Maryland; (2) Momentum Wind, consisting of approximately 808 MW for which the State of Maryland awarded additional ORECs in 2021; and (3) future development of the remainder of the Lease Area to fulfill ongoing, government-sponsored demands for offshore wind energy. US Wind's goal is to develop a commercial-scale, offshore wind energy project in the Lease Area. The Project (full build-out) is comprised of up to 121 wind turbine generators (WTGs), up to 4 offshore substations (OSSs), up to 4 offshore export cables, and 1 meteorological tower (met tower), distributed across the Lease Area. The offshore export cables are planned to make landfall in Sussex County, Delaware. The Project will be interconnected to the onshore electric

[7] See Figure 2-3 (Proposed Layout with 1 NM TSS Setback) of the COP (US Wind 2024); also *Consolidated Port Approaches Port Access Route Studies (PARS)* at https://www.navcen.uscg.gov/sites/default/files/pdf/PARS/Consolidated_Port_Approaches_PARS_Updated_Mar2023.pdf

grid by up to four new 230 -275 kilovolt (kV) export cables to new US Wind onshore substations, with an anticipated connection to the existing Indian River substation near Millsboro, Delaware.

Based on BOEM's authority under the OCSLA to authorize renewable energy activities on the OCS, and Executive Order 14008; the goals of the Administration to deploy 30 gigawatts (GW) of offshore wind energy capacity in the U.S. by 2030, while protecting biodiversity and promoting ocean co-use;[8] and in consideration of the goals of US Wind, the purpose of BOEM's action is to determine whether to approve, approve with modifications, or disapprove US Wind's COP. BOEM will make this determination after weighing the factors in Subsection 8(p)(4) of 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 requires BOEM to make a decision on the Lessee's plan to construct and operate a commercial-scale, offshore wind energy facility in the Lease Area.

NMFS, which has MMPA authorization decision responsibilities and is 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 of this ROD).

3 Alternatives

The final EIS considered a reasonable range of alternatives to the Proposed Action.[9] BOEM carried forward four action alternatives for detailed analysis (one of which includes sub-alternatives) and the No Action Alternative. Other action alternatives were considered but not further analyzed because they did not meet the purpose and need or did not meet other screening criteria. Refer to final EIS, Section 2.2, *Alternatives Considered but not Analyzed in Detail*.

3.1 Alternatives Carried Forward for Detailed Analysis

Table 3-1. Description of Alternatives

[8] Fact Sheet: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs | The White House. Interior, Energy, Commerce, and Transportation Departments Announce New Leasing, Funding, and Development Goals to Accelerate and Deploy Offshore Wind Energy and Jobs: https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/. See also § 207 of E.O. 14008, Tackling Climate Change at Home and Abroad, 86 Fed. Reg. 7619 (Feb. 1, 2021) ("doubling offshore wind by 2030 while ensuring robust protection for our lands, waters, and biodiversity and creating good jobs").

[9] The Department of the Interior'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).

Alternative	Description
Alternative A: No Action Alternative	Under Alternative A, the No Action Alternative, BOEM would not approve the COP; the Project construction and installation, O&M, and conceptual decommissioning would not occur; and no additional permits or authorizations for the Project would be required.[10] Any potential environmental and socioeconomic impacts, including benefits, associated with the Project as described under the Proposed Action (Alternative B) would not occur. However, all other existing or reasonably foreseeable future impact-producing activities would continue. The current resource conditions, trends, and effects from ongoing activities under the No Action Alternative serve as the baseline against which all action alternatives are evaluated.
Alternative B: Proposed Action (Preferred Alternative)	Under Alternative B, the Proposed Action, the construction, O&M, and eventual decommissioning of an up to 2.2 GW wind energy facility consisting of up to 114 WTGs,[11] ranging from 14 to 18 MW each, up to 4 OSSs, 1 Met Tower, inter-array cables linking the individual WTGs to the OSSs, and substation interconnector cables linking the substations to each other would be developed in the Lease Area located 10.1 miles (16.2 km) off the coast of Maryland. Additionally, up to four offshore export cables (installed within one Offshore Export Cable Route) that connect to Inshore Export Cable Route and three onshore substations with connections to the existing electrical grid near Millsboro, Delaware, would be constructed. The export cable would make landfall at 3R's Beach, traverse Indian River Bay (e.g., Inshore Export Cable Route), and connect to onshore substations next to the POI at the Indian River substation. The POI will include construction of three new substations in the vicinity of the existing substation. Development of the wind energy facility would occur within the range of design parameters outlined in the COP (US Wind 2024), subject to applicable mitigation measures.
Alternative C: Landfall and Onshore Export Cable Routes Alternative	Under Alternative C, the Landfall Alternative, the construction, O&M, and eventual decommissioning of an up to 2.2 GW wind energy facility offshore Maryland would occur within the range of the design parameters outlined in the COP (US Wind 2024), subject to applicable mitigation measures. This alternative would result in onshore export cable routing that avoids crossing Indian River Bay and the Indian River (i.e., Inshore Export Cable Route). Each of the below sub-alternatives may be individually selected, subject to meeting the purpose and need. • Alternative C-1 includes the Towers Beach landfall (i.e., exclusion of the 3R's Beach landfall), and a terrestrial-based Onshore Export Cable Route from the Towers Beach landfall to the Indian River substation (POI) (i.e., Onshore Export Cable Route 2). This would be contingent on selection of Offshore Cable Route 2 (northern route). • Alternative C-2 includes the 3R's Beach landfall (i.e., exclusion of the Towers Beach landfall), and terrestrial-based Onshore Export Cable Routes from the 3R's Beach landfall to the Indian River substation would be considered (i.e., Onshore Export Cable Routes 1a, 1b, and 1c). This would be contingent on selection of Offshore Cable Route 1 (southern route).

[10] Under the No Action Alternative, 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.

[11] US Wind's Proposed Action includes a 1 nautical mile (1.9 kilometer) setback from the traffic separation scheme (TSS) from Delaware Bay which removes 7 of the 121 WTG positions, resulting in a total of 114 WTGs.

Alternative	Description
Alternative D: No Surface Occupancy to Reduce Visual Impacts Alternative	Under Alternative D, the Viewshed Alternative, the construction, O&M, and eventual decommissioning of a wind energy facility offshore Maryland would occur within the range of the design parameters outlined in the COP (US Wind 2024), subject to applicable mitigation measures. However, no surface occupancy would occur within 14 miles (22.5 km) of shore, removing 32 WTG positions and one OSS associated with the future development phase, to reduce the visual impacts of the Project. This alternative would still allow for full development of MarWin and Momentum and fulfillment of existing ORECs.
Alternative E: Habitat Impact Minimization Alternative	Under Alternative E, the Habitat Impact Minimization Alternative, the construction, O&M, and eventual decommissioning of an up to 2.2 GW wind energy facility offshore Maryland would occur within the range of the design parameters outlined in the COP (US Wind 2024), subject to applicable mitigation measures. This alternative would result in the removal of up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), realigning of the offshore export cables, or both, and relocation of the Met Tower. Micrositing of WTGs, the Met Tower, and cables may be necessary to avoid areas of concern.

BOEM = Bureau of Ocean Energy Management; COP = Construction and Operations Plan; GW = gigawatt; km = kilometer; Met Tower = meteorological tower; mi = mile; MMPA = Marine Mammal Protection Act; MW = megawatt; NMFS = National Marine Fisheries Service; O&M = operations and maintenance; OSS = offshore substation; POI = point of interconnection; WTG = wind turbine generator

3.2 Environmental Consequences of Alternatives

Table 3-2 summarizes and compares the impacts from the proposed Project under each action alternative assessed in Chapter 3 of the final EIS. Under the No Action Alternative, BOEM would not approve the COP and any potential environmental and socioeconomic impacts associated with the Project, including both adverse impacts and benefits, would not occur. However, as described under the cumulative impact analysis in Chapter 3, impacts from other activities could still occur.

Table 3-2. Summary and Comparison of Impacts among Alternatives

Resource	Alternative A – No Action Alternative	Alternative B – Proposed Action (Preferred Alternative)	Alternative C – Landfall and Onshore Export Cable Route Alternative	Alternative D – No Surface Occupancy to Reduce Visual Impacts Alternative	Alternative E – Habitat Impact Minimization Alternative
Air Quality	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **minor** to **moderate** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **minor** to **moderate** adverse impacts due to emissions of criteria pollutants, volatile organic compounds, hazardous air pollutants, and greenhouse gases, mostly released during construction and decommissioning, and **minor beneficial** impacts on regional air quality after offshore wind projects are operational.	*Proposed Action*: The Proposed Action would result in **minor** to **moderate** adverse air quality impacts and **minor** to **moderate beneficial** impacts, to the extent that energy produced by the Project would displace energy produced by fossil fuel power plants. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **minor** to **moderate** adverse impacts because while emissions would increase ambient pollutant concentrations, they are not expected to exceed the National Ambient Air Quality Standards (NAAQS), and **minor** to **moderate beneficial** impacts because the magnitude of the potential reduction in emissions from displacing	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally larger construction impacts from air emissions; however, the overall impact would not change from the Proposed Action and would remain **minor** to **moderate** adverse and **minor** to **moderate beneficial**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** to **moderate** adverse and **minor** to **moderate beneficial**.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) of shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor** to **moderate** adverse and **minor** to **moderate beneficial**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** to **moderate** adverse and **minor** to **moderate beneficial**.	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of the offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor** to **moderate** adverse and **minor** to **moderate beneficial**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** to **moderate** adverse and **minor** to **moderate beneficial**.

		fossil fuel power generation would be small relative to total energy generation emissions in the area.			
Water Quality	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in temporary and **minor** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative, combined with all other planned activities, including other offshore wind activities, would result in **minor** impacts. When considering the possibility of impacts resulting from accidental releases, a moderate impact could occur if there was a large-volume, catastrophic release; however, the probability of such a release is very low.	*Proposed Action*: The Proposed Action would result in **minor** impacts because the impact would be detectable but not exceed water quality standards, and the resource would be expected to recover completely without remedial or mitigating action after decommissioning. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action, when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **minor** impacts and would not alter the overall character of water quality.	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes, resulting in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **minor**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor**.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) of shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor**.	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor**.
Bats	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **negligible** impacts.	*Proposed Action*: The Proposed Action would result in **negligible** impacts because no measurable impacts are expected due to the anticipated absence of bats within the offshore portions	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes, resulting in marginally lower construction impacts;	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) of shore, resulting in marginally lower impacts due to the reduced	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore

	Cumulative Impacts of the No Action Alternative: The No Action Alternative, combined with all other planned activities, including other offshore wind activities, would result in **negligible** impacts because bat presence on the OCS is anticipated to be limited and onshore bat habitat impacts are expected to be minimal.	of the Project area and the minimal impacts due to onshore habitat loss or disturbance. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action, when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **negligible** impacts.	however, the overall impact would not change from the Proposed Action and would remain **negligible**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **negligible**.	number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **negligible**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **negligible**.	export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **negligible**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **negligible**.
Benthic Resources	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **moderate** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative, combined with all other planned activities, including other offshore wind activities, would result in **moderate** adverse impacts and could include **moderate beneficial** impacts due to	*Proposed Action*: The Proposed Action would result in **moderate** impacts because the effect would be localized, and the benthic environment would recover completely over time without remedial and mitigation actions. In addition, **moderate beneficial** impacts could result from habitat alteration from soft bottom to hard bottom "reefing" habitats. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action, when combined with the impacts	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes, resulting in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **moderate** with potentially **moderate beneficial** impacts. *Cumulative Impacts of Alternative C*: Impacts of Alternative C, when combined with impacts from ongoing and	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) of shore, resulting in decreased potential impacts on benthic resources; however, impacts would be similar to the Proposed Action, to a lesser degree, but remain **moderate** with potentially **moderate beneficial** impacts. *Cumulative Impacts of Alternative D*: Impacts of Alternative D, when combined with	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in decreased potential impacts on benthic resources; however, impacts would be similar to the Proposed Action, to a lesser degree. A roughly 10 percent reduction in WTGs would reduce the disturbance to sand ridge and trough features that support

	habitat creation from other offshore wind projects.	from ongoing and planned activities, including other offshore wind activities, would result in **moderate** impacts, because a measurable impact is anticipated and could include **moderate beneficial** impacts.	planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** and could include **moderate beneficial** impacts.	impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** and could include **moderate beneficial** impacts.	diverse invertebrate assemblages that serve important ecological functions for the benthic community and the complex food web they support. Impacts of Alternative E would remain **moderate** with potentially **moderate beneficial** impacts. *Cumulative Impacts of Alternative E*: Impacts of Alternative E, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** and could include **moderate beneficial** impacts.
Birds	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **minor** adverse. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative, combined with all other planned activities, including other offshore wind activities, would result in **moderate** adverse impact on birds but could include **moderate beneficial** impacts due to fish	*Proposed Action*: The Proposed Action would result in **minor** impacts on birds, depending on the location, timing, and species affected by an activity and could also result in potential **minor beneficial** impacts associated with foraging opportunities for marine birds. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action, when combined with the impacts from ongoing and planned activities, including other offshore wind activities,	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **minor**, with **minor beneficial** impacts. *Cumulative Impacts of Alternative C*: Impacts of Alternative C, when combined with impacts from ongoing and planned activities, including	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) of shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor**, with **minor beneficial** impacts. *Cumulative Impacts of Alternative D*:	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor**, with **moderate beneficial** impacts.

	aggregation and associated increase in foraging opportunities provided by the WTG and OSS foundations.	would result in **moderate** adverse and **moderate beneficial** impacts. Climate change and the presence of operating WTGs may result in habitat loss and mortality. The Proposed Action would contribute to the overall impacts primarily through the presence of structures.	other offshore wind activities, would not change from the Proposed Action and would remain **moderate** adverse and **moderate beneficial**.	Impacts of Alternative D, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**, with **moderate beneficial** impacts.	*Cumulative Impacts of Alternative E*: Impacts of Alternative E, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**, with **moderate beneficial** impacts.
Coastal Habitat and Fauna	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result **moderate** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative, combined with all other planned activities, including other offshore wind activities, would result in **moderate** impacts.	*Proposed Action*: The Proposed Action would result in **moderate** impacts as a result of the loss of individuals and disturbance to habitats for the duration of Project construction but no population-level impacts to fauna and no permanent loss of habitat is expected as a direct result of the Proposed Action. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action, when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **moderate** impacts.	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) of shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E, when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.

Finfish, Invertebrates, and EFH	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **moderate** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities would result in **moderate** impacts.	*Proposed Action*: The Proposed Action would result in **moderate** impacts, including the presence of structure, which may result in **minor beneficial** that would be localized; however, because the structures would remain for the full life of the Project, impacts would be long term. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **moderate** with potentially **minor beneficial** impacts. The main drivers for this impact rating are fish mortality, climate change, recurring seafloor disturbance from bottom-tending fishing gear, and mortality resulting from offshore construction.	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **moderate** with potentially **minor beneficial** impacts. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** with potentially **minor beneficial** impacts.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate** with potentially **minor beneficial** impacts. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** with potentially **minor beneficial** impacts.	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate** with potentially **minor beneficial** impacts. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** with potentially **minor beneficial** impacts.
Marine Mammals	*Incremental Impacts:* Not approving the COP would have no additional incremental effect on marine mammals (i.e., no effect).	*Incremental Impacts[1]:* The incremental impact of the Proposed Action when compared to the No Action Alternative would be **moderate** for some baleen whales (except for NARW) and harbor porpoise that may experience PTS and **minor** on	*Incremental Impacts[1]:* Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact	*Incremental Impacts[1]:* Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs,	*Incremental Impacts[1]:* Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of

		all other odontocetes (i.e., MFC species) and pinnipeds. For NARW, **minor** impacts are expected due to noise exposure and no concentrated foraging habitat within the Project Area. Some **minor beneficial** impacts on odontocetes and pinnipeds could be realized through artificial reef effects. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.	would not change from the Proposed Action and would remain **moderate** for some baleen whales (except for NARW) and harbor porpoise and **minor** for all other odontocetes, pinnipeds, and NARWs., with possible **minor beneficial** impacts for odontocetes and pinnipeds. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.	OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate** for some baleen whales (except for NARW) and harbor porpoise and **minor** for all other odontocetes, pinnipeds, and NARWs., with possible **minor beneficial** impacts for odontocetes and pinnipeds. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.	concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate** for some baleen whales (except for NARW) and harbor porpoise and **minor** for all other odontocetes, pinnipeds, and NARWs., with possible **minor beneficial** impacts for odontocetes and pinnipeds. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.
	No Action Alternative (with Baseline): Continuation of existing environmental trends and activities under the No Action Alternative would result in **moderate** adverse impacts on mysticetes (other than NARWs), odontocetes and pinnipeds. The No Action Alternative with consideration of baseline activities may also result in **minor beneficial** impacts on odontocetes and pinnipeds from a beneficial reef effect. Adverse impacts on mysticetes (other than	*Proposed Action (with Baseline[2])*: The Proposed Action in combination with the existing environmental trends and ongoing activities would result in overall **major** impacts on NARW (determination is primarily due to baseline conditions) and **moderate** impacts on other mysticetes, odontocetes, and pinnipeds. BOEM made this determination because the anticipated impact would be notable and measurable, but most mammals are expected to recover completely when IPF stressors are removed, and remedial or mitigating	*Alternative C (with Baseline[2])*: Alternative C, in combination with the existing environmental trends and ongoing activities, would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **moderate** for mysticetes (except NARW), odontocetes, and pinnipeds because impacts would be noticeable and measurable,	*Alternative D (with Baseline[2])*: Alternative D, in combination with the existing environmental trends and ongoing activities, would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate** for mysticetes (except NARW), odontocetes, and	*Alternative E (with Baseline[2])*: Alternative E, in combination with the existing environmental trends and ongoing activities, would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and

	NARW), odontocetes, and pinnipeds would be primarily due to underwater noise, commercial and recreational fishing gear interactions, and ongoing climate change. Non-offshore wind Vessel activity (vessel collisions) would also be a primary contributor to adverse impacts on mysticetes. For the NARW, continuation of existing environmental trends and activities under the No Action Alternative would result in **major** adverse impacts due to low population numbers and potential to compromise the viability of the species from the loss of a single individual.	actions are taken. **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.	but would not result in population level effects, except for the NARW. BOEM expects impacts to be **major** for the NARW primarily due to ongoing baseline conditions (e.g., non-offshore wind vessel traffic and entanglement risk associated with the presence of structures). **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.	pinnipeds because impacts would be noticeable and measurable, but would not result in population level effects, except for the NARW. BOEM expects to be **major** for the NARW primarily due to ongoing baseline conditions (e.g., non-offshore wind vessel traffic and entanglement risk associated with the presence of structures). **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.	would remain **moderate** for mysticetes (except NARW), odontocetes, and pinnipeds because impacts would be noticeable and measurable, but would not result in population level effects, except for the NARW. BOEM expects impacts to be **major** for the NARW primarily due to ongoing baseline conditions (e.g., nonoffshore wind vessel traffic and entanglement risk associated with the presence of structures). **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.
	Cumulative Impacts of the No Action Alternative (with Baseline and Other Foreseeable Impacts[3]): The No Action Alternative, when combined with all other planned activities (including offshore wind) would result in **moderate** adverse impacts on mysticetes (except for NARW), odontocetes, and pinnipeds. For NARWs impacts would be **major**	*Cumulative Impacts of the Proposed Action (with Baseline and Other Foreseeable Impacts[3])*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in overall **major** impacts on NARW (primarily due to baseline conditions) and **moderate** impacts on	*Cumulative Impacts of Alternative C (with Baseline and Other Foreseeable Impacts[3])*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** for all mysticetes, odontocetes, and pinnipeds,	*Cumulative Impacts of Alternative D (with Baseline and Other Foreseeable Impacts[3])*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** for all mysticetes, odontocetes,	*Cumulative Impacts of Alternative E (with Baseline and Other Foreseeable Impacts[3])*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** for all mysticetes, odontocetes, and pinnipeds, except for the NARW. For the

	adverse due to low population numbers and potential to compromise the viability of the species from the loss of a single individual. Adverse impacts would be primarily due to underwater noise, non-offshore wind vessel activity (vessel collisions), fishing entanglement, and climate change. **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures, but these may be offset by the potential risks associated with entanglement from fishing gear.	other mysticetes, odontocetes, and pinnipeds. BOEM made this determination because the anticipated impact would be notable and measurable, but most mammals are expected to recover completely when IPF stressors are removed, and remedial or mitigating actions are taken. **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures. Beneficial effects, however, may be offset by increased interactions with fishing gear associated with the presence of structures.	except for the NARW. For the NARW impacts would be **major** because the anticipated impact would be noticeable and measurable, but marine mammals are expected to recover completely when IPF stressors are removed and remedial or mitigating actions are taken. **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures, but these may be offset by the potential risks associated with entanglement from fishing gear.	and pinnipeds, except for the NARW. For the NARW impacts would be **major** because the anticipated impact would be noticeable and measurable, but marine mammals are expected to recover completely when IPF stressors are removed and remedial or mitigating actions are taken. **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures, but these may be offset by the potential risks associated with entanglement from fishing gear.	NARW impacts would be **major** because the anticipated impact would be noticeable and measurable, but marine mammals are expected to recover completely when IPF stressors are removed and remedial or mitigating actions are taken. **Minor beneficial** impacts for odontocetes and pinnipeds are possible from the presence of structures, but these may be offset by the potential risks associated with entanglement from fishing gear.
Sea Turtles	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **minor** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities would result in **minor** impacts.	*Proposed Action*: The Proposed Action would result in **minor** impacts because impacts would be noticeable and measurable but would not result in population level effects. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **minor** impacts because impacts would be	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **minor**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities of	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor**.

		noticeable and measurable, but sea turtles are expected to recover completely when IPF stressors are removed and remedial or mitigating actions are taken.	offshore export cables, including other offshore wind activities, would not change from the Proposed Action and would remain **minor**.	impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor**.	*Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor**.
Wetlands and Other Waters of the US	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **minor** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **moderate** impacts.	*Proposed Action*: The Proposed Action would result in **minor** impacts on wetlands. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **moderate** impacts.	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would be **minor**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.

Commercial Fisheries and For-Hire Recreational Fishing	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **minor** to **major** long-term impacts on commercial fisheries and **moderate** long-term impacts on for-hire recreational fisheries. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **major** long-term impacts on commercial fisheries and **moderate** long-term impacts on for-hire recreational fishing due primarily to the presence of structures, new cable emplacement, and noise from pile driving. The presence of structures may also induce a **moderate beneficial** long-term impact, particularly on the for-hire recreational fishing.	*Proposed Action*: The Proposed Action would result in long-term impacts ranging from **minor** to **major**, depending on the fishery and fishing operation and could include long-term, **minor beneficial** impacts for some for-hire recreational fishing operations due to the artificial reef effect. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **major** and long-term impacts because some commercial and for-hire recreational fisheries and fishing operations would experience substantial disruptions indefinitely, even with mitigation.	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **minor** to **major** and could include **minor beneficial** impacts for some for-hire recreational fishing operations. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **major**.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor** to **major** and could include **minor beneficial** impacts for some for-hire recreational fishing operations. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **major**.	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor** to **major** and could include **minor beneficial** impacts for some for-hire recreational fishing operations. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **major**.
Cultural Resources	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would	*Proposed Action*: The Proposed Action would result in **moderate** impacts because a notable and measurable impact requiring mitigation is anticipated. In most cases,	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or

	result in **moderate** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **moderate** impacts.	the resource would likely recover completely when the affecting agent was gone or remedial or mitigating action were taken. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **moderate** impacts.	lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.	due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.	realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.
Demographics, Employment, and Economics	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **minor** adverse and **minor beneficial** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **minor** adverse	*Proposed Action*: The Proposed Action would result in **minor** adverse impacts to certain recreation and tourism businesses and **minor beneficial** impacts through job creation, expenditures on local businesses, tax revenues, grant funds, and support for additional regional offshore wind development. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**. *Cumulative Impacts of Alternative D*:	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**.

	and **minor beneficial** impacts.	from ongoing and planned activities including, other offshore wind activities, would result in **minor** adverse and **minor beneficial** impacts.	planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**.	Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**.	*Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**.
Environmental Justice	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **minor** adverse and **minor beneficial** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **moderate** adverse and **minor beneficial** impacts.	*Proposed Action*: The Proposed Action would result in **moderate** impacts because environmental justice populations would have to adjust somewhat to account for disruptions due to notable and measurable adverse impacts. Potentially small and measurable **minor beneficial** impacts could result from port utilization and the resulting employment and economic activity at ports as well as from enhanced opportunities for for-hire recreational fishing. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **moderate**	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**.	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain

		adverse with **minor beneficial**.			**moderate** adverse with **minor beneficial**.
Land Use and Coastal Infrastructure	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **negligible** adverse and **minor beneficial** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **minor** adverse impacts and **minor beneficial** impacts.	*Proposed Action*: The Proposed Action would result in **minor** adverse with **minor beneficial** impacts. Minor beneficial impacts would result from port utilization. The potential for land use change due to the visibility of Proposed Action WTGs and OSSs from coastal and elevated locations could have moderate impacts, but the overall adverse impacts would be minor. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **minor** adverse and **minor beneficial** impacts. The main drivers for this impact rating are the minor beneficial impacts of port utilization, moderate impacts from the presence of structures, and negligible to minor impacts from other IPFs.	*Alternative C*: The use of Onshore Export Cable Routes for Alternative C would avoid crossing Indian River Bay and the Indian River but would temporarily disrupt roads and onshore land uses, resulting in marginally greater construction impacts; however, the overall impact would not change from the Proposed Action and would remain **minor** adverse with **minor beneficial**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor** adverse with **minor beneficial**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**.	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **minor** adverse with **minor beneficial**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **minor** adverse and **minor beneficial**.
Navigation and Vessel Traffic	*No Action Alternative:* Continuation of existing environmental trends and activities under the No	*Proposed Action*: The Proposed Action would result in **moderate** impacts from changes in navigation routes,	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer)	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of

	Action Alternative would result in **moderate** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **moderate** impacts primarily due to the presence of structures.	delays in ports, degraded communication and radar signals, and increased difficulty of offshore SAR or surveillance missions, all of which would increase navigational safety risks. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **moderate** impacts, due primarily to the increased possibility for marine accidents.	Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.	from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.	associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate**.
Other Uses (Marine Minerals, Military and National Security Uses, Aviation, Scientific Research, and Surveys and SAR)	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **negligible** impacts for marine mineral extraction, military and national security uses, aviation and air traffic, cables and pipelines, and radar systems; minor impacts on USCG SAR operations; and **moderate** impacts on scientific research and surveys.	*Proposed Action*: The Proposed Action would result in **negligible** impacts for aviation and air traffic and cables and pipelines; **minor** for radar systems and USCG SAR operations; **moderate** for marine mineral extraction, military and national security uses; and **major** for scientific research and surveys. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **negligible** for aviation and air traffic and cables and pipelines; **minor** for radar systems and USCG SAR operations; **moderate** for marine mineral	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **negligible** for aviation and air traffic and cables and pipelines; **minor** for radar	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and

	Cumulative Impacts of the No Action Alternative: The No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **negligible** impacts for aviation and air traffic and cables and pipelines; **minor** impacts for marine mineral extraction, military and national security uses, and USCG SAR operations; **moderate** impacts for radar systems due to WTG interference; and **major** impacts for scientific research and surveys.	combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **negligible** to **minor** impacts for aviation and air traffic, cables and pipelines, radar systems, and USCG SAR operations; **moderate** for most military and national security uses and marine mineral extraction; and **major** for scientific research and surveys.	extraction, military and national security uses; and **major** for scientific research and surveys. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **negligible** to **minor** for aviation and air traffic, cables and pipelines, radar systems, and USCG SAR operations; **moderate** for most military and national security uses and marine mineral extraction; and **major** for scientific research and surveys.	systems and USCG SAR operations; **moderate** for marine mineral extraction, military and national security uses; and **major** for scientific research and surveys. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **negligible** to **minor** for aviation and air traffic, cables and pipelines, radar systems, and USCG SAR operations; **moderate** for most military and national security uses and marine mineral extraction; and **major** for scientific research and surveys.	would remain **negligible** for aviation and air traffic and cables and pipelines; **minor** for radar systems and USCG SAR operations; **moderate** for marine mineral extraction, military and national security uses; and **major** for scientific research and surveys. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **negligible** to **minor** for aviation and air traffic, cables and pipelines, radar systems, and USCG SAR operations; **moderate** for most military and national security uses and marine mineral extraction; and **major** for scientific research and surveys.
Recreation and Tourism	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **negligible** impacts. *Cumulative Impacts of the No Action Alternative*: The No Action Alternative combined with all other	*Proposed Action*: The Proposed Action would result in **moderate** adverse with **minor beneficial** impacts. Short-term impacts during construction include noise, anchored vessels, and hindrances to navigation from the installation of the export cable and WTGs; Long-term impacts result from the presence of cable and	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**.	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not be less than the Proposed Action	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of concern and would result in marginally lower impacts due to the reduced number of

	planned activities, including other offshore wind activities, would result in **moderate** adverse and **minor beneficial** impacts.	foundation hard protection and structures in the Lease Area during O&M. Beneficial impacts would result from the reef effect and sightseeing attraction of offshore wind energy structures. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts from ongoing and planned activities, including other offshore wind activities, would result in **moderate** adverse with **minor beneficial** impacts. The main drivers for this impact rating are the visual impacts associated with the presence of structures and lighting; impacts on fishing and other recreational activity from noise, vessel traffic, and cable emplacement during construction; and beneficial impacts on fishing from the reef effect.	*Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**.	and would be **moderate** adverse with **minor beneficial**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**.	installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **moderate** adverse with **minor beneficial**.
Visual Resources	*No Action Alternative:* Continuation of existing environmental trends and activities under the No Action Alternative would result in **minor** impacts. *Cumulative Impacts of the No Action Alternative*: The	*Proposed Action*: The Proposed Action would result in **major** impacts. *Cumulative Impacts of the Proposed Action*: Overall impacts associated with the Proposed Action when combined with the impacts	*Alternative C*: Alternative C would avoid crossing Indian River Bay and the Indian River by using Onshore Export Cable Routes and would result in marginally lower construction impacts; however, the overall impact would not change from the	*Alternative D*: Alternative D would remove 32 WTG positions and 1 OSS within 14 mi (22.5 kilometer) from shore, resulting in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables;	*Alternative E*: Alternative E would remove up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), and/or realignment of offshore export cables and/or micrositing to avoid areas of

	No Action Alternative combined with all other planned activities, including other offshore wind activities, would result in **major** impacts.	from ongoing and planned activities, including other offshore wind activities, would result in **major** impacts associated with the presence of structures, lighting, and vessel traffic.	Proposed Action and would remain **major**. *Cumulative Impacts of Alternative C*: Impacts of Alternative C when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **major**.	however, the overall impact would not change from the Proposed Action and would remain **major**. *Cumulative Impacts of Alternative D*: Impacts of Alternative D when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **major**.	concern and would result in marginally lower impacts due to the reduced number of installed WTGs, OSSs, and cables; however, the overall impact would not change from the Proposed Action and would remain **major**. *Cumulative Impacts of Alternative E*: Impacts of Alternative E when combined with impacts from ongoing and planned activities, including other offshore wind activities, would not change from the Proposed Action and would remain **major**.

3.3 Environmentally Preferable Alternatives

BOEM is required by CEQ regulations to identify in the ROD the environmentally preferable alternative(s) (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), Alternatives C1 and C2 (Landfall and Onshore Export Cable Route Alternative), Alternative D (No Surface Occupancy to Reduce Visual Impacts Alternative), and Alternative E (Habitat Impact Minimization Alternative).

Adverse environmental impacts in the Project area would generally be less under the No Action Alternative because construction and installation, O&M, and decommissioning activities and disturbances related to the proposed 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 likely result in minor to 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 wind turbines 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, which in turn could result in the loss of beneficial cumulative impacts, such as increased employment, improvements in air quality, and reductions in greenhouse gas emissions.

Alternative C was developed through the scoping process for the EIS in response to comments requesting an alternative to minimize impacts on Indian River Bay. Alternative C includes 2 sub-alternatives that would result in terrestrial onshore export cable routing that avoids crossing Indian River Bay and the Indian River, though offshore Project components within the Lease Area would be the same as the Proposed Action (Alternative B).

- Alternative C-1 includes the Towers Beach landfall (i.e., exclusion of the 3R's Beach landfall), and a terrestrial Onshore Export Cable Route from the Towers Beach landfall to the Indian River substations (POI) (i.e., Onshore Export Cable Route 2). This would be contingent on selection of Offshore Cable Route 2 (northern route).
- Alternative C-2 (Figure 2-8) includes the 3R's Beach landfall similar to the Proposed Action (i.e., exclusion of the Towers Beach landfall); however, only terrestrial Onshore Export Cable Routes from the 3R's Beach landfall to the Indian River substation would be considered. This would be contingent on selection of Offshore Cable Route 1 (southern route).

In comparison to the Proposed Action, Alternatives C1 and C2 would reduce the potential impacts on benthic resources, finfish, invertebrates, essential fish habitat, and coastal habitats due to the avoidance and minimization of impacts on sensitive habitats and the removal of cable routes through Indian River Bay. In contrast to the No Action Alternative, Alternative D, and

Alternative E, this alternative allows full build out of the Project and maximizes the potential benefits inherent in reducing greenhouse gas emissions and pollutants.

Alternative D was developed through the scoping process for the EIS in response to public comments concerning the visual impacts of the Project. Under Alternative D, no surface occupancy would occur within 14 miles (22.5-kilometers) from shore, resulting in the exclusion of 32 WTG positions and one OSS. The exclusion zone would allow fulfillment of existing ORECs, but would limit future build out, and thus decrease the ability of the Project to generate up to 2,200 MW of wind energy to the Delmarva Peninsula, including Maryland, in fulfillment of state and federal clean energy standards and targets. While a reduction in visual impacts would occur and could present potentially meaningful changes to local communities, it would not be sufficient to change the level of impacts as compared with the Proposed Action.

In comparison to the Proposed Action, Alternative D would reduce the potential impacts on benthic resources, finfish, invertebrates, essential fish habitat, marine mammals and sea turtles due to the potential removal of up to 32 WTGs and associated interarray cables. In contrast to Alternatives B and C, this alternative does not allow full build out of the Project and does not maximize the potential benefits inherent in reducing greenhouse gas emissions and pollutants.

Alternative E was identified through the scoping process for the EIS in response to comments received requesting an alternative to minimize impacts on offshore benthic habitats. NMFS identified six habitat areas of concern (AOCs) characterized by large, landscape-scale features that produce valuable habitat, or that overlap or are located close to important fishing grounds. Under Alternative E, removal of up to 11 WTG positions, removal/realignment of associated inter-array cables (if applicable), realignment of the offshore export cables, and relocation of the Met Tower would avoid the identified AOCs. In comparison to the Proposed Action, Alternative E would reduce the potential impacts on benthic resources, finfish, invertebrates, essential fish habitat, marine mammals and sea turtles due to the potential removal of up to 11 WTGs and associated interarray cables in high value habitat areas. In contrast to Alternatives B and C, this alternative does not allow full build out of the Project and does not maximize the potential benefits inherent in reducing greenhouse gas emissions and pollutants.

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, Alternatives C, D, and E would allow for the generation of electricity from sources that do not adversely affect the air quality in the region. Also, in contrast to the No Action Alternative, selection of Alternatives C, D, and E 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 G of the final EIS[12] 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 Tables G-2, and G-3 of Appendix G of the final EIS, except for the 18 Essential Fish Habitat Conservation Recommendations (CRs) that are either under USACE's jurisdiction (see final EIS Table G-2, CRs 1-13) or determined by BOEM to be infeasible or duplicative of other measures (see Final EIS Table G-2, CRs 14, 19, 25, 30, and 33) and the measures that are identified in Tables G-2 and G-3 as outside of BOEM's or BSEE's authority to enforce.

The mitigation, monitoring, and reporting measures that BOEM intends to include as conditions of approval are identified in this ROD in Appendix A. Consultation under Section 106 of the National Historic Preservation Act (NHPA) was concluded after publication of the final EIS, and stipulations included in the executed Memorandum of Agreement (MOA) for Section 106 are included in Appendix A. Appendix A also clarifies the language of certain measures that were identified in the final EIS to ensure that they are enforceable, or to reflect updates to measures being considered by NMFS for the final ITR and associated LOA.

5 Final Agency Decisions

5.1 The Department of the Interior Decision

After carefully considering the final EIS alternatives, including comments from the public on the draft EIS, DOI has decided to approve, with modifications, the COP for Maryland Offshore Wind by adopting the Preferred Alternative. By selecting the Preferred Alternative (hereinafter the "selected alternative"), DOI will allow for the construction, operation, maintenance, and eventual decommissioning of an offshore wind energy facility (the Project) consisting of up to 114 WTGs and up to 4 OSSs on the OCS offshore Maryland within Lease Area OCS-A 0490, with transmission cables making landfall at 3Rs Beach, Delaware. The selected alternative would generate approximately 2,200 MW of energy for the Delmarva peninsula. US Wind plans to develop the Project in three phases: (1) MarWin, a wind farm of approximately 300 MW for which US Wind was awarded ORECs in 2017 by the State of Maryland; (2) Momentum Wind, consisting of approximately 808 MW for which the State of Maryland awarded additional ORECs in 2021; and (3) future development of the remainder of the Lease Area to fulfill ongoing, government-sponsored demands for offshore wind energy.

The selected alternative is Alternative B (the Proposed Action), which will entail the construction, O&M, and eventual decommissioning of an up to 2,200 MW wind energy facility consisting of up to 114 WTGs, ranging from 14 to 18 MW each, up to 4 OSSs, 1 met tower, inter-array cables linking the individual WTGs to the OSSs, and substation interconnector cables

[12] Appendix G 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 the applicant-proposed mitigation measures identified in Appendix G.

linking the substations to each other would be developed in the Lease Area located 10.1 miles (16.2 kilometers) off the coast of Maryland. Additionally, up to four offshore export cables (installed within one Offshore Export Cable Route) that connect to Inshore Export Cable Route and three onshore substations with connections to the existing electrical grid near Millsboro, Delaware, would be constructed. The export cable would make landfall at 3R's Beach, traverse Indian River Bay (i.e., Inshore Export Cable Route), and connect to onshore substations next to the POI at the Indian River substation. The POI will include construction of three new substations in the vicinity of the existing substation. Development of the wind energy facility would occur within the range of design parameters outlined in the COP (US Wind 2024), subject to applicable mitigation measures.

Alternative A (No Action) would not have additional environmental and socioeconomic impacts from the proposed Project, aside from what was described in the affected environment for past and present conditions. Alternative A would also not meet BOEM's purpose and need, the goals of the project, or contribute to the Administration's goal to reach 30 GW of renewable offshore wind energy by 2030. Therefore, BOEM has not selected Alternative A.

Selection of either sub-alternative of Alternative C would result in the same offshore components and energy production as the Proposed Action, but would require terrestrial crossings for onshore cables, rather than routing through Indian River Bay. This alternative would meet the purpose and need and result in some reductions in environmental impacts, particularly estuarine impacts in Indian River Bay, but would involve multiple water body crossings along the terrestrial routes. The majority of impacts expected from the selected alternative are due to offshore activities, and Alternative C does not present a reduction in any of those activities. The overall impact designation would not differ from the Proposed Action. Alternative C would result in the elimination of approximately 168.3 acres of temporary seafloor disturbance in Indian River Bay associated with cable installation and 39 acres associated with dredging for barge access, but would include wetland impacts that are not present in Alternative B. The precise selection of onshore routing, which constitutes the sole difference between Alternatives B and C, for any action alternative is under the jurisdiction of USACE. The USACE will be completing additional consultations as part of their public interest review and determination of the Least Environmentally Damaging Practicable Alternative (LEDPA) under the Section 404(b)(1) Guidelines. Identification of the LEDPA will be documented in their independent ROD. The USACE may incorporate the final EIS or a portion thereof and prepare an appropriate and adequate NEPA document to address the USACEs involvement with the proposed action. For these reasons, BOEM has not selected Alternative C.

Selection of Alternative D would exclude all WTGs and OSSs positions within 14 miles (22.5 kilometers) of the shoreline, resulting in the exclusion of 32 WTG and 1 OSS positions. Excluding the 32 WTG positions closest to shore would reduce environmental impacts to benthic resources, finfish, invertebrates, essential fish habitat, birds, and marine mammals due to the reduction in presence of structures and the impacts associated with construction, O&M, and decommissioning. However, the reduction in impacts would not be sufficient to reduce the overall impact rating for any of these resources as compared with those of Alternative B. Eliminating the 32 WTG positions closest to shore would incrementally reduce nighttime lighting during construction, O&M, and decommissioning, and would marginally reduce seascape/landscape impacts in all Landscape Similarity Zones (LSZs). Within LSZs with direct

ocean views, the removal of these positions would perceptibly reduce the scale of the offshore proposed Project facilities. Similarly, the exclusion of WTGs would marginally reduce visual impacts from all Key Observation Points (KOPs). These marginal changes notwithstanding, Alternative D would not change the impact magnitude components or ratings provided for Alternative B. Removal of 32 turbines would constitute a 28% reduction in WTG capacity when compared to Alternative B, which would have impacts on the Project's ability to deliver the nameplate energy capacity to the Delmarva Peninsula. Though energy produced under Alternative D in the MarWin and Momentum phases would meet BOEM's purpose and need, the reduction in potential energy production coupled with the marginal reduction of impacts that do not lessen the impact rating led to BOEM's selection of Alternative B over Alternative D.

Selection of Alternative E would modify the WTG array layout by either excluding or micrositing up to 11 WTG positions, removing or realigning associated inter-array cables (if applicable), realigning the offshore export cables, and relocating the Met Tower. This alternative would reduce the short-term disturbance to valuable habitat and fishing areas, but the reduction would not be sufficient to change the level of impacts as compared with those of Alternative B. The specific AOCs identified by NMFS overlap with multiple WTG strings, and removal of components along a string may have broader implications for the overall viability of the string in whole. If Alternative E were selected, there would be long-term loss in annual energy production and associated greenhouse gas emission reductions, in comparison with the selected alternative. In contrast, the disturbances resulting from seabed preparation and cable installation activities in conditions similar to the Project have been shown to reduce in magnitude over relatively short time periods through natural processes, typically within one year following a disturbance event. Because the environmental impacts of Alternative E would be similar to those of Alternative B and due to the reduction in potential energy production if WTG positions are removed, BOEM has not selected Alternative E.

In summary, DOI considered the action alternatives that would result in fewer environmental impacts and use conflicts, while meeting the purpose and need for the action. The final EIS found that the selected alternative would result in similar impact level determinations compared to other action alternatives, and is consistent with the purpose and need. 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 representative of those included in Appendix G of the final EIS. Concurrent with the NEPA process, BOEM conducted a thorough NHPA Section 106 review of the Project with federally recognized Tribal Nations, the Delaware State Historic Preservation Office, the Maryland State Historic Preservation Office, the New Jersey State Historic Preservation Office, the Virginia State Historic Preservation Office, the ACHP, and consulting parties and, through the Section 106 review, identified 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. 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 and implementation of the MOA, which was signed by BOEM; the Delaware State Historic Preservation Office, the Maryland State Historic Preservation Office, and the Virginia State Historic Preservation Office; ACHP; and the Lessee on August 27, 2024. 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: Absentee-Shawnee Tribe of Indians of Oklahoma, Chickahominy Indian Tribe, Chickahominy Indian Tribe-Eastern Division, Delaware Nation, Delaware Tribe of Indians, Eastern Shawnee Tribe of Oklahoma, Mashantucket (Western) Pequot Tribal Nation, Mashpee Wampanoag Tribe, Monacan Indian Nation, Nansemond Indian Nation, Narragansett Indian Tribe, Pamunkey Indian Tribe, Rappahannock Indian Tribe, Seneca-Cayuga Nation, Shawnee Tribe, Shinnecock Indian Nation, Stockbridge-Munsee Community Band of Mohican Indians, Tuscarora Nation, Upper Mattaponi Indian Tribe, and Wampanoag Tribe of Gay Head (Aquinnah). BOEM held a government-to-government Tribal consultation meeting on the Maryland Offshore Wind NOI on September 30, 2022. Additionally, BOEM consulted with the Delaware Nation and the Delaware Tribe of Indians in a series of one-on-one meetings in April, May, June, and July 2024.

As set forth in the final EIS, all alternatives, including the selected alternative, except where noted, are anticipated to have major adverse impacts to the following resources:

Marine Mammals, North Atlantic Right Whale (NARW): 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. The incremental impacts of the Project alone are not expected to include entanglements or vessel strikes. Mitigation measures, such as vessels maintaining a safe separation distance from marine mammals and reduced vessel speeds, are designed to avoid vessel 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 for pile driving and HRG surveys, use of sound attenuation measures during impact pile driving, numerous vessel strike avoidance measures, and use of Protected Species Observers (PSO) and Passive Acoustic Monitoring (PAM).

Commercial Fisheries and For-Hire Recreational Fishing: Major adverse impacts are anticipated to occur, primarily because of the presence of structures (e.g., through gear loss, navigational hazards, space use conflicts, potential impacts on fisheries surveys) (see final EIS Section 3.6.1). Such adverse impacts will be mitigated through a requirement for US Wind to establish and implement a direct fisheries compensation and mitigation fund for commercial and for-hire recreational fishermen impacted by the Project, through a requirement for US Wind to maintain a fisheries gear loss claims procedure throughout the life of the Project, and through a survey mitigation agreement between US Wind and NMFS that will describe how US Wind will mitigate Project impacts on NMFS scientific surveys. BOEM anticipates including conditions of COP approval (see ROD Appendix A, Sections 6.2 and 6.3) to address this issue.

Other Uses, Scientific Research and Surveys: As set forth in the final EIS, major adverse effects are anticipated to occur to NMFS Northeast Fisheries Science Center scientific surveys (hereinafter "NMFS surveys"). NMFS and BOEM have developed the NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region (Hare et al. 2022) to address the adverse impacts. BOEM and NMFS are of the view that the solution is a collaborative effort between both agencies and the offshore wind industry to establish project specific monitoring programs that follow specific guidelines, thereby allowing the information to be combined regionally into a programmatic approach (see final EIS Section 3.17). There are 14 NMFS scientific surveys that overlap with wind energy development in the northeast region. Twelve of these surveys overlap with the Project. BOEM anticipates including a condition of COP approval (see ROD Appendix A, Section 6.3) 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 twelve 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: Due to distance, extensive field of views, strong contrasts, large scale of change, and level of prominence, as well as heretofore undeveloped ocean views, major impacts are anticipated from the presence of structures on the open ocean character unit and viewer boating and cruise ship experiences. The daytime presence of offshore WTGs and OSSs, as well as their nighttime lighting, would change perception of ocean scenes from natural and undeveloped to a developed wind energy environment characterized by WTGs and OSSs. In clear weather, the WTGs and OSSs would be an unavoidable presence in views from the coastline, with minor to moderate effects on seascape character and landscape character, and major effects on open ocean character. In coordination with BOEM, the Lessee must prepare and implement a scenic and visual resource monitoring plan (see Appendix A 7.2.1) that monitors and compares the visual effects of the wind farm 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 System (ADLS) in the monitoring plan. The Lessee must monitor the ADLS operations, 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.

Additional anticipated engineering and technical conditions of COP approval are included in Appendix A of this ROD. US Wind will certify annually that it complies with the terms and conditions of its approved COP (30 CFR § 285.633(b)). US Wind 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 that does not treat 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 12 enumerated goals.

My approval of this decision constitutes the final decision of the Department of the Interior. The action taken herein is pursuant to an existing delegation of authority.

STEVEN FELDGUS Digitally signed by STEVEN FELDGUS
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Steven H. Feldgus
Principal Deputy Assistant Secretary
Land and Minerals Management

5.2 National Marine Fisheries Service Decision

This section documents NMFS' planned determination to promulgate ITR and issue an incidental take authorization in the form of a LOA to US 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 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: (i) the action analyzed in the final EIS covers NMFS' proposed decision to issue an LOA to US Wind and meets all NEPA requirements under 40 CFR § 1506.3 (adopting an EIS); (ii) the analysis includes the appropriate scope and level of environmental impact evaluation for NMFS' proposed action and alternatives; and (iii) 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 August 31, 2022, NMFS received an application from US 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 offshore Maryland in Lease Area OCS-A 0490, for a period of five 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) ITR 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 §§ 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 US 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 April 3, 2023, after NMFS determined US 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 MMPA and its implementing regulations. Thus, the purpose of NMFS' proposed action—which was based on US Wind's request for authorization to take marine mammals incidental to specified activities associated with the Project (e.g., pile driving, marine site assessment and characterization surveys)—is to evaluate US Wind's request under requirements of the MMPA (16 U.S.C. § 1371(a)(5)(A)) and its implementing regulations (50 CFR Part 216) administered by NMFS and to determine whether the findings necessary to promulgate the ITR and issue the LOA can be made, based on the best available information. NMFS must render a decision regarding the request for authorization under its MMPA responsibilities (16 U.S.C. § 1371(a)(5)(A)) and its implementing regulations. In addition to its opportunity to comment on the draft EIS, the public was also involved in the MMPA decision-making process through its opportunity to comment on NMFS' Notice of Receipt of US Wind's incidental take request, which was published in the Federal Register (88 Fed. Reg. 27,463 [May 2, 2023]), and NMFS' proposed rulemaking that was published in the Federal Register (89 Fed.

Reg. 504 [January 4, 2024]). NMFS' final action considers those comments, as well as the corresponding formal consultation process under Section 7 of the ESA for promulgation of the final ITR and issuance of the associated LOA.

5.2.1 NMFS Decision (40 C.F.R. § 1505.2(a)(1))

Pending completion of all statutory processes, NMFS intends to promulgate an ITR and issue an LOA to US Wind, if specific findings are made, which would authorize take of marine mammals incidental to specified construction activities associated with the proposed Project (i.e., pile driving and HRG site and characterization surveys) for five years. NMFS' final decision to promulgate the ITR and issue the requested LOA will be documented in separate Decision Memoranda prepared in accordance with internal NMFS' policy and procedures. The LOA would authorize the incidental take of marine mammals while prescribing the amount and means of incidental take, as well as mitigation, monitoring, and reporting requirements, including those mandated by the BiOp that complete the formal Section 7 consultation process under the ESA. A final rule promulgating the regulations would describe NMFS' final determinations. Separately, NMFS would publish a notice in the Federal Register announcing an LOA has been issued, within 30 days of the action, in accordance with the MMPA.

5.2.2 Alternatives NMFS Considered (40 C.F.R. § 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 US Wind's request for an authorization and an action alternative in which it would issue the requested LOA to US 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 US Wind, in which case, NMFS assumes US Wind would not proceed with the proposed project as described in the application since it would be likely to cause harassment of marine mammals that is prohibited under the MMPA without an authorization. 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 US Wind, which would authorize take of marine mammals incidental to five years of specified 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 (89 Fed. Reg. 504 (January 4, 2024)) and may be modified in the final rule and LOA, if issued, in response to public comment, agency review, and ESA Section 7 consultation. The regulations and LOA, if issued, would also include monitoring and reporting requirements, as mandated under the MMPA. The Proposed Action alternative evaluated by NMFS (i.e., the promulgation of regulations and issuance of the LOA to US Wind) will provide the incidental take authorization necessary to undertake the activities identified in the Preferred Alternative evaluated by BOEM in the final EIS and selected in this ROD.

5.2.3 Primary Factors NMFS Considers Favoring Selection of the Proposed Action (40 C.F.R. § 1505.2(a)(2))

As noted earlier, NMFS must promulgate regulations and issue an LOA to US Wind in response to its request for an incidental take authorization, if specific findings are made after consideration of public comments. NMFS' Proposed Action to promulgate regulations and issue an LOA for specified activities included as part of BOEM's selected alternative effectively meets NMFS' stated purpose and need.

5.2.4 Mitigation, Monitoring and Reporting Considered by NMFS (40 C.F.R. § 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 (89 Fed. Reg. 504 (January 4, 2024)). If NMFS promulgates 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 US Wind. In summary, the mitigation, monitoring, and reporting measures generally include, but are not limited to, the following: vessel strike avoidance measures; seasonal moratorium on foundation pile driving; usage of PSOs and PAM operators; establishment of clearance and shutdown zones; soft-start and ramp-up procedures for impact pile driving and acoustic source use during high-resolution geophysical surveys, respectively; use of sound attenuation measures and PAM during foundation pile driving; requirements to conduct sound field verification (SFV) during foundation pile driving; fishery survey mitigation to avoid interactions and entanglements; and various situational and incremental (i.e., weekly, monthly, annual) reporting requirements. Appendix A of this ROD 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 and LOA; 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 Date

Deputy Assistant Administrator for Regulatory Programs

6 References

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Appendix A:ANTICIPATED Conditions of Construction and Operations Plan Approval

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

Anticipated Conditions of Construction and Operations Plan Approval
Lease Number OCS-A 0490
September 4, 2024

Subject to the conditions set forth in this document, the Bureau of Ocean Energy Management (BOEM) approves US Wind, Inc. (Lessee) to conduct activities under the Construction and Operations Plan (COP)[1] for the Maryland Offshore Wind Project (Project) in Lease Area OCS-A 0490. 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 Lessees must maintain a full copy of these terms and conditions on every Project-related vessel and are responsible for the implementation of, or the failure to implement, each of these terms and conditions by the Lessees' contractors, consultants, operators, or designees.

Contents:

[1] Maryland Offshore Wind. May 2024. Construction and Operations Plan, US Maryland Offshore Wind, Volumes I-II.

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 the 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 0490 (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 (C.F.R.) § 585.106(b) and 30 C.F.R. § 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 C.F.R. § 585.106 and 30 C.F.R. § 285.400, where appropriate.

1.1.1 As provided 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) up to 114 wind turbine generators (WTGs), up to 4 offshore substations (OSSs), up to 1 permanent meteorological (met) tower, interarray and interlink cables, and up to 4 export cables within an export cable corridor of up to 35 km (21.7 mi) in length 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 mitigation measures in the ROD and these terms and conditions, these terms and conditions 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 earlier of the end of the operations period or termination of the Lease.

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 June 18, 2024;[2] the BiOp issued by the U.S. Fish and Wildlife Service (USFWS) on May 31, 2024;[3] the

[2] *See* BiOp Letter from Michael Pentony, Regional Administrator, US Dept of Commerce National Oceanic and Atmospheric Administration NMFS GARFO, to Karen Baker, Chief Office of Renewable Energy Programs, BOEM. National Marine Fisheries Service Endangered Species Act Section 7 Biological Opinion for the Maryland Wind Project (June 18, 2024), https://www.boem.gov/renewable-energy/state-activities/nmfs-esa-consultations [hereinafter NMFS BiOp]. This is inclusive of the avoidance, minimization, and mitigation measures described in the proposed action and included in the BiOp's ITS.

[3] *See* BiOp Letter from Genevieve Pullis LaRouche, Field Office Supervisor, U.S. Fish and Wildlife Service, Chesapeake Bay Field Office, to David Bigger and Lorena Edenfield, BOEM. (May 31, 2024), https://www.boem.gov/renewable-energy/state-activities/fws-esa-consultations [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.

Letters of Authorization (LOAs) issued for the Project under the Marine Mammal Protection Act (MMPA); the Section 106 Memorandum of Agreement (MOA) executed on August 21, 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 (RPMs) resulting from a 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 Deputy Chief for Atlantic Operations and 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 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, BOEM or BSEE, in consultation with the other Bureau, may grant a request for variance if the appropriate Bureau determines 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 subsection 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 for variances or departures in these terms and conditions.

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: met tower installation, seabed preparation activities such as boulder relocation and pre-lay grapnel runs, export cable installation, inter-array cable installation, WTG and OSS foundation installation, WTG tower and nacelle installation, OSS topside installation, and cable and scour protection installation.

1.7 Inspections. As provided for in Term and Condition Item 12 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 purposes 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 Lessee representative who will, as practicable, respond to these communications.

1.8.1 The Lessee must post construction notices and other publicly relevant information on 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 on the Project website within 5 business days of availability.

1.8.2.1 Locations where 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 2.14.

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

1.8.2.3 The Fisheries Communication Plan (COP Volume II Appendix F1).

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 use a North America Datum of 1983 (NAD83) Universal Transverse Mercator (UTM) Zone 18 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 Submissions. Unless otherwise stated, the Lessee must provide any submissions required under these conditions to the stated agencies through the following:

1.9.1 BOEM[4] and/or BSEE:

1.9.1.1 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.

1.9.1.2 For Sections 5 through 9 of this appendix, via email to renewable_reporting@boem.gov for submissions to BOEM, and

1.9.1.3 TIMSWeb for all submissions to BSEE in addition, unless otherwise stated, for Section 5 a notification email to protectedspecies@bsee.gov, Section 7 a notification email to env-compliance-arc@bsee.gov, and Section 8 a notification email to oswsubmittals@bsee.gov.

1.9.2 U.S. Army Corps of Engineers (USACE) Baltimore District at NAB-Regulatory@usace.army.mil and Philadelphia District at napregulatory@usace.army.mil. The Lessee must confirm any additional points of contact with USACE prior to submitting.

1.9.3 USFWS Chesapeake Field Office at cbfoprojectrecview@fws.gov. The Lessee must confirm the correct point of contact with the USFWS prior to submitting.

1.9.4 Environmental Protection Agency (EPA) at chan.suilin@epa.gov and petriman.viorica@epa.gov. The Lessee must confirm the correct point of contact with the EPA prior to submitting.

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

1.9.6 NMFS:

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

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

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

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

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

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 risks 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 findings; (3) an identification survey to determine the nature of the identified objects and report of findings; (4) MEC/UXO mitigation; 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/or 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 C.F.R. § 585.702 and Lease Stipulation 4.2.7). As part of the Fabrication and Installation Report (FIR) and prior to commencing seabed preparation activities (such as but not limited to pre-lay grapnel run and boulder relocation) and installation activities, the Lessee must make available for review to the approved Certified Verification Agent (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 mitigation measure(s), and/or construction re-routing.

2.2 MEC/UXO Investigation Survey Plan. The Lessee must submit an Investigation Survey Plan to BOEM and BSEE for review and concurrence prior to seabed disturbing activities and the installation of facilities in the area of potential disturbance. The MEC/UXO Investigation Survey Plan must describe the surveys that will be performed to determine the nature of objects as potential MEC/UXO to reduce risks to ALARP levels. The plan must include information on the proposed survey vessel, equipment, methodologies, and planned survey schedule.

2.3 MEC/UXO Investigation Survey Report. The Lessee must submit an Investigation Survey Report to BOEM and BSEE for review and concurrence prior to seabed disturbing activities and the installation of facilities in the areas of potential disturbance. The report must include the following:

2.3.1 A detailed discussion of methodologies.

2.3.2 A summary and detailed description of findings for target discrimination.

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

2.4 MEC/UXO Identification Survey Plan. The Lessee must submit an Identification Survey Plan to BOEM and BSEE for review and concurrence prior to seabed preparation activities and the installation of facilities in the areas of potential disturbance. The MEC/UXO Identification Survey Plan must describe the surveys that will be performed to determine the nature of objects identified as potential MEC/UXO to reduce risks to ALARP levels. The plan must include information on the proposed survey vessel, equipment, methodologies, and planned survey schedule. If the Identification Survey Plan is not consistent with the recommendations included in the DTS and Investigation Survey

Report, the Identification Survey Plan must discuss in detail the deviations and the associated rationale.

2.5 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 seabed disturbing activities and the installation of facilities in the areas of potential disturbance. The report must include the following:

2.5.1 A detailed discussion of methodologies.

2.5.2 A comprehensive list and shapefile of locations of all confirmed MEC (latitude, longitude).

2.5.3 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, detonation, micrositing of facilities, changes to installation or operational activities, and cable re-routings.

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

2.5.5 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.

2.6 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 performing any seabed preparation activities (including activities associated with the Pre-Lay Grapnel Run Plan (Section 2.27) and Boulder Identification and Relocation Plan (Section 5.3.4)), and prior to commencing installation activities with the submission of the relevant FIR.

2.7 MEC/UXO Discovery Notification. In the event of a confirmed MEC/UXO, the Lessee must coordinate with the USCG to ensure that the MEC/UXO discovery is published in the next version of the LNM for the specified area and must provide BOEM and BSEE with 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, and relevant agency representatives within 24 hours of any such discovery made during activities, such as seabed clearance, construction, and operations:

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

2.7.2 A description of the activity at the time of discovery (e.g., survey, seabed clearance, cable installation);

2.7.3 A description of the location (latitude, longitude);

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

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

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

2.8 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. Under all circumstances of confirmed MEC/UXO, the Lessee must demonstrate to BSEE's and BOEM's satisfaction that avoidance of confirmed MEC/UXO through micrositing of planned infrastructure (e.g., WTGs, OSSs, inter-array cables, or export cables) 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:

2.8.1 A description of the method of munitions response (in situ disposal, or relocation through "lift and shift") and an analysis describing the identification and determination of the method chosen for each confirmed MEC/UXO;

2.8.2 A hazard analysis of the response activities;

2.8.3 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;

2.8.4 The contact information of the identified munitions response contractor;

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

2.8.6 A proposed timeline of activities;

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

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

2.8.9 A description of the potential for human exposure;

2.8.10 A medical emergency procedures plan;

2.8.11 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;

2.8.12 A plan for accidental detonation; and

2.8.13 A plan for removal of non-MEC/UXO discoveries and debris during MEC/UXO mitigation.

2.9 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:

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

2.9.1.1 A comprehensive list and shapefile of As Found location and, if applicable, As Left location (latitude, longitude);

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

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

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

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

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

2.9.3 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;

2.9.4 The results of the munitions response;

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

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

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

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

2.10 Safety Management System. Pursuant to 30 C.F.R. § 285.810, a 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").

2.10.1 The Lessee must submit all SMS related documentation to BSEE via TIMSWeb.

2.10.2 The Lessee must 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 2.10.3 and verify that the submissions are acceptable.

2.10.3 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.

2.10.4 Pursuant to 30 C.F.R. § 285.812, the Lease Area's Primary SMS must be functional when the Lessee begins activities described in the approved COP. The Lessee must conduct all activities described in its approved COP in accordance with the SMS. 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 the scheduled beginning of the relevant activities described in the COP.

2.10.5 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 and BSEE is satisfied that the Lease Area Primary SMS is effective and functional.

2.10.6 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 the relevant SMS(s) failed to ensure safety.

2.11 Emergency Response Procedure. Prior to the 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 to the procedure once every 3 years and upon BSEE's request, consistent with Section 2.10.5. The Emergency Response Procedure must address the following:

2.11.1 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 (i.e. mass marine debris, fires, vessel allisions) 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; (5) notifying Federal, Tribal Nations, state, local officials of an emergency response event; and (6) providing the USCG with environmental data, imagery, communications, and other information pertinent to search and rescue or marine pollution response.

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

2.11.3 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.

2.12 Oil Spill Response Plan. Pursuant to 30 C.F.R. § 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 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 C.F.R. § 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:

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

2.12.2 Table of Contents.

2.12.3 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.

2.12.4 Facility and Oil Information. "Facility", as defined in 30 C.F.R. § 585.113, means an installation that is permanently or temporarily attached to the seabed of the OCS. An OSS 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:

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

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

2.12.4.3 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.

2.12.5 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.

2.12.6 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 (ICS) position in the OSRP.

2.12.6.1 "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.

2.12.6.2 "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.

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

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

2.12.7.2 IMT members, including phone numbers and email addresses;

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

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

2.12.7.5 Other response organizations and subject matter experts that the Lessee will rely on, including nongovernmental wildlife response and rehabilitation services.

2.12.8 Spill Mitigation Procedures. The OSRP must describe the different discharge scenarios that could occur from the Lessee's facilities and the mitigation procedures 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:

2.12.8.1 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).

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

2.12.8.3 Procedures to remove oil and oiled debris from the water surface and along shorelines.

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

2.12.9 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).

2.12.10 OSRO(s) and SROT(s). The Oil Spill Removal Organization (OSRO) is an entity contracted by the Lessee to provide spill response equipment and/or manpower in the event of an oil spill. The Spill Response Operating Team (SROT) is the group of 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.

2.12.11 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.

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

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

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

2.12.11.4 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.

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

2.12.12 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 position-specific 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.

2.12.13 Worst-Case Discharge 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.

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

2.12.13.2 The WCD facility must be identified on the facility map consistent with the "Facility and Oil Information" Section 2.12.4.

2.12.13.3 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.

2.12.14 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:

2.12.14.1 Be based on the WCD volume.

2.12.14.2 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.

2.12.14.3 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.

2.12.15 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.

2.12.15.1 The triennial exercise plan must include annual scenario-based notification exercises, at least one functional IMT exercise, and annual scenario-based IMT tabletop exercises in the two years without a functional exercise. The Lessee must conduct an annual oil spill response equipment deployment exercise.

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

2.12.15.3 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.

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

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

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

2.12.16 OSRP Review and Update. The Lessee must review and update the 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.

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

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

2.12.17.2 The calculated WCD volume has significantly increased.

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

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

2.13 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 with 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.

2.14 Cable Burial. The Lessee must install the export and inter-array cables using jetting, trenching, or plowing, as described in Section 3.6.2 of the approved COP. For the approved COP, BOEM has determined the proper burial depth to be a minimum of 3.3 feet (1.0 m) below the stable seabed for federal sections of the export and inter-array cables. This depth is consistent with the approved COP and the cable burial performance assessment provided in COP Appendix II-K5 and K7. 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 90 percent of the total export cable length on the OCS and 90 percent of the inter-array cable length, excluding cable crossings and approaches to foundations. The Lessee must demonstrate proper burial depth by providing cable monitoring reports (Section 2.17) and final, as-built information (Section 2.24).

2.15 Cable Protection Measures. In areas where the final cable burial depth is less than 1.0 m below seabed, excluding cable crossings and within the vicinity of WTG/OSS foundations where cables are enclosed within a cable protection system, the Lessee must install secondary protection such as concrete mattresses, rock bags, or rock placement and must adhere to the scour and cable protection measures in Section 5.3.7.

2.15.1 The use of cable protection measures must not exceed 10 percent of the total export and inter-array cable length, excluding cable crossings and approaches to foundations. The Lessee must employ cable protection measures when proper burial depth, as defined in Section 2.14, 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. The Lessee must also provide BSEE with detailed drawings/information of the actual burial depths and locations where protective measures were used in accordance with timeframes in Section 2.24. The Lessee must post on the project website

(Section 1.8, Project Website) notice of locations where target burial depths were not achieved and where cable protection measures were used, including an accessible graphic/geo-referenced repository.

2.15.2 The use of cable protection measures through the proposed Cape Charles to Delaware Bay Shipping Safety Fairway should be limited in extent and vertical profile to maintain vessel navigability. Cable protection measures through the proposed fairway should not result in more than a 20 percent reduction in the measured water depth above the protection measure.

2.15.3 If the Lessee requests a variance under Section 1.5 for the requirements of Section 2.15, the Lessee must include with the request CVA verification of the proposed alternative.

2.16 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 business days before seabed preparation activities which occur within 500 m of such infrastructure, including boulder clearance. The Lessee must also provide information on cable crossing agreements which have not been finalized, including draft agreements and communication logs between owners or operators. The Lessee must make the agreements and crossing designs available to the CVA for review unless otherwise determined by BOEM.

2.16.1 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 business days before seabed preparation activities which occur within 500 m of the in-use infrastructure, 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.

2.17 Post-Installation Cable Monitoring. The Lessee must conduct an inspection of each inter-array and export cable to determine cable location, burial depths, and site conditions, and to assess the state of the cables. Inspections must occur within 6 months following installation of the export and inter-array cables, within 1 year following completion of the initial post-installation inspection, and every 3 years thereafter. Additional inspections must be conducted within 180 days of a storm event (as defined in the Post-Storm Event Monitoring Plan, described in Section 2.21). 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 all federal sections of the cable routing, to be included in the cable monitoring report. The cable

monitoring report must also include summary records from monitoring systems used to assess the state of the cables, such as distributed temperature sensing (DTS) or other condition assessment techniques. Additionally, the Lessee must notify BSEE within 30 days if monitoring systems detect changes that exceed thresholds of the cable design associated with the chosen monitoring technique.

2.17.1 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.

2.17.2 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.

2.17.3 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.

2.18 WTG and OSS Foundation Depths. The Lessee must include, with the relevant FDR, geotechnical investigations at all approved foundation locations along with associated geotechnical design parameters and recommendations pursuant to BOEM's March 30, 2022, departure approval[5] and consistent with 30 C.F.R. § 285.701(a)(10). The geotechnical investigations at each OSS must include, at a minimum, one deep boring located within the footprint of each OSS.

2.19 Structural Integrity Monitoring. In accordance with 30 C.F.R. § 285.824(a) (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.

[5] BOEM March 30, 2022, Departure Request Approval to US Wind Inc., https://www.boem.gov/sites/default/files/documents/renewable-energy/OCS-A0490Letter%20to%20US%20Wind%20Approving%20Geotechnical%20Departure%20Request.pdf

2.19.1 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 the as-installed platform orientation; and f) measurement of the as-installed platform elevation from the mean lower low water datum.

2.19.2 Above-water Inspection. The Lessee must conduct annual above-water inspections to ensure structural integrity is maintained. The Lessee must inspect the condition of cathodic protection system(s), deteriorating coating systems, excessive corrosion, indications of obvious overloading, and bent, missing, or damaged members of the structure in the splash zone and above the water line. The Lessee must provide a summary of the findings in the Annual Self-Inspection Report pursuant to 30 C.F.R. § 285.824(c). See Section 2.21 for post-storm structural integrity monitoring.

2.20 Foundation Scour Protection Monitoring. The Lessee must inspect scour protection performance. The Lessee must submit an Inspection Plan to BSEE for review and concurrence with the relevant FDR.

2.20.1 The Lessee must include in the Inspection Plan how it will document and monitor the occurrence of lionfish to understand the occurrence of invasive lionfish (*Pterois volitans* and P. miles).

2.20.2 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 2.21).

2.20.3 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.

2.20.4 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.

2.21 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 with the relevant FDR. The Lessee must address BSEE's comment(s) to BSEE's satisfaction and receive concurrence prior to commencing installation activities. The Lessee may submit separate plans for the cables (including cable protection), the WTGs, the OSSs, and met tower. The plan must describe how the Lessee will measure and monitor environmental conditions and duration of storm events; specify the environmental condition thresholds (and their associated technical justification) above which post-storm event monitoring or mitigation is necessary; 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 for each OSS, met tower, and 10% of the WTGs including associated scour protection, following each storm where any condition(s) exceeds the one-half the design return period. For example, a WTG platform designed for 50-year environmental conditions must be inspected following a storm event with 25-year environmental conditions. Cables must be inspected in accordance with Section 2.17. To change the post-storm event inspection triggering criteria the Lessee must submit a revised plan for BSEE review and concurrence. BSEE reserves the right to require post-storm mitigations and additional inspections to address conditions that could result in safety risks and/or impacts to the environment.

2.22 High-Frequency Radar Interference Analysis and Mitigation. The Lessee's Project has the potential to interfere with oceanographic high-frequency (HF) radar systems in the U.S. 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 Lessee's Project is within the measurement range of nine oceanographic HF radar systems listed in Table 2-1 below:

Table 2.22-1: Identified IOOS HF Radar Systems

Radar Name	Radar Operator
Assateague, MD SeaSonde (ASSA)	Old Dominion University
Brigantine, NJ SeaSonde (BRIG)	Rutgers University
Cape Henlopen, DE SeaSonde (HLPN)	University of Delaware
Cape May Point, NJ SeaSonde (CMPT)	Rutgers University
Cedar Island, VA SeaSonde (CEDR)	Old Dominion University
Loveladies, NJ SeaSonde (LOVE)	Rutgers University
North Wildwood, NJ (WOOD)	Rutgers University
Strathmere, NJ SeaSonde (RATH)	Rutgers University
Wildwood, NJ SeaSonde (WILD)	Rutgers University

2.22.1 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. The Lessee must mitigate interference 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 where 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.

2.22.2 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 2.22.1. 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. If, after consultation with the NOAA IOOS Office, BOEM deems the mitigation acceptable, the Lessee must conduct activities in accordance with the proposed mitigations. If, after consultation with NOAA IOOS Office, BOEM deems the mitigation unacceptable, the Lessee must resolve all comments on the documentation to BOEM's satisfaction.

2.22.3 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. A Lessee may satisfy its obligations under Section 2.22.2 by providing BOEM with an executed Mitigation Agreement between the Lessee and NOAA IOOS. If there is any discrepancy between Section 2.22.2 and the terms of a Mitigation Agreement, the terms of the Mitigation Agreement will prevail.

2.22.4 Mitigation Data Requirements. Mitigation required under Section 2.22.2 must address the following:

2.22.4.1 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.

2.22.4.2 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.

2.22.5 Additional Notification and Mitigation.

2.22.5.1 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 2.22.5.2 as soon as possible and no later than 30 days from the date on which the determination was communicated.

2.22.5.2 If a mitigation measure other than that identified in Section 2.22.2 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.

2.23 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 other 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 2.23.5.

2.23.1 Qualified Third Party. A qualified third party must be 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.

2.23.2 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.

2.23.3 Identification of Critical Safety Systems Risk Assessment(s). The Lessee must conduct a risk assessment(s) to identify hazards and the critical safety systems used within its facilities, including WTG(s), tower(s), and each OSS, 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 C.F.R. § 285.700.

2.23.4 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 OSS 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 OSS. The Lessee must arrange for a qualified third party, at a minimum, to verify the following:

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

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

2.23.4.3 The systems and equipment function as designed.

2.23.4.4 The completion of the final commissioning records.

2.23.5 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 2.23.2. Surveillance records for each OSS 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 that 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, the Lessee may presume concurrence and continue operating. If the surveillance records or Conformity Statement and supporting documentation are not submitted within a 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.

2.24 Engineering Drawings. The Lessee must compile, retain, and submit to BSEE the drawings and documents specified in Table 2.24-1.

Table 2.24-1: Engineering Drawings

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.[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. Include a table with and show the relationships between: (1) vertical datum planes including Highest Astronomical Tide (HAT), Mean Lower Low Water (MLLW), Mean Sea Level, and others as applicable, (2) 1,000-year wave crest elevation, and (3) elevation to the underside of the deck.	N/A

6 As required by 30 CFR § 285.701(a)(4). This is applicable to the WTGs and OSSs.

7 As required by 30 CFR § 285.701(a)(3). This is applicable to the WTGs and OSSs.

Table 2.24-1: Engineering Drawings

Drawing Type	Time Frame to Submit "Issued for Construction" (IFC) Drawings	Deadline to Submit Final, As-Built Drawings
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.
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 7.1.2	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 activities	N/A	Submit 90 days after completion of an activity or construction of a major facility component.
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. Drawings must show location of all lifesaving equipment and egress routes.	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.

[8] As required by 30 CFR § 285(a)(2). This is applicable for all installed assets on the OCS including scour protection, cables, met tower, WTGs, and OSSs.

[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.

Table 2.24-1: Engineering Drawings

Drawing Type	Time Frame to Submit "Issued for Construction" (IFC) Drawings	Deadline to Submit Final, As-Built Drawings
Area classification diagrams	With FDR submittal.	Submit quarterly for all facilities installed in the previous quarter.

2.24.1 Engineering drawings, as outlined in Table 2.24-1, and the associated engineering report(s) must include the lease number "OCS-A 0490" on all drawings and reports and, where applicable, the Area Name, Block Number, and Structure Designation on all drawings and reports. Also, these drawings and reports must be reviewed and stamped by a licensed professional engineer or a professional land surveyor. Pursuant to 30 C.F.R § 285.705(a), 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 C.F.R § 285.703(c). This applies beginning 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, any changes that result in material changes from the IFC drawings have been analyzed and are acceptable, 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.

2.24.2 As-Placed Anchor Plats. The Lessee must provide as-placed anchor plats to BOEM and BSEE within 90 days of completion of an activity (including during operations and decommissioning) or construction of a major facility component (e.g., buoys, export cables, WTGs or OSSs, inter-array cables, etc.) or decommissioning to demonstrate 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 meters) with Differential Global Positioning System (DGPS) accuracy. The Lessee must submit the plats to BSEE.

2.25 Construction Status. Every 2 weeks during months in which installation activities are ongoing, the Lessee must provide BSEE, BOEM, and the USCG with a construction status update and any changes to the schedule or process described in the plan required by Section 3.2.1 (Installation Schedule). The Lessee must also include a list of all vessels

being used and a comprehensive list and shapefile of As-Built locations of all installed infrastructure (met tower, WTG, OSS, cables) with the construction status update.

2.25.1 For met tower, WTG, and OSS facilities, the As-Built locations must include the following:

2.25.1.1 Area and block;

2.25.1.2 USCG approved, unique alpha-numeric identification;

2.25.1.3 Latitude and longitude (expressed in decimal degrees relative to the western hemisphere (negative longitude) and Easting and Northing);

2.25.1.4 Water depth (in feet and meters, referenced to MLLW); and

2.25.1.5 Installation date for each major structural component, as applicable (i.e., foundation, transition piece, tower, RNA, blades, topsides (OSS)).

2.25.2 For cables, the As-Built locations must include the following:

2.25.2.1 Unique cable segment identifier (ideally, expressive of the facilities or joints at cable terminations);

2.25.2.2 String number; and

2.25.2.3 Latitude and longitude at 0.001 KP intervals (expressed in decimal degrees relative to the western hemisphere (negative longitude) and Easting and Northing).

2.26 Maintenance Schedule. On a quarterly basis, the Lessee must provide BSEE with its maintenance schedule for any planned met tower, WTG, or OSS maintenance.

2.27 Pre-lay Grapnel Run Plan. The Lessee must submit a Pre-lay Grapnel Run Plan for BSEE review and concurrence. The Lessee must submit the plan at least 120 days prior to pre-lay grapnel run activities. BSEE will review the plan and provide comments, if applicable, within 60 business days of submittal. The Lessee must resolve BSEE's comments to BSEE's satisfaction. If BSEE does not provide comments on the plan within 60 business 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 2.10.

2.27.1 The plan must include the following:

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

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

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

2.27.1.4 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 2.16).

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

2.27.1.6 A description of MEC/UXO ALARP certified areas, which must be consistent with MEC/UXO ALARP Certification (Section 2.6).

2.27.1.7 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).

2.27.2 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, OSS, and met tower with "OCS-A 0490" in addition to the USCG private aids to navigation. No sooner than 180 days and no less than 60 days before foundation installation, the Lessee must file an application (form CG-2554, or CG-4143, as appropriate), with the Commander of the Fifth Coast Guard District to establish Private Aids to Navigation (PATON), as provided in 33 C.F.R. Part 66. USCG acceptance of the application must be obtained before the Lessee begins installation of the facilities. The lighting, marking, and signaling plan, and 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 the USCG, and obtain 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 Clearly and visibly mark each individual WTG, OSS, and met tower with "OCS-A 0490" and the unique, alpha-numeric identification characters as identified in the lighting, marking and signaling plan "OCS-A 0490" must be inscribed directly above or below the alpha-numeric identification characters be on each WTG and OSS. The Lessee must additionally display "OCS-A 0490" and the alpha-numeric identification character as identified in the lighting, marking, and signaling plan on each WTG nacelle, and on the OSS's heli-hoist and/or heli-pad area, 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 [AC] 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 (HAT).

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 the 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 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 north – south to less than 1 nautical miles (nmi) or east to west to less than 0.76 nmi; except the met tower position located on the western edge of the west to east row, which must not be less than 0.47 nmi from the nearest gridded location. The Lessee must not change the approved layout to eliminate the two distinct lines of orientation in the grid pattern. The Lessee must submit the final as-built structure locations as part of the as-built documentation outlined in Section 2.24.

3.2 Installation Conditions.

3.2.1 Installation Schedule. Not less than 60 days prior to commencing offshore construction activities, the Lessee must provide the USCG with a plan that describes the schedule and process for seabed preparation, export and inter-array cable installation, and WTGs and OSSs 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 Cable Burial. The Lessee must submit a detailed cable burial plan, containing the proposed locations and burial depths, to the USCG no later than the relevant FIR submittal. If secondary cable protection is needed, as described in Section 2.15, it must not reduce the water depth by 20 percent. In accordance with Section 2.24, the Lessee must submit to BOEM and the USCG a copy of the final as-built cable burial report containing a positioning list that depicts the precise location and burial depths of the entire cable system (export and array routes).

3.2.3 Nautical Charts/Navigation Aids. The Lessee must submit as-built cable burial reports (containing precise locations and burial depths), OSS locations, and WTG locations, and met tower locations to USCG and NOAA, consistent with Section 2.24, to facilitate government-produced and commercially available nautical charts and aid USCG cross-reference structures with 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 C.F.R. Part 285.

3.3.2 Correspondence. On a monthly basis, the Lessee must provide BSEE, BOEM, and the 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 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 US Fleet Forces Command and Naval Air Warfare Center Aviation Division for the following conditions:

4.2.1 The Lessee must 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.

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

4.2.3 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 must seek resolution to conflicts as it is determined to be practicable.

4.3 North American Aerospace Defense Command (NORAD) Operations. The Lessee must enter into a mitigation agreement with the DoD/NORAD 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. The NORAD point-of-contact for the development of the agreement 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. Within 45 days of completing the requirements in Section 4.3, the Lessee must provide BOEM with evidence of compliance with those requirements.

4.3.1 Radar Adverse Impact Management (RAM) Scheduling. To mitigate impacts on the NORAD of the Wallops Island, Maryland Airport Surveillance Radar model 8 (ASR-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. The Lessee must again notify NORAD when the commissioning of the last WTG is complete.

4.3.1.2 Funding for RAM Execution. 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 contribute funds in the amount of $80,000 to NORAD toward the execution of the RAM. 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 additional funds in the amount of $80,000 per affected radar to NORAD toward the execution of the RAM when 50 percent of the WTGs are commissioned, and an additional $80,000 per affected radar to NORAD toward the execution of additional RAM when the last WTG is commissioned if commissioning of the last WTG occurs later than 3 years from commissioning of the first WTG. 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 Sections 4.4.1 through 4.4.3, the Lessee must provide BOEM with evidence of compliance with those requirements. The DON point-of-contact for coordination is Matthew Senska: matthew.c.senska.civ@us.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 Fiber-Optic Sensing Technology and Acoustic Monitoring Devices. At least 240 days prior to deployment, 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 for a 180-day review. If the DON requests additional information, the Lessee must provide it within 15 days of the request.

4.4.1.1 The following information must be provided:

4.4.1.1.1 Sensor deployment dates and duration;

4.4.1.1.2 Siting routes and locations of acoustic monitoring devices;

4.4.1.1.3 Shore station location;

4.4.1.1.4 DOFS and acoustic monitoring capabilities;

4.4.1.1.5 Make and model of integrated (or planned integration/deployment of) and standalone scientific sensors;

4.4.1.1.6 Manufacturers and vendors;

4.4.1.1.7 Plans for data storage;

4.4.1.1.8 Transmission and usage; and

4.4.1.1.9 Associated physical and cybersecurity protocols.

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

4.4.1.3 If the DON determines through the evaluation in Section 4.4.1 that the use of DOFS or other acoustic monitoring devices presents risk to national security or military operations, the Lessee must work with DON to implement mitigation measures to address the risk (Section 4.4.3). The Lessee must implement DON mitigation within 30 days of notification from the DON.

4.4.1.4 As-Builts. The Lessee must provide DON 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.

4.4.2 National Security Review. Within 45 days following approval of the COP, the Lessee must provide DON 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, who supply or manufacture equipment used on the project, control equipment used on the project, or have access to associated data systems. In addition, the Lessee must provide such information for each director and the top five executives of the Lessee and the project operator. The Lessee must also provide the following information for each identified person: full legal name, date of birth, country of citizenship, and permanent address.

4.4.2.1 The Lessee and DON 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 DON of information regarding any foreign entities and persons allowed to access the wind turbine structures and associated data systems.

4.4.2.2 The DON will screen the names of the entities and persons identified. Once the Lessee submits the names of the entities and persons for screening, DON will identify to the Lessee, no later than 60 days after the receipt of the name of any entity and person posing a security concern.

4.4.2.3 The Lessee must provide written notice to the DON 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 DON 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.

4.4.2.4 In any case in which the DON identifies any entity and any person screened in accordance with this section as posing national security risk, the Lessee agrees to enter into negotiations with DON to mitigate the risk to national security that arises as a result of the proximity of any entity and person posing a national security concern to military activities. Except in unexpected situations as previously described, the threat to national security must be resolved to the satisfaction of the DON 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 wind turbines 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 DON at the earliest opportunity.

4.4.3 Mitigation Measures. As a result of the analyses conducted pursuant to Sections 4.4.1 and 4.4.2, the DON and Lessee will coordinate to implement mitigation required to address national security risk. To implement mitigation measures, DON may determine it necessary for the Lessee to enter into an additional mitigation agreement to detail the agreed upon terms. Mitigation measures may include, but are not limited to, the following:

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

4.4.3.2 Restrictions on DOFS, multi-phenomenological sensing, 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 DON.

4.4.3.3 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 it is banned by any agency of the United States.

4.4.3.4 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.

4.4.3.5 Temporary or permanent shutdown or data diversion of cable distributed sensing, multi-phenomenological sensing, or acoustic monitoring devices in sensitive locations, as determined and required by DON.

4.4.3.6 Reporting requirements for the Lessee and subcontractor reporting requirements concerning business and ownership relationships with foreign entities and use of non-citizens for installation and maintenance work.

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

[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 C.F.R. § 17.11-12. The term also includes marine mammals protected under the MMPA.

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 OSS at the time the relevant FIR is submitted.

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, annual survey and reporting, and decommissioning and site clearance) described in Sections 5.1.2.1 through 5.1.2.8 to BSEE via TIMSWeb.

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 and are certified prior to engaging in offshore activities and annually thereafter. The training and certification process must include training through viewing of either a marine debris video or training slide pack posted on the BSEE website (https://www.bsee.gov/debris).

5.1.2.2 Training Compliance Report. Before engaging in offshore activities pursuant to the approved COP and by January 31 of each year thereafter, the Lessee must submit to BSEE a report that describes its marine debris awareness training process and certifies that all personnel have completed the required training for the previous year. The Lessee must make this certification available for inspection by BSEE upon request.

5.1.2.3 Marking. Any materials, equipment, tools, containers, and other items that are used in OCS activities and that are of such a 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 able to resist the effects of the environmental conditions to which they may be exposed.

5.1.2.4 Recovery. 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

[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.

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 and Recovery. 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 cause undue harm or damage to natural resources or interfere with OCS uses). After reviewing the notification BSEE may order the Lessee to recover the marine debris within a specified timeframe, or at the time of decommissioning, if the debris was not immediately recovered.

5.1.2.6 Recovery Plan. If BSEE orders the Lessee to recover the marine debris, the Lessee must then submit a Recovery Plan to BSEE within 10 calendar days. BSEE may order the Lessee to submit additional or updated Recovery Plans if there is an ongoing loss of marine debris event. Unless BSEE objects within 2 business days after initiating review, the Lessee may proceed with the activities described in the Recovery Plan. BSEE must be notified that recovery activities are complete within 30 days from the time the marine debris notification was submitted, unless BSEE grants the Lessee an extension.

5.1.2.7 Annual Reporting. The Lessee must include, for each release, the following in an annual report submitted to BSEE via TIMSWeb by January 31st of each year: The report should be in chronological order and 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 release;

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 released object(s), including dimensions (approximate length, width, height, and weight), composition (e.g., plastic, aluminum, steel, wood, or paper), and buoyancy (floats or sinks);

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

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

5.1.2.7.7 An explanation of 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 conduct a survey around at least 10 WTG foundations for lost fishing gear annually 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 quantity 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. The Lessee must submit annual reports in both Microsoft Word and Adobe PDF format. The Lessee must provide photographic and videographic materials (TIFF or Motion JPEG 2000) in TIMSWeb with the submittal of the annual report. The Lessee may submit photographic and videographic files to marinedebris@bsee.gov if the files cannot be uploaded in TIMSWeb. The Lessee may only modify survey design and effort (i.e., the number of WTGs and frequency of reporting) upon review and concurrence by BOEM and BSEE.

5.1.2.8.1 Annual reports must include a summary of the survey reports including 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).

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 5.2.8 to BOEM; to BSEE via TIMSWeb and with a notification email to protectedspecies@bsee.gov; and to USFWS Chesapeake Bay Field Office at (cbfoprojectreview@fws.gov). 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 OSS. The Lessee must submit for BOEM and BSEE approval a plan to deter perching on offshore infrastructure by roseate terns and other marine birds. BOEM, BSEE, and USFWS will review the Bird Perching Deterrent Plan and provide any comments on the plan to the Lessee within 60 business days of its submittal. The Lessee must resolve all comments on the Bird Perching Deterrent Plan to BOEM's satisfaction before the Lessee may begin installation of WTGs or OSSs. 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 Lessee must propose the location of bird deterrent devices based on Best Management Practices applicable to the appropriate operation and safe installation of the devices. The Lessee must include the bird perching deterrents from the Plan with the appropriate FDR. The Bird Perching Deterrent Plan must be approved before the Lessee may commence with installation of any WTGs or OSSs. 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 PATONs (Section 3.1.1.1).

5.2.4 Avian and Bat Monitoring Program. The Lessee must develop and implement an Avian and Bat Post-Construction Monitoring Plan (ABPCMP) based on the Avian Survey Plan in Support of US Wind Offshore Wind Development (COP Appendix II-N2), in coordination with USFWS Delaware Department of Natural Resources and Environmental Control (DNREC), Maryland Department of Natural Resources (MDNR), and other relevant regulatory agencies. The objectives of the monitoring plan include: (1) to advance understanding of how the target species utilize the offshore airspace and do (or do not) interact with the wind farm; (2) to improve the collision estimates from SCRAM (or its successor) for the three listed bird species; and (3) to inform any efforts aimed at minimizing collisions or other project effects on target species. 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 business 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.

5.2.4.1 Monitoring. The Lessee must conduct monitoring as outlined in ABPCMP. The ABPCMP will allow for changing methods over time (see Conservation Measure 5.d, USFWS BiOp) in order to regularly update and refine collision estimates for listed birds. The plan must include an initial monitoring phase involving deployment of Motus radio tags on listed birds in conjunction with installation and operation of Motus receiving stations on turbines in the Lease Area following offshore Motus recommendations. The initial phase may also include deployment of satellite-based tracking technologies (e.g., GPS or Argos tags). The plan must include acoustic bat and bird detectors that may integrated with a camera system.

5.2.4.2 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, rufa red knots, and roseate terns; 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.

5.2.4.3 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 (see addresses in Section 5.2.1). The Lessee must include a summary of all work performed, an explanation of overall progress, and any technical problems encountered.

5.2.4.4 Monitoring Plan Revisions. Within 30 business days of submitting the annual monitoring report, the Lessee must meet with BOEM, BSEE, and USFWS 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 (See Conservation Measure 5.d, Monitoring and Data Collection, USFWS BiOp).

5.2.4.5 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 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 C.F.R. § 585.114.

5.2.5 Raw Data. The Lessee must store the raw data from all avian and bat surveys and monitoring activities using accepted archiving practices, including data collected during COP preparation. 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. The Lessee must store, manage, and make available all avian tracking data (i.e., from radio and satellite transmitters) to BOEM and USFWS following the protocols and procedures outlined in the USFWS document entitled, *Guidance for Coordination of Data from Avian Tracking Studies* that is effective at time of COP approval. All bat data must be stored in NAB at (https://www.nabatmonitoring.org/).

5.2.6 Annual Bird/Bat 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

[12] https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis

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. Additionally, annual reporting of injured or dead listed species will be recorded in the Injury & Mortality Reporting (IMR) system (https://ecos.fws.gov/imr/welcome).

5.2.6.1 Immediate Reporting. Any occurrence of a dead or injured ESA-listed bird or bat in or within 1 mile of the lease area must be reported to BOEM, BSEE, and USFWS (Eric W. Marek, Assistant Special Agent in Charge, USFWS, Office of Law Enforcement, 300 Westgate Center Drive, Hadley, MA 01035, Eric_marek@fws.gov, (413) 253-8274 and cbfoprojectreview@fws.gov) 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.

5.2.7 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 business 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.

5.2.8 Compensatory Mitigation for Piping Plover, Red Knot, and Roseate Tern. At least 180 days prior to the start of commissioning of the first WTG, the Lessee must distribute a Compensatory Mitigation Plan for piping plovers, red knot, and roseate tern to BOEM, BSEE, and 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 fully offset the impact of the incidental take of piping plover, red knot, and roseate tern. The Compensatory Mitigation Plan would require that the compensatory mitigation be implemented by the fifth year of WTG operation. The Lessee must review the effectiveness of the plan with BOEM, BSEE and USFWS at regular (5 year) intervals thereafter or as new information becomes available, during which alternative and adaptive

strategies might be considered. The Compensatory Mitigation Plan must include: (1) a quantification of the level of offsets to fully offset the impact of the incidental take expressed in the ITS, based on scientifically recognized techniques and methodologies for each of the impacted species, piping plover, red knot, and the roseate tern; (2) detailed description of the mitigation actions for each species; (3) the specific location for each mitigation action; (4) a timeline for completion of the mitigation measures; (5) details of the mitigation mechanisms (e.g., conservation bank, in-lieu fee, Lessee-proposed mitigation); (6) best available science linking the compensatory mitigation action(s) to the projected level of collision mortality; and (7) monitoring and reporting to ensure the effectiveness of the mitigation actions in offsetting take.

5.3 Pre-Seabed Disturbance Conditions.

5.3.1 The Lessee must submit all required documents related to pre-seabed disturbance conditions in Sections 5.3.2 through 5.3.8 (e.g., sand bedform removal plan, anchoring plans, as-placed anchor plats, boulder identification and relocation, micrositing plan, and scour and cable protection) to BOEM, BSEE, and NMFS GARFO-HESD.

5.3.2 Anchoring Plans/Plats. 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 OSS 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; and avoidance of cultural resources, shipwrecks, and ASLFs consistent with Section 7.1.

5.3.2.1 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 OSS 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 practicable or feasible; or (2) a different alternative is as safe and provides the same or greater environmental protection.

5.3.2.2 If placement of jack-up barge spud cans is necessary in sensitive benthic habitats, the Lessee must select locations for the spud cans that 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, and 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.

5.3.2.3 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 at least 120 days before construction begins for export and inter-array cables, whichever is earlier. 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 Lessee must provide the final version of each Anchoring Plan to BOEM, BSEE, NMFS GARFO-HESD, and USACE.

5.3.3 Micrositing Plan(s). The Lessee must prepare and implement a Micrositing Plan(s) that describes how inter-array cables, export cable routes, WTGs, and OSSs will be microsited to avoid or minimize impacts (as technically and/or economically practicable or feasible) to archaeological resources (Section 7.1), sensitive benthic habitats, Prime Fishing Areas (including artificial reefs and

fish havens), 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 2.6). 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 2.13) and the Boulder Identification and Relocation Plan(s) (Section 5.3.4).

5.3.3.1 The Micrositing Plan(s) must include a figure for each microsited cable segment, including benthic habitat delineations showing sensitive benthic habitat (NOAA Complexity Categories) and locations of boulders greater than or equal to 0.5 m in diameter. The plan(s) must include a figure encompassing the lease area, depicting large boulder locations, benthic habitat delineations, and the proposed microsited locations for cables, WTGs, and OSSs. Benthic habitat (NOAA complexity categories) and benthic feature/habitat type (as defined in Section 5.3.3.2) maps in conjunction with backscatter, bathymetry, and boulder layers should be used to inform the Micrositing Plan. Soft bottom areas (identified by low multibeam backscatter returns) absent benthic features and biogenic/living resources should be targeted for micrositing.

5.3.3.2 For cables, OSSs, and/or WTGs that cannot be microsited to avoid impacts to sensitive benthic habitat or boulders greater than or equal to 0.5 m in diameter, 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 the following 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, and complex habitats with no large boulders.

5.3.3.3 The Lessee must submit the Micrositing Plan(s) to BOEM, NMFS-HESD, and BSEE for a 60-day review, 120 days prior to site preparation activities for cables, WTGs, and OSS(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 Lessee must provide the final version of each Micrositing Plan to BOEM, BSEE, NMFS, and USACE. Additionally, the plan must describe how information regarding sensitive benthic habitats is shared with vessel operators.

5.3.3.4 Post-Installation Micrositing Report. The Lessee must provide a post-installation Micrositing Report to BOEM and BSEE (in coordination with NMFS GARFO-HESD). The report must include a summary of the micrositing activities for WTGs, inter-array cables, and the export cables 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 5.3.3) and include documentation of technical feasibility issues encountered. The Lessee must submit the report 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).

5.3.4 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 and fishing operations.[13] 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.

[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% 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). 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.

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 2.10. The plan must include the following for boulders that are proposed to be relocated:

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

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

5.3.4.3 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;

5.3.4.4 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;

5.3.4.5 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;

5.3.4.6 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);

5.3.4.7 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;

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

5.3.4.9 A description of MEC/UXO ALARP Certified areas, which should be consistent with MEC/UXO ALARP Certification (Section 2.6);

5.3.4.10 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

5.3.4.11 A statement of consistency with the Micrositing Plan (Section 5.3.3).

5.3.4.12 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.

5.3.5 Boulder Relocation. The Lessee must implement methods identified in the approved COP and described in the Boulder Identification and Relocation Plan (Section 5.3.4) for boulder relocation activities. The Lessee must consider the spatial extent of boulder relocation in the micrositing of WTGs and OSS 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.

5.3.6 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 Lessee must submit the report 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).

5.3.7 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 scour and cable protection to include for WTG and OSS foundations, the habitat delineations for the areas of scour and 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) (Section 5.3.3), as appropriate.

5.3.7.1 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, the Lessee must use bioactive concrete (i.e., with bio-enhancing admixtures), as practicable, as the primary scour protection (e.g., concrete mattresses) or veneer to support biotic growth.

5.3.7.2 Scour and 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.

5.3.7.3 The Lessee must submit the Scour and Cable Protection Plan(s) 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.

5.3.7.4 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.

5.4 Benthic Habitat and Fisheries Monitoring Conditions.

5.4.1 Berm Survey and Remediation Plan. Where plows, jets, grapnel runs, or other similar methods are used, the Lessee must complete post-construction geophysical surveys required as part of the Post-Installation Cable Monitoring capable of detecting bathymetry changes of 0.5 meters or less 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 2.13). 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 practicable 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 Lessee must provide the final version of the Berm Remediation Plan to BOEM, BSEE, NMFS, and USACE.

5.4.2 Benthic Habitat Monitoring Plan (BHMP). The Lessee must submit a BHMP that describes how benthic habitat information will be included in the following monitoring reports: Post-Installation Cable Lay Monitoring, Scour and Cable Protection Monitoring, and Post Storm Monitoring. The Lessee must submit the BHMP to BOEM, to BSEE with status updates of submittals in the Annual Certification, and to NMFS GARFO-HESD. The Lessee must also submit any data identified in the BHMP to NMFS GARFO-HESD.

5.4.3 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 OSS foundations to reduce the release of metal contaminants in the water column.

5.5 Non-Avian Protected Species Monitoring Plan Conditions.[14] The Lessee must submit all required documents related to protected species in accordance with Term and Condition 10 of the June 18, 2024, NMFS BiOp. In addition to the requirements in the BiOp, all documents must also be submitted to BOEM (via renewable_reporting@boem.gov), BSEE (via TIMSWeb with a notification email sent to BSEE at protectedspecies@bsee.gov), and USACE (cenae-r-@usace.army.mil). The Lessee must obtain BOEM's and BSEE's concurrence with the Plan(s) prior to the start of any specified activity. To change an approved non-avian protected species monitoring plan, the Lessee must submit a revised plan for BOEM and BSEE review. BOEM's and BSEE's concurrence with the revised plan is required prior to commencement of activities under the revised plan. The Lessee must follow final plans.

5.6 Endangered and Threatened Species Conditions for Fishery Monitoring. The Lessee must follow reporting requirements in accordance with NMFS BiOp Term and Condition 7, as applicable, as well as submit all required reporting documents related to endangered and threatened species conditions for fishery monitoring in Sections 5.13.2 through 5.13.9 to BOEM (via renewable_reporting@boem.gov), BSEE (via TIMSWeb with a notification email sent to protectedspecies@bsee.gov or marinedebris@bsee.gov [if related to marine debris/lost gear]), and NMFS GARFO-PRD.

5.6.1 The Lessee must ensure that any lost survey gear is reported and recovered according to the Marine Debris Awareness and Elimination conditions in Section 5.1.2. All lost gear must also be reported to NMFS GARFO-PRD and BSEE within 24 hours of the documented time when gear is discovered to be missing or lost. This report must include information on any markings on the gear and any efforts undertaken or planned to recover the gear.

[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 10, in the Incidental Take Statement of the Biological Opinion. BOEM intends to implement its conditions of approval, including those in this section, consistently with the Terms and Conditions in the Biological Opinion. See, Condition 1.4, above.

5.6.2 The captain and/or a member of the scientific crew must conduct marine mammal monitoring prior to, during, and after haul-back of gear used for fisheries monitoring surveys. If a marine mammal is determined by survey staff to be at risk of interaction with the deployed gear, all gear must be immediately removed.

5.6.3 If marine mammals are sighted in the area within 15 minutes before deploying gear and are considered by survey staff to be at risk of interaction with the research gear, then the sampling station must be either moved or canceled, or the activity must be suspended, until there are no marine mammal sightings within 1 nmi (1,852 m) of sampling location for 15 minutes. If this occurs, this information must be included in PSO reporting.

5.6.4 The Lessee must ensure all vessels deploying fixed gear have adequate disentanglement equipment (i.e., knife and boathook) onboard. Any disentanglement must occur consistent with the Northeast Atlantic Coast Sea Turtle Disentanglement Network Guidelines and the procedures described in "Careful Release Protocols for Sea Turtle Release with Minimal Injury" (2019).

5.6.5 Conditions for Trawl Surveys.

5.6.5.1 The Lessee must ensure all vessels have at least one survey team member onboard each trawl survey who has completed Northeast Fisheries Observer Program (NEFOP) observer training, or equivalent training (i.e., another training in protected species identification and safe handling, inclusive of taking genetic samples from Atlantic sturgeon), within the last 5 years or other training in protected species identified and safe handling (inclusive of taking genetic samples from Atlantic sturgeon). Reference materials for identification, disentanglement, safe handling, and genetic sampling procedures must be available on board each survey vessel. This requirement applies to any trips where gear is set or hauled. The Lessee must provide documentation of training to NMFS and BSEE at least 15 days prior to the start of the trawl surveys, for which a non-NEFOP trained observer will be deployed, and at any later time that a different observer is deployed on the survey. If the Lessee will deploy non-NEFOP trained observers, the Lessee must submit a training plan to BOEM and NMFS GARFO-PRD describing the training that will be provided to the survey observers. The Lessee must submit the PSO Training Plan for Trawl Surveys no later than 7 days prior to the start of trawl surveys. This plan must include a description of the elements of the training (i.e., curriculum, virtual or hands on, etc.) and identify who will carry out the training and their qualifications. Once the training is complete, confirmation of the training and a list of trained survey staff must be submitted to NMFS GARFO-PRD; this list must be updated if additional staff are trained for future surveys. The Lessee must submit a list of trained survey

staff to NMFS GARFO-PRD at least one business day prior to the beginning of the survey. The Lessee must obtain BOEM's and BSEE's concurrence (in consultation with NMFS GARFO-PRD) with this plan before starting any trawl surveys.

5.6.5.2 The Lessee must ensure that any sea turtles or Atlantic sturgeon incidentally caught and/or collected in any fisheries survey gear are identified to species or species group and reported to BOEM, BSEE, and NMFS GARFO-PRD, then be properly documented using appropriate equipment and the NMFS data collection form.[15] Biological data, samples, and tagging must occur as outlined below. The Lessee must follow the Sturgeon and Sea Turtle Take Standard Operating Procedures.[16]

5.6.5.2.1 The Lessee must equip survey vessels with a passive integrated transponder (PIT) tag reader onboard capable of reading 134.2 kHz and 125 kHz encrypted tags (e.g., Biomark GPR Plus Handheld PIT Tag Reader), and this reader must be used to scan any captured sea turtles and sturgeon for tags. Any recorded tags must be recorded on the take reporting form[10] and reported to BOEM, BSEE, and NMFS GARFO-PRD.

5.6.5.2.2 The Lessee must take genetic samples from all captured Atlantic sturgeon (alive or dead). This sample collection must be done consistent with the Procedures for Obtaining Sturgeon Fin Clips.[17]

5.6.5.2.3 The Lessee must send fin clips to a NMFS GARFO-PRD-approved laboratory. The Lessee must submit the results of genetic analysis, including assigned DPS of origin, to BOEM, BSEE, and NMFS GARFO-PRD within 6 months of the sample collection.

5.6.5.2.4 The Lessee must hold and submit subsamples of all fin clips and accompanying metadata form to the Atlantic Coast Sturgeon Tissue Research Repository on a quarterly basis using the Sturgeon Genetic Sample Submission Form.[18]

5.6.5.3 The Lessee must ensure that any live, uninjured animals are returned to the water as quickly as possible after completing the required handling and documentation. Live and responsive sea turtles or

[15] https://media.fisheries.noaa.gov/2021-07/Take%20Report%20Form%2007162021.pdf?null
[16] https://media.fisheries.noaa.gov/2021-11/Sturgeon-Sea-Turtle-Take-SOPs-external-11032021.pdf
[17] https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-take-reporting-programmatics-greater-atlantic
[18] https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-take-reporting-programmatics-greater-atlantic

Atlantic sturgeon incidentally caught and retrieved in gear used in any fisheries survey must be released according to established protocols[19] and whenever at-sea conditions are safe for those releasing the animal(s). Any unresponsive sea turtles or Atlantic sturgeon caught and retrieved in gear used in fisheries surveys must be handled and resuscitated whenever at-sea conditions are safe for those who are handling and resuscitating the animal(s).

5.6.5.3.1 To the extent allowed by sea conditions, the Lessee must give priority to the handling and resuscitation of any sea turtles or sturgeon that are captured in the gear being used. Handling times for these species must be minimized (i.e., kept to 15 minutes or less) to limit the amount of stress placed on the animals.

5.6.5.3.2 All survey vessels must be equipped with copies of the sea turtle handling and resuscitation requirements found at 50 C.F.R. § 223.206(d)(1) prior to the commencement of any on-water activity.[20] These handling and resuscitation procedures (the latter, when necessary) must be executed any time a sea turtle is incidentally captured and brought onboard a survey vessel.

5.6.5.3.3 For sea turtles that appear injured, sick, distressed, or dead (including stranded or entangled individuals), survey staff must immediately contact the Greater Atlantic Region Marine Animal Hotline at 866-755-6622 for further instructions and guidance on handling, retention, and/or disposal of the animal. If survey staff are unable to contact the hotline (e.g., due to distance from shore or lack of ability to communicate via phone), then survey staff must contact the USCG via very high frequency (VHF) marine radio on Channel 16. If required, hard-shelled sea turtles (i.e., non-leatherbacks) may be held on board for up to 24 hours, provided conditions during holding are authorized by the NMFS GARFO-PRD and safe handling practices are followed. If the hotline or an available veterinarian cannot be contacted and the injured animal cannot be taken to a rehabilitation center, activities that could further stress the animal must be stopped. When sea-to-shore contact with the hotline or an available veterinarian is not possible, the animal must be allowed to recover and be responsive before safely releasing it to the sea.

5.6.5.3.4 The Lessee must make attempts to resuscitate any Atlantic sturgeon that are unresponsive or comatose by providing a

[19] https://media.fisheries.noaa.gov/2021-11/Sturgeon-Sea-Turtle-Take-SOPs-external-11032021.pdf
[20] https://media.fisheries.noaa.gov/dam-migration/sea_turtle_handling_and_resuscitation_measures.pdf

running source of water over the gills as described in the Sturgeon Resuscitation Guidelines.[21]

5.6.5.3.5 Carcasses of incidentally caught sea turtles and sturgeon must be held in cold storage (frozen is preferred, although refrigerated is permitted if a freezer is not available) until retention or disposal procedures are authorized by the NMFS GARFO-PRD, which may include transfer to an appropriately permitted partner or facility on shore. Following reporting of an incidental capture, NMFS may authorize that incidentally captured dead sea turtles or Atlantic sturgeon be retained on board the survey vessel, provided that appropriate cold storage facilities are available on the survey vessel.

5.6.5.3.6 The Lessee must commence trawl operations as soon as possible once the vessel arrives on station; the target tow time must be limited to 20 minutes.

5.6.5.3.7 The Lessee must maintain visual monitoring effort during the entire period of time that trawl gear is in the water (i.e., throughout gear deployment, fishing, and retrieval). If marine mammals are sighted before the gear is fully removed from the water, (i.e., prior to haul back) the vessel must slow its speed and steer away from the sighted animal in order to minimize potential interactions.

5.6.5.3.8 The Lessee must open the codend of the net close to the deck/sorting area to avoid damage to animals that may be caught in gear.

5.6.5.3.9 The Lessee must empty gear as close as possible to the deck/sorting area and as quickly as possible after retrieval.

5.6.5.3.10 The Lessee must fully clean and repair trawl nets (if damaged) before setting again.

5.6.5.3.11 In the case of a marine mammal interaction, the Lessee must contact the Marine Mammal Stranding Hotline immediately at 866-755-6622 and report the incident to NMFS-OPR, and, for ESA-listed marine mammals, NMFS GARFO-PRD.

5.6.6 Notification Report. The Lessee must notify BOEM, BSEE, and NMFS GARFO-PRD via email within 24 hours of any interaction with a sea turtle or

[21] https://media.fisheries.noaa.gov/dam-migration-miss/Resuscitation-Cards-120513.pdf. Lessee shall comply with the version effective at the time of COP approval.

sturgeon and include the NMFS take reporting form.[22] The report must include, at a minimum, the following: (1) survey name and applicable information (e.g., vessel name, station number); (2) Global Positioning System (GPS) coordinates describing the location of the interaction (in decimal degrees); (3) gear type involved (e.g., bottom trawl, gillnet, longline); (4) soak time, gear configuration and any other pertinent gear information; (5) time and date of the interaction; (6) identification of the animal to the species level (if possible); and (7) a photograph or video of the animal (multiple photographs are suggested, including at least one photograph of the head scutes). If reporting within 24 hours is not possible (e.g., due to distance from shore or lack of ability to communicate via phone, fax, or email), the Lessee must submit reports as soon as possible and must submit late reports with an explanation for the delay.

5.6.7 Annual Report. The Lessee must submit an annual report by February 15 each year for the previous year (i.e., the report for 2024 activities is due by February 15, 2025) to BOEM, BSEE, and NMFS GARFO-PRD. The report must include all information on any observations of and interactions with ESA-listed species and contain information on all survey activities that took place during the season, including location of gear set, duration of soak/trawl, and total effort. The report on survey activities must be comprehensive of all activities, regardless of whether ESA-listed species were observed.

5.7 Protected Species Training and Coordination. Before beginning any in-water activities involving vessel use (transit), cable installation, pile-driving, 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 to explain responsibilities, communication procedures, and protected species mitigation, monitoring, and reporting requirements.

5.7.1 The Lessee must submit all required documents and reports related to protected species training and coordination to BOEM, BSEE, and NMFS-OPR (See Sections 5.7.2 through 5.7.3).

5.7.2 Vessel Crew and Protected Species Observer (PSO) 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 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 and Vessel Strike Avoidance Plan (included in plans required under Section 5.5) . 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

[22] https://media.fisheries.noaa.gov/2021-07/Take%20Report%20Form%2007162021.pdf?null

sheets to BOEM, BSEE, and NMFS-OPR 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.

5.7.3 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.[23] 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 NMFS-approved PSO for construction activities can be found in NMFS-OPR's LOA. 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.

5.8 Vessel Strike Avoidance Conditions and Plan Conditions.

5.8.1 The Lessee must submit any required documents related to vessel strike avoidance consistent with the June 18, 2024, NMFS BiOp Term and Condition 10.e. to BOEM and BSEE via TIMSWeb with a notification email sent to protectedspecies@bsee.gov.

5.8.2 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 or North Atlantic right whales (NARWs), 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 NARWs (e.g., Long Island Sound, shallow harbors).

5.8.3 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

[23] https://repository.library.noaa.gov/view/noaa/15851

Tursiops are visually detected approaching the vessel (i.e., to bow ride) or towed equipment, vessel speed reduction, course alteration, and shutdown are not required.

5.8.4 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, the vessel may use crew as a Trained Lookout to meet this requirement.

5.8.5 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.

5.8.6 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.

5.8.7 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.

5.8.8 Vessel Strike Avoidance of Sea Turtles. 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 or less and steer away (unless unsafe to do so) until there is a separation distance of at least 100 m, at which time the vessel may resume normal operations. 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 when the sea turtle is no longer in the forward path of the vessel. The vessel may resume normal operations after it has passed 100 m from the turtle.

5.8.8.1 Vessel operators must avoid transiting through areas of visible jellyfish aggregations or floating sargassum lines or mats. If operational safety prevents avoidance of such areas, vessels must slow to 4 knots while transiting through such areas.

5.8.8.2 All vessel crew members must be briefed in the identification of sea turtle in regulations and best practices for avoiding vessel collisions. Reference materials must be available aboard all Project vessels for identification of sea turtles. The requirement 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 a clear requirement 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.

5.8.8.3 The only exception to the requirements regarding vessel speed and avoiding jellyfish, sargassum, and/or sea turtles is when the safety of the vessel or crew during an emergency necessitates deviation from these requirements. If any such incidents occur, they must be reported to BSEE and NMFS GARFO-PRD within 24 hours.

5.8.9 Visual 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.

5.8.9.1 All vessels must have a visual observer on board who is responsible for monitoring the vessel strike avoidance zone (500 m) for marine mammals and sea turtles. Visual observers may be PSO or crew members, but the Lessee must provide crew members responsible for these duties sufficient training 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 while the vessel is operating over 10 knots.

5.8.9.2 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.

5.8.9.3 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. Vessel transits to and from the Project area that require PSOs will maintain a speed commensurate with weather conditions and effectively detecting sea turtles prior to reaching the 1,640-feet (500 m) avoidance measure. 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.

5.8.10 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.

5.8.10.1 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.

5.8.10.2 The Lessee's staff or contractor, including vessel crew, must communicate immediately any observations of any large whale to PSOs and all vessel operators to increase situational awareness.

5.9 Passive Acoustic Monitoring (PAM) During Construction. Consistent with the procedures according to the MMPA LOA per the June 18, 2024, NMFS BiOp Term and Condition 10.c, the Lessee must conduct PAM to supplement visual monitoring of marine mammals before, during, and after all monopile, jacket, and met tower foundation installations.

5.10 Clearance and Shutdown Zones. The Lessee must be in accordance with the MMPA LOA per the June 18, 2024, NMFS BiOp Term and Condition 13 (Table 5.10-1) that any 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 must not proceed with pile-driving unless the visual PSOs can effectively monitor the full extent of the minimum visibility zones. Detection of an animal within the clearance zone triggers a delay of initiation of pile-driving and detection of an animal in the shutdown zone triggers the identified shutdown requirements. The Lessee must establish and monitor the following clearance and shutdown zones for the specified activity unless otherwise approved by BOEM and BSEE (in consultation with NMFS).

Table 5.10-1. Clearance and Shutdown Zones

Species	Clearance Zone	Shutdown Zone
Impact Pile-Driving for WTG, OSS, and Met Tower Foundation Installation:		
Minimum visibility zone from each PSO platform (pile-driving vessel and at least two PSO vessels): Monopiles - 2,900 m; 3-m pin piles - 1,400 m; 1.8-m pin piles - 200 m; and PAM monitoring out to 10,000 m		
NARW (visual and PAM monitoring)	At any distance (Minimum visibility zone (2,900 m) plus any additional distance observable by the visual PSOs on all PSO platforms); At any distance within the 10,000 m monitoring zone monitored by PAM	At any distance (Minimum visibility zone (2,900 m) plus any additional distance observable by the visual PSOs on all PSO platforms); At any distance within the 10,000 m monitoring zone monitored by PAM
Other large whales (visual and PAM monitoring)	Monopiles - 5,250 m 3-m pin piles - 1,400 m 1.8-m pin piles - 200 m	Monopiles - 2,900 m 3-m pin piles - 1,400 m 1.8-m pin piles - 100 m
Sea turtles (visual detection)	250 m	250 m
HRG Surveys – visual PSOs		
NARW	500 m	500 m
Other large whales	500 m	100 m
Sea turtles	100 m	100 m

Note: These are the clearance and shutdown zones incorporated into the proposed action; the zones for marine mammals reflect the proposed conditions of the MMPA ITA, and the zones for sea turtles reflect the zone sizes identified in BOEM's BA. Further modification may be included in the final MMPA ITA. The clearance and shutdown zones for non-ESA-listed marine mammals will be identified in the final LOA issued by NMFS under the MMPA.

NA = not applicable; *On any day that concurrent pile driving is planned, we expect the "concurrent" zone sizes will be in effect.

5.10.1 Noise Abatement Systems. The Lessee must employ noise abatement systems in accordance with June 18, 2024, NMFS BiOp Term and Condition 2. The noise abatement system must be employed during all foundation pile-driving 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. Additional noise mitigation measures may be required if modelled ranges are exceeded.

5.10.2 The Lessee must follow pre-clearance, soft start, shutdown, and restart procedures according to the final MMPA ITA per the June 18, 2024, NMFS BiOp Term and Condition 1.

5.10.3 Adaptive Monitoring Conditions. The Lessee must monitor through sound field verification (SFV) and the required reporting, adaptive attenuation measures, and monitoring measures consistent with the final MMPA LOA per the June 18, 2024, NMFS BiOp Term and Condition 2.

5.10.3.1 The Lessee must send all raw SFV PAM data to the NCEI Passive Acoustic Data archive within 12 months following the completion of WTG/OSS/met tower 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.

5.10.4 Long-term PAM. The Lessee must conduct long-term monitoring of ambient noise and baleen whale, and commercially important fish vocalizations in the Lease Area before, during, and following construction. The Lessee must conduct continuous[24] recording at least 1 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[25] 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.

5.10.4.1 Option 1 - Lessee Conducts Long-term PAM. If the Lessee chooses to comply with Section 5.10.4 using this option, the Lessee must conduct PAM, including data processing and archiving following the Regional Wildlife Science Collaborative (RWSC) best practices[26] 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.

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-

[24] 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 nearly continuous as possible. If temporal gaps in recording are expected, the lessee must ensure that additional recorders can be deployed to fill gaps.

[25] For the purposes of this condition, operation initiates with the commissioning of the first WTG.

[26] https://rwsc.org/wp-content/uploads/2022/12/RWSC-PAM-Data-Management-Storage-Best-Practices.pdf.

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,[27] 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 7.1 and the Section 106 Memorandum of Agreement.

The Lessee must document the occurrence of mysticete 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 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.

5.10.4.1.1 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; 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 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

[27] https://rwsc.org/wp-content/uploads/2022/12/RWSC-PAM-Data-Management-Storage-Best-Practices.pdf.

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. If BOEM does not provide comments on the Long-term PAM Plan within 45 days of its submittal, the Lessee may conclusively presume BOEM's concurrence with the Long-term PAM Plan.

5.10.4.2 Option 2 – Financial and Other Contributions to BOEM's Environmental Studies Program.[28] 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 a copy of the raw PAM data collected under this option after the DON has cleared the data for national security concerns.

5.11 WTG, OSS, and Met Tower Foundation Installation Conditions. Monopiles must be no larger than 11 m in diameter. For all monopiles, the Lessee must use the minimum amount of hammer energy necessary to effectively and safely install and maintain the integrity of the piles. Hammer energies must not exceed 4,400 kilojoules (kJ) for monopile installation. Pin piles must be no larger than 3 m in diameter. Hammer energies must not exceed 1,500 kJ for 3-m pin pile installation. Met towers pin piles must be no larger than 1.8 m in diameter, and hammer energies must not exceed 1,500 kJ for Met tower pin pile installation.

[28] The Lessee may elect Option 2 initially or during any subsequent calendar year of monitoring, subject to agreement with BOEM and BSEE.

5.11.1 The Lessee must submit all required documents related to WTG, OSS, and met tower foundation installation conditions in Sections 5.11.2 through 5.11.3 to BOEM, BSEE (via TIMSWeb and protectedspecies@bsee.gov), and NMFS GARFO-PRD.

5.11.2 Seasonal and Daily Restrictions. No foundation impact pile driving activities are allowed to occur December 1 through April 30. Consistent with the proposed action, no more than one foundation monopile, four 3-m pin piles, and two 1.8-m pin piles are to be installed per day. The Lessee must not conduct pile driving operations at any time when lighting or weather conditions (e.g., darkness, rain, fog, sea state) prevent visual monitoring of the full extent of the clearance and shutdown zones. The lead PSO must determine when sufficient light exists to allow effective visual monitoring in all cardinal directions. If light is insufficient, the lead PSO must call for a delay until the visual clearance zone is visible in all directions or must implement the Reduced Visibility Monitoring Plan/Nighttime Pile Driving Monitoring Plan (see plans required under Section 5.5).

5.11.3 Use of PSOs and PAM Operators for Pile-Driving. The Lessee must use NMFS-approved PSOs and PAM operators to monitor the identified clearance and shutdown zones (see Section 5.10) before, during, and after all foundation installation activities. At minimum, nine visual PSOs must be actively observing for marine mammals and sea turtles before, during, and after pile driving. At least three visual PSOs must be stationed on the pile driving vessel and at least three visual PSOs must be stationed on each of the two secondary, PSO-dedicated vessels. The dedicated PSO vessels must be positioned in locations that maximize ability to monitor the full extent of the minimum visibility, clearance, and shutdown zones. The lessee must adjust this distance as required based upon SFV results. Consistent with the proposed action, these PSOs must maintain watch at all times 60 minutes prior to, during, and 30 minutes following all pile-driving activities. Concurrently, at least one PAM operator must actively monitor for vocalizing marine mammals before, during and after pile driving. Furthermore, all crew and personnel working on the Project are required to maintain situational awareness of marine mammal presence (discussed further above) and are required to report any sightings to the PSOs.

5.11.3.1 The Lessee must ensure that PSO coverage is sufficient to reliably detect marine mammals and sea turtles at the surface in the identified clearance and shutdown zones (Section 5.10) to execute any pile driving delays or shutdown requirements. If, at any point prior to or during construction, the PSO coverage is determined not to be sufficient to reliably detect marine mammals and sea turtles within the clearance and shutdown zones, additional PSOs and/or platforms must be deployed. Determinations prior to construction must be based on review of the Marine Mammal and Sea Turtle Monitoring Plan for Pile Driving (Section 5.6.1). Determinations during

construction must be based on review of the weekly reports and other information, as appropriate.

5.11.3.2 The Lessee must ensure that, if the clearance and/or shutdown zones are expanded due to the verification of sound fields from Project activities, PSO coverage is sufficient to reliably monitor the expanded clearance and/or shutdown zones. Additional observers must be deployed on additional platforms for every 1,500 m that a clearance or shutdown zone is expanded beyond the initial clearance and shutdown zones (Table 5.10-1; Section 5.10). In the event that the clearance or shutdown zone for protected species needs to be expanded, the Lessee must submit a proposed monitoring plan for the expanded zones to BOEM and BSEE, who will coordinate with NMFS-OPR and NMFS-GARFO-PRD prior to granting approval. Expansion of the zones will be reconsidered after additional sound attenuation measures are in place that reduce distances to at or below those modeled assuming 10 dB, as verified by SFV.

5.12 Project Design Criteria and Best Management Practices for Protected Species. The Lessee must comply with all applicable measures identified in Appendix A of the June 18, 2024, NMFS BiOp. The Lessee must submit Survey Plans 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.), the Lessee must submit an Alternative Monitoring Plan to BOEM, NMFS-OPR, 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 Lessee must submit the AMP 60 days before survey operations are set to begin. The Lessee must submit survey reports to BOEM and BSEE (via TIMSWeb with a notification email at protectedspecies@bsee.gov).

5.13 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 June 18, 2024, NMFS BiOp consistent with RPM 4 and according to the MMPA LOA per the NMFS BiOp Term and Condition 7, and as specified in the following conditions.

5.13.1 The Lessee must report to BOEM and BSEE within 24 hours of confirmation any take of an ESA-listed species.

5.13.2 The Lessee must report all sightings or acoustic detections of NARWs immediately (no later than 24 hours). PAM detections and sightings of right whales with no visible injuries or entanglement must be reported as described in Section 5.13.2.1. Suspected vessel strikes and injured or dead NARWs must be reported as described in Sections 5.13.4 and 5.13.5.

5.13.2.1 If a NARW is observed with no visible injuries or entanglement or is detected via PAM at any time by PSOs or Project personnel on or in the vicinity of any project vessel, or during vessel transit, the Lessee must immediately report sighting or acoustic detection information to the NMFS North Atlantic Right Whale Sighting Advisory System (866) 755-6622, through the WhaleAlert app (https://www.whalealert.org/), and to the USCG via channel 16, as soon as feasible, but no later than 24 hours after the initial sighting or acoustic detection.

5.13.2.1.1 To report the sighting or acoustic detection, download and complete the Real-Time North Atlantic Right Whale Reporting Template spreadsheet found here: https://www.fisheries.noaa.gov/resource/document/template-datasheet-real-time-north-atlantic-right-whale-acoustic-and-visual. Save the spreadsheet as a .csv file and email it to NMFS NEFSC-PSD (ne.rw.survey@noaa.gov), NMFS GARFO-PRD (nmfs.gar.incidental-take@noaa.gov), and NMFS OPR (PR.ITP.MonitoringReports@noaa.gov).

5.13.2.1.2 If unable to report a sighting through the spreadsheet within 24 hours, call the relevant regional hotline (Greater Atlantic Region [Maine through Virginia] Hotline 866-755-6622; Southeast Hotline 877-WHALE-HELP) with the observation information provided below (PAM detections are not reported to the Hotline).

5.13.2.1.3 Observation information: Report the following information: the time (note time format), date (MM/DD/YYYY), location (latitude/longitude in decimal degrees; coordinate system used) of the observation, number of whales, animal description/certainty of observation (follow up with photos/video if taken), reporter's contact information, and lease area number/project name, PSO/personnel name who made the observation, and PSO provider company (if applicable) (PAM detections are not reported to the Hotline).

5.13.2.1.4 If unable to report via the template or the regional hotline, enter the sighting via the WhaleAlert app (http://www.whalealert.org/). If this is not possible, report the sighting to the U.S. Coast Guard via channel 16. The report to the Coast Guard must include the same information as would be reported to the Hotline (see above). PAM detections are not reported to WhaleAlert or the U.S. Coast Guard.

5.13.3 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) consistent with June 18, 2024, NMFS BiOp Term and Condition 6, as well as file this report with BOEM and BSEE within 48 hours of the incident. The report must include the following: description of the activity (i.e., vibratory or impact pile driving) and duration of pile driving 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).

5.13.4 Detected or Impacted Protected Species Reporting. The Lessee must report within 48 hours all observations or collections of injured or dead whales, sea turtles, or sturgeon to BSEE, NMFS-OPR, and NMFS GARFO-PRD, including observations and interactions during the fisheries surveys. The Lessee must ensure its reports reference the Project and include the Take Report Form available on NMFS webpage (https://media.fisheries.noaa.gov/2021-07/Take%20Report%20Form%2007162021.pdf?null). The Lessee must ensure reports of Atlantic sturgeon take include a statement as to whether a fin clip sample for genetic sampling was taken. Fin clip samples are required in all cases with the only exception being when additional handling of the sturgeon may result in an imminent risk of injury to the fish or the PSO. Incidents falling within the exception are expected to be limited to capture and handling of sturgeon in extreme weather. Instructions for fin clips and associated metadata are available at https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-take-reporting-programmatics-greater-atlantic under the "Sturgeon Genetics Sampling" heading.

5.13.5 In the event of a suspected or confirmed vessel strike of any ESA-listed species (e.g. marine mammal, sea turtle, listed fish) by any vessel associated with the Project or other means by which project activities caused a non-auditory injury or death of an ESA-listed species, the Lessee must immediately report the incident to BOEM and BSEE.

5.13.5.1 Reports to NMFS must be made by phone and email:

5.13.5.1.1 Phone: If in the Greater Atlantic Region (ME-VA): the NMFS Greater Atlantic Stranding Hotline (866-755-6622); in the Southeast Region (NC-FL): the NMFS Southeast Stranding Hotline (877-942-5343).

5.13.5.1.2 Email: GARFO (nmfs.gar.incidental-take@noaa.gov), and if in the Southeast region (NC-FL), also to NMFS SERO (secmammalreports@noaa.gov).

5.13.5.2 The report must include: (A) Time, date, and location (coordinates) of the incident; (B) Species identification (if known) or description of the animal(s) involved (i.e., identifiable features including animal color, presence of dorsal fin, body shape and size); (C) Vessel strike reporter information (name, affiliation, email for person completing the report); (D) Vessel strike witness (if different than reporter) information (name, affiliation, phone number, platform for person witnessing the event); (E) Vessel name and/or MMSI number; (F) Vessel size and motor configuration (inboard, outboard, jet propulsion); (G) Vessel's speed leading up to and during the incident; (H) Vessel's course/heading and what operations were being conducted (if applicable); (I) Part of vessel that struck animal (if known); (J) Vessel damage notes; (K) Status of all sound sources in use; (L) If animal was seen before strike event; (M) behavior of animal before strike event; (N) Description of avoidance measures/requirements that were in place at the time of the strike and what additional measures were taken, if any, to avoid strike; (O) Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, visibility) immediately preceding the strike; (P) Estimated (or actual, if known) size and length of animal that was struck; (Q) Description of the behavior of the marine mammal immediately preceding and following the strike; (R) If available, description of the presence and behavior of any other animals immediately preceding the strike; (S) Other animal details if known (e.g., length, sex, age class); (T) Behavior or estimated fate of the animal post-strike (e.g., dead, injured but alive, injured and moving, external visible wounds (linear wounds, propeller wounds, non-cutting blunt-force trauma wounds), blood or tissue observed in the water, status unknown, disappeared); (U) To the extent practicable, photographs or video footage of the animal(s); and (V) Any additional notes the witness may have from the interaction. For any numerical values provided (i.e., location, animal length, vessel length etc.), please provide if values are actual or estimated.

5.13.6 In the event that any PSO or other project personnel, including any project vessel operator or crew, observe or identify a stranded, entangled, injured, or dead ESA listed species (e.g. marine mammal, sea turtle, listed fish), the Lessee must immediately report the observation to NMFS (by phone (marine mammals and turtles only) and email (marine mammal, sea turtle, listed fish) and BSEE (via TIMSWeb and notification email to (protectedspecies@bsee.gov).

5.13.6.1.1 Phone: If in the Greater Atlantic Region (ME-VA): NMFS Greater Atlantic Stranding Hotline (866-755-6622); in the

Southeast Region (NC-FL) call the NMFS Southeast Stranding Hotline (877-942-5343). Note, the stranding hotline may request the report be sent to the local stranding network response team.

5.13.6.1.2 Email: if in the Greater Atlantic region (ME to VA) to GARFO (nmfs.gar.incidental-take@noaa.gov) or if in the Southeast region (NC-FL) to NMFS SERO (secmammalreports@noaa.gov).

5.13.6.2 The report must include: (A) Contact information (name, phone number, etc.), time, date, and location (coordinates) of the first discovery (and updated location information if known and applicable); (B) Species identification (if known) or description of the animal(s) involved; (C) Condition of the animal(s) (including carcass condition if the animal is dead); (D) Observed behaviors of the animal(s), if alive; (E) If available, photographs or video footage of the animal(s); and (F) General circumstances under which the animal was discovered. Staff responding to the hotline call will provide any instructions for handling or disposing of any injured or dead animals, which may include coordination of transport to shore, particularly for injured sea turtles.

5.13.7 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. The email must also include modifications the Lessee will make to reduce the risk of additional fish kills in the project area.

5.13.8 SFV Reports. The Lessee must submit all SFV reports to BOEM, BSEE via TIMSWeb with a notification email sent to BSEE at protectedspecies@bsee.gov, NMFS GARFO-PRD, NMFS-OPR, and NMFS HESD.

5.13.8.1 SFV Interim Reports for Pile Driving. The Lessee must provide, as soon as they are available but no later than 48 hours after the installation of each of the first three monopiles and full jacket foundations (inclusive of all pin/skirt piles for a specific jacket foundation), the initial results of the SFV measurements in an interim report. If technical or other issues prevent submission within 48 hours, the Lessee must notify NMFS-OPR and NMFS-GARFO-PRD within that 48-hour period with the reasons for delay and provide an anticipated schedule for submission of the report. This

report is required for each of the first three monopiles and pile driven jacket foundations installed and any additional piles for which SFV is required. The interim report must include data from hydrophones identified for interim reporting in the SFV Plan and include a summary of pile installation activities (pile diameter, pile weight, pile length, water depth, sediment type, hammer type, total strikes, total installation time [start time, end time], duration of pile driving, max single strike energy, NAS deployments), pile location, recorder locations, modeled and measured distances to thresholds, received levels (rms, peak, and SEL) results from Conductivity, Temperature, and Depth (CTD) casts/sound velocity profiles, signal and kurtosis rise times, pile driving plots, activity logs, and weather conditions. Additionally, any important sound attenuation device malfunctions (suspected or definite), must be summarized and substantiated with data (e.g. photos, positions, environmental data, directions, etc.). Such malfunctions include gaps in the bubble curtain, significant drifting of the bubble curtain, and any other issues which may indicate sub-optimal mitigation performance or are used by the Lessee to explain performance issues. If additional SFV is required after the first 3 monopiles are installed (see Section 5.10.3) the Lessee must submit additional SFV interim reports to BOEM, BSEE, and NMFS GARFO for the next 3 monopiles. If the measured sound fields continue to exceed the modeled results, the Lessee must submit additional SFV interim reports.

5.13.8.2 SFV Final Reports. The Lessee must submit the final results of SFV for monopile and pin pile installations as soon as possible, but no later than 90 days following completion of pile driving of the three or more monopiles for which SFV was carried out.

5.13.9 Weekly Pile-Driving Reports. The Lessee must compile and submit weekly reports during construction that document pile driving, and HRG survey activities, including associated PSO, SFV, and noise abatement activities. These weekly reports must include the information required by the June 18, 2024, NMFS BiOp Terms and Conditions 2 and 9e and the Lessee must submit the reports to NMFS-OPR, NFMS GARFO-PRD, BOEM, and BSEE (protectedspecies@bsee.gov). the Lessee may submit the reports directly from the PSO providers and the reports may consist of raw data. The Lessee must submit weekly reports no later than Wednesday for the previous week (Sunday – Saturday). Weekly reports must include:

5.13.9.1 Summaries of pile driving activities and piles installed, including pile ID, type of pile, pile diameter, start and finish time of each 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 5.13.9.6 below;

5.13.9.2 A summary of SFV, including the results of abbreviated SFV monitoring conducted, and NAS implemented during pile driving;

5.13.9.3 Which turbines become operational and when (a map must be provided);

5.13.9.4 Summaries of HRG survey activities;

5.13.9.5 Vessel operations (including port departures and destinations, number of vessels, type of vessel(s), and route);

5.13.9.6 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, and 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

5.13.9.7 Vessel strike avoidance measures taken.

5.13.10 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 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 the June 18, 2024, NMFS BiOp Terms and Conditions 4a and 7f, and the Lessee must submit the reports to BOEM, BSEE, NMFS-OPR, and NMFS-GARFO-PRD no later than the 15th of the month for the previous month.

5.13.10.1 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 Lessee must submit the reports 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.

5.13.10.2 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. The Lessee must generate all PSO data through software applications or otherwise recorded electronically by PSOs and the Lessee must provide the data to BOEM and BSEE in electronic format (CSV files or similar format) to 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:

<u>Project Information</u>:

- 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

<u>Operations Information</u>:

- 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

5.13.11 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 Lessee must submit the annual reports to BOEM, BSEE, NMFS-OPR, 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.

5.14 Other Protected Species Conditions. On June 18, 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 Lessee must execute the proposed action in compliance with all avoidance, minimization, and monitoring measures described in the NMFS BiOp, as well as the 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 and measures from the MMPA LOA that were incorporated into the NMFS BiOp. The Lessee must comply with all conditions in Appendix A of these Conditions of COP Approval consistent with Sections 1.1 and 1.4.

6 CONDITIONS RELATED TO COMMERCIAL FISHERIES AND FOR-HIRE RECREATIONAL FISHING

6.1 Fisheries Compensation and Mitigation Funds. No later than 120 days prior to offshore construction activities, unless a different schedule is agreed to as a component of a separate agreement between the Lessee and 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 and shoreside support services impacted by the Project and funded in accordance with Section 6.1.1 and Section 6.1.2 below. A State with an agreement for compensatory mitigation, such as with the State of Maryland or Delaware, may be removed from the calculation in Section 6.1.3 if the funding amount is greater than BOEM's required amounts. Calculation steps (without State agreement considerations) 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 eligible claimants and must be based, at a minimum, on the annual average commercial fisheries landings values as derived from Table 3.6.1-2 (page 3-281) and Table 3.6.1-12 (page 3-301) of the Maryland Offshore Wind Final EIS. The Fund amount must be determined by the formula set out below.

6.1.1.1 In the Fund, the Lessee must reserve the amount of, at a minimum, 100 percent of annual revenue exposure allocated to the Project during the post-COP approval pre-construction and construction period and (pending BSEE's approval of the Lessee's decommissioning application) 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. DOI will evaluate the need for additional mitigation consistent with the Annual Certification under 30 C.F.R. § 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 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,[29] "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product") to the year construction begins, through the construction period, and thereafter

[29] BEA Table 1.1.9. Implicit Price Deflators for Gross Domestic Product

for the 5-years post-construction. The reserve amounts for mitigation during decommissioning must also be normalized.

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 Section 6.1.3 if such amount is greater than BOEM's required amounts. 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 within communities near the ports listed below:

- Ocean City, MD
- Cape May, NJ
- New Bedford, MA
- Indian River, DE
- Newport News, VA
- Atlantic City, NJ
- Hampton, VA
- North Kingstown, RI
- Other Cape May, NJ

6.1.3 Compensation Calculations. The Lessee must use Tables 6.1.3-1 and 6.1.3-2 to calculate the total Fund amount required by Section 6.1.1.1. 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).

6.1.4 As described in Section 6.1.1.1, the Lessee must ensure the reserve amount allows for, at a minimum, 100 percent of annual revenue exposure allocated to the Project during the projected post-COP approval pre-construction and construction years and, pending BSEE approval of the 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 3.6.1-2 (page 3-281) and Table 3.6.1-12 (page 3-301) of the Maryland Offshore Wind Final EIS. After two years following the expiration of a Project Period, unclaimed funds for that expired Project Period may be rolled forward or recouped.

Table 6.1.3-1. Calculation Subcomponents for Construction and Decommissioning

Project Period	Base Annual Average Fishing Revenue Exposed to the Wind Farm Area[1,2]	Shoreside Support Services Multiplier[3]	Exposure Ratio	Adjusted Base Annual Average Fishing Revenue Exposed to the Wind Farm Area	Reserve Requirements
Construction	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	M	1	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)(1 + \mathrm{M})$
Decommissioning[4]	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	M	1	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)(1 + \mathrm{M})$

Notes:

[1] Inflation-adjusted revenues are derived from Table 3.6.1-2 (page 3-281) and Table 3.6.1-12 (page 3-301) of the Maryland Offshore Wind Final EIS. Derived figures may not be identical to the Final EIS due to rounding. The inflation-adjusted base equation is:

$$\left(\frac{Total\ Commercial\ Fishing\ Revenues}{15} + Annual\ Average\ Recreational\ Fishing\ Revenues\right) \times \frac{\boldsymbol{n_i}}{117.973}.$$

[2] Across Project Periods, it is anticipated that the value for n_i will change.

[3] 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 C.F.R. Part 585* or future versions, but BOEM must, in all events, review the calculations.

[4] Decommissioning funds may be required pending BSEE's approval of Lessee's decommissioning application.

Table 6.1.3-2. Calculation Subcomponents by Operating Year

Project Period	Base Annual Average Fishing Revenue Exposed to the Wind Farm Area[1,2]	Exposure Ratio	Adjusted Base Annual Average Fishing Revenue Exposed to the Wind Farm Area	Shoreside Support Services Multiplier[3]	Reserve Requirements
Operating Year 1	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	1	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	M	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)(1 + \mathrm{M})$
Operating Year 2	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	0.8	$\left(\$237{,}387 \times \frac{n_i}{117.973}\right)$	M	$\left(\$237{,}387 \times \frac{n_i}{117.973}\right)(1 + \mathrm{M})$
Operating Year 3	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	0.7	$\left(\$207{,}714 \times \frac{n_i}{117.973}\right)$	M	$\left(\$207{,}714 \times \frac{n_i}{117.973}\right)(1 + \mathrm{M})$
Operating Year 4	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	0.6	$\left(\$178{,}040 \times \frac{n_i}{117.973}\right)$	M	$\left(\$178{,}040 \times \frac{n_i}{117.973}\right)(1 + \mathrm{M})$
Operating Year 5	$\left(\$296{,}734 \times \frac{n_i}{117.973}\right)$	0.5	$\left(\$148{,}367 \times \frac{n_i}{117.973}\right)$	M	$\left(\$148{,}367 \times \frac{n_i}{117.973}\right)(1 + \mathrm{M})$

Notes:

[1] Inflation-adjusted revenues are derived from Table 3.6.1-2 (page 3-281) and Table 3.6.1-12 (page 3-301) of the Maryland Offshore Wind Final EIS. Derived figures may not be identical to the Final EIS due to rounding. The inflation-adjusted base equation is:

$$\left(\frac{Total\ Commercial\ Fishing\ Revenues}{15} + Annual\ Average\ Recreational\ Fishing\ Revenues\right) \times \frac{\boldsymbol{n_i}}{117.973}.$$

[2] Across Project Periods, it is anticipated that the value for n_i will change.

[3] 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 C.F.R. Part 585* or future versions, but BOEM must, in all events, review the calculations.

6.1.5 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, as applicable, 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 impacts to commercial and for-hire fishers and related shoreside businesses resulting from all phases of the Project development on the Lease Area (post-COP approval 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.

6.1.6 Notification. The Lessee must notify BOEM and BSEE of any compensation and mitigation fund agreements into which a State and the Lessee have entered. 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 Lessee must request that the Administrator(s) 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 Lessee must request that the notification 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 F (F1 - Attachment D) 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 overlap with wind energy development in the northeast region. Twelve 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,*[30] within one year plus 120 days of 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

[30] 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.

mitigate the Project impacts on the 12 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 Sections 6.3.1 and 6.3.2 below, within one year plus 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 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 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) Atlantic surfclam survey; (g) Coastal shark bottom longline survey; (h) Atlantic Sea scallop survey; (i) Ocean quahog survey; (j) Seal survey; (k) NARW survey; and (l) Sea Turtle Ecology survey. At a minimum, the survey mitigation agreement must describe actions 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' 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.

7 VISUAL AND CULTURAL RESOURCES CONDITIONS

7.1 Section 106 MOA Conditions.

7.1.1 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).

7.1.2 Avoidance of Known and Potential Shipwrecks, Debris Fields, and ASLFs. The Lessee must avoid known and potential shipwrecks and 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 consultation with consulting parties under Section 106 of the NHPA and additional measures to resolve adverse effects. If any vessel conducting work on behalf of the Lessee or any other activity associated with 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.

7.1.2.1 Avoidance of Marine Archaeological Resources. The Lessee must comply with protective buffers recommended by the Qualified Marine Archaeologist (QMA) such that all 18 identified marine archaeological resources (i.e., Targets 01–18) are provided buffers measuring a distance of no less than 164 feet (50 meters) from the outer edge of magnetic anomalies or acoustic contacts for each of the resources.

7.1.3 Avoidance of ASLFs. The Lessee must comply with the following avoidance measures described in the Project Section 106 MOA, Stipulation I by:

7.1.3.1 Establishing protective buffers for 11 ASLFs (P-03-A, P-03-B, P-03-C, P-03-D, P-03-E, P-04-B, P-05-A, P-05-B, P-05-C, P-05-D, P-05-E) as identified in the MARA (COP, Volume II, Appendix II-I1) by a distance of no less than 164 feet (50 meters) from the known extent of the resource for placement of proposed Project structures and when conducting seafloor-disturbing activities.

7.1.3.2 Micro-siting around three ASLFs (P-01, P-02, and P-04-A) as identified in the MARA (COP, Volume II, Appendix II-I1) that cannot be avoided by 164-foot (50-meter) buffers. The Lessee must shift all turbines in the UA row to the north-northeast up to 5 percent of the inter-turbine distance (±246 feet [75 meters] in the east-west direction and approximately 312 feet [95 meters] in the north-south direction). The Lessee must shift the WTG foundation at UD-03 up to 5 percent of the inter-turbine spacing distance (±246 feet [75 meters] in the east-west direction and approximately 312 feet [95 meters] in the north-south direction).

7.1.4 Demonstration of Avoidance of Marine Archaeological Resources and ASLFs. The Lessee will provide as-placed and as-laid maps with both the horizontal and vertical extent of all seafloor impacts. These seafloor impacts may include anchoring activities (location of all anchors, anchor chains, cables, and wire ropes on the seafloor, including sweep but excluding the vertical extent of anchor penetration of the seafloor), cable installation (including trenching depths and seafloor footprint of the installation vessel), and WTG installation (anchoring and spudding/jack-up vessel placement). The Lessee must submit the as-built or as-laid position plats at a scale of 1-in. = 1,000-ft., with Differential Global Positioning System (DGPS) accuracy demonstrating that these seafloor disturbing activities complied with the avoidance criteria applied to the archaeological sites or historic properties established in the Section 106 MOA. The Lessee must submit these documents and maps to BOEM and BSEE no later than 90 days after completion of the seafloor disturbing/construction activities.

7.1.5 Implementation of Minimization Measures in the Terrestrial Area of Potential Effects. The Lessee must conduct archaeological monitoring during onshore construction in areas described in the Section 106 MOA Attachment 5: Terrestrial Monitoring and Post-Review Discovery Plan. If archaeological resources or human remains are identified during construction, operations, or decommissioning of the Project, the onsite construction supervisor must stop work immediately and follow the protocols outlined in the Terrestrial Monitoring and Post-Review Discovery Plan. The Lessee must execute all aspects of the Section 106 MOA (Stipulation II.B and Attachment 5, Terrestrial Monitoring and Post-Review Discovery Plan).

7.1.6 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.

7.1.7 Implementation of Minimization Measures in the Visual Area of Potential Effects. The Lessee must use uniform WTG design, height, and rotor diameter to reduce visual contrast and decrease visual clutter.

7.1.8 Lighting and Marking of Structures. The Lessee must use ADLS or related means (e.g., dimming or shielding) to limit visual impact, pursuant to approval by the FAA and BOEM and commercial and technical feasibility at the time of FDR/FIR approval. The WTGs, meteorological towers, and OSSs must be lit and marked in accordance with FAA and USCG lighting standards and will be consistent with BOEM's Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development (April 28, 2021) to reduce light intrusion.

7.1.9 Implementation of Mitigation Measures to Resolve Visual Adverse Effects to Historic Properties. The Lessee must fund and implement mitigation measures consistent with the Section 106 MOA, Stipulation III.A to resolve visual adverse effects to three historic properties. The Lessee must execute all aspects of Stipulation III.A of the Section 106 MOA; Attachment 3: Historic Property Treatment Plan for Aboveground Historic Resources. The three adversely affected historic properties in the visual APE are:

- Fort Miles Historic District (Delaware);
- U.S. Coast Guard Tower (Maryland); and
- U.S. Life Saving Station Museum (Maryland).

7.1.10 Implementation of Mitigation Measures to Resolve Physical Adverse Effects to Historic Properties. The Lessee must fund and implement mitigation measures consistent with the Section 106 MOA, Stipulation III.B to resolve adverse effects to one archaeological historic property in the terrestrial APE. The Lessee must execute all aspects of Stipulation III.B of the Section 106 MOA; Attachment 4: Historic Property Treatment Plan for Terrestrial Archaeology Resources.

7.1.11 Annual Monitoring and Reporting on the Section 106 MOA. By January 31 of each 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, minimization, and mitigation measures (Section 106 MOA Stipulations I, II, and III) were implemented; any scheduling changes proposed; any project modifications; any changes to the attachments of the MOA; any amendments to the MOA; 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 C.F.R. § 285.633.

7.1.12 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 Stipulation XII, Attachment 5: Terrestrial Post-Review Discovery Plan, and Attachment 6: Marine Post-Review Discovery Plan.

7.1.12.1 If BOEM or BSEE incurs costs in addressing the discovery, under Section 110(g) of the NHPA, BOEM or BSEE may charge the

Lessee reasonable costs for carrying out preservation responsibilities under OCSLA (30 C.F.R. § 585.702(c)-(d)).

7.1.13 Emergency Situations and Section 106 Consultation. In the event of an emergency or disaster that is declared by the President or the Governors of Delaware and Maryland, 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 notify BOEM and BSEE. BOEM and/or BSEE, with the assistance of the Lessee, will notify the consulting federally recognized Tribal Nations, SHPOs, and the Advisory Council on Historic Preservation (ACHP) of the condition that has initiated the situation and the measures taken to respond to the emergency or hazardous condition consistent with the Section 106 MOA. BOEM and/or BSEE will make this notification as soon as reasonably possible, but no later than 48 hours from when the Bureau(s) becomes aware of the emergency or disaster. If the consulting federally recognized Tribal Nations, SHPOs, or the ACHP desire to provide technical assistance to BOEM and/or BSEE, they will submit comments within 7 days from notification if the nature of the emergency or hazardous condition allows for such coordination.

7.1.14 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 with 24 hours to BOEM and BSEE; and provide a written report within 72 hours to BOEM and BSEE.

7.2 Other Visual and Cultural Conditions.

7.2.1 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 wind farm 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 an agreed duration of time from selected onshore key observation points, as determined by BOEM and the Lessee. In addition, the Lessee must include monitoring the operation of 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.

7.2.2 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 QMA as to whether any potential

archaeological resources are present in the area. This activity may have already been performed 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 7.1.2 above, the PAM placement activities must avoid potential archaeological resources by a minimum of 164 feet (50 meters) from the outer edge of magnetic anomalies or acoustic contacts for each of the resources, and the avoidance distance must be calculated from the maximum discernible extent of the archaeological resource. The Lessee must submit as-placed PAM system plats to BSEE within 90 days of placement.

7.2.2.1 If PAM placement activities impact potential historic properties, the Lessee must take the actions described in Post-Review Discoveries (Section 7.1.12), the Section 106 MOA Stipulation XII and Attachment 6.

7.2.2.2 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 to BOEM and BSEE 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 7.1.3, above. BOEM may require the Lessee to implement additional mitigation measures as appropriate based on a review of the results and supporting information.

8 AIR QUALITY CONDITIONS

8.1 Reporting. The Lessee must submit all monitoring, reporting, and survey requirements related to air quality which are included in the OCS permit to BOEM, BSEE via TIMSWeb with a notification email sent to oswsubmittals@bsee.gov, USFWS at jaron_ming@fws.gov and AQ_BOEM@fws.gov, and the appropriate EPA regional contact(s). The Lessee must confirm the relevant point of contact prior to reporting and confirmation of reporting receipt.

8.2 OCS Air Permit Incorporation by Reference. Pursuant to Clean Air Act Section 328, the Lessee must obtain an OCS air permit for OCS sources. Where required, the Lessee must demonstrate that the air quality impacts from emissions of both the construction and operation and maintenance phases will not interfere with the attainment and maintenance of any applicable Federal or State ambient air quality standard and Prevention of Significant Deterioration of Air Quality Increments. The Lessee must comply with the anticipated OCS air permit issued by the EPA or the delegated state/local permitting authority. The terms and conditions for Air Quality incorporate by reference the entirety of the expected EPA OCS Permit, and the air quality mitigation measures found in COP Volume II, Section 1.5 (US Wind 2023) and in Appendix G, Table G-1, pages G 4-5 of the

Final EIS. The EPA is the enforcement authority for ensuring compliance with the air quality conditions listed in the OCS Air Permit.

8.3 Brigantine Wilderness Area Air Quality Related Values (AQRV) Mitigation Framework. The Lessee must develop a framework for the mitigation of Air Quality Related Value impacts at Brigantine Wilderness Area if air quality modeling shows that the AQRV are being impacted at the Class I area. The Lessee must submit the framework (if required) to BOEM, and the Federal Land Manager or National Park Service Representative for the impacted Class I area within 180 days of COP approval, or on a schedule agreed to by the Lessee, BOEM, and the applicable Federal Land Manager or National Park Service representative for the impacted Class I area. The framework must include:

8.3.1 A description of existing conditions and monitoring objectives;
8.3.2 A description of preventative and any voluntary offsetting mitigation measures;
8.3.3 Identification of the avoidance or offset value for each measure;
8.3.4 The mechanism for the transfer of any funding from the Lessee to USFWS; and
8.3.5 Reporting to demonstrate completion of implementation.

9 FEDERALLY RECOGNIZED TRIBAL NATIONS CONDITIONS

9.1 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: Absentee-Shawnee Tribe of Indians of Oklahoma, Chickahominy Indian Tribe, Chickahominy Indian Tribe-Eastern Division, Delaware Nation, Delaware Tribe of Indians, Eastern Shawnee Tribe of Oklahoma, Mashantucket (Western) Pequot Tribal Nation, Mashpee Wampanoag Tribe, Monacan Indian Nation, Nansemond Indian Nation, Narragansett Indian Tribe, Pamunkey Indian Tribe, Rappahannock Indian Tribe, Tuscarora Nation, Upper Mattaponi Indian Tribe, 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 generated as a result of the Fisheries Research and Monitoring Plan; 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 its 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, 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.

ATTACHMENT 1: LIST OF ACRONYMS

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
ASR	Airport Surveillance Radar
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
C.F.R.	Code of Federal Regulations
CHIRPs	compressed high-intensity radiated pulses
COP	Construction and Operations Plan
CVA	Certified Verification Agents
CZMA	Coastal Zone Management Act
dB	decibels
DGPS	Differential Global Positioning System
DoD	Department of Defense
DOI	Department of the Interior
DON	Department of the Navy
DPS	distinct population segment
DTS	Desktop Study
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FDR	Facility Design Report
FIR	Fabrication and Installation Report
GARFO	Greater Atlantic Fisheries Office
GDP	Gross Domestic Product
GIS	Geographic Information System
GPS	Global Positioning System
HESD	Habitat and Ecosystem Division
HF	high frequency
HRG	high resolution geophysical
IC	Incident Commander
ICS	Incident Command System
IFC	issued for construction

IMT	Incident Management Team
IOOS	U.S. Integrated Ocean Observing System
IR	infrared
ITA	Incidental Take Authorization(s)
ITS	Incidental Take Statement
km	kilometer(s)
KP	kilometer post
kts	knots
Lease	commercial lease OCS-A 0483
LNM	Local Notice to Mariners
LOA	Letter of Agreement
m	meter(s)
m^2	meters squared
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
NAD83	North America Datum of 1983
NARW	North Atlantic right whale
NAS	Naval Air Station or Noise Attenuation System
NAWCAD	Naval Air Warfare Center Aviation Division
NCEI	National Centers for Environmental Information
NEFSC	Northeast Fisheries Science Center
NHPA	National Historical Preservation Act
nmi	nautical miles
NMFS	National Marine Fisheries Service
NMS	noise mitigation systems
NOAA	National Oceanic and Atmospheric Administration
NORAD	North American Aerospace Defense Command
NRHP	National Register of Historic Places
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
OEM	Original Equipment Manufacturer
OPR	Office of Protected Resources
OSPD	Oil Spill Preparedness Division
OSRO	Oil Spill Removal Organization
OSRP	Oil Spill Response Plan
OSS	offshore substation
PAM	Passive Acoustic Monitoring or Passive Acoustic Monitor(s)

PATON	Private Aids to Navigation
PIT	passive integrated transponder
POWERON	Partnership for an Offshore Wind Energy Regional Observation Network
Project	Maryland Offshore Wind Project
PSO	Protected Species Observer
PTS	permanent threshold shift
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 rms root mean square
ROD	Record of Decision
RVMP	Reduced Visibility Monitoring Plan
RWSC	Regional Wildlife Science Collaborative
SEL	sound exposure level(s)
SF_6	Sulfur Hexafluoride
SFV	Sound Field Verification
SMS	Safety Management System
SROT	Spill Response Operating Team
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
UAS	unmanned aircraft systems
UTC	Coordinated Universal Time
UTM	Universal Transverse Mercator
UXO	unexploded ordnance
VHF	Very High Frequency
WCD	worst-case discharge
WTG	wind turbine generator

Appendix B:OSCLA Compliance Review of the Construction and Operations Plan for the Maryland Offshore Wind 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: 2024.09.04 14:52:58 -04'00'

Subject: Compliance Review of the Construction and Operations Plan for the Maryland Offshore Wind Project for Commercial Lease OCS-A 0490

1.0 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. This memorandum documents the Bureau of Ocean Energy Management's (BOEM) compliance review of the Construction and Operations Plan (COP)[1] for the Maryland Offshore Wind Project (hereinafter "Project")[2] on Commercial Lease OCS-A 0490, and BOEM's consideration of the 12 factors enumerated in subsection 8(p)(4) of OCSLA (hereinafter "8(p)(4) factors").[3]

BOEM has determined that the Project will comply with the Bureau's regulations[4] 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] Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024), https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan.
[2] This memorandum considers the Project as modified by the Preferred Alternative B in the Final Environmental Impact Statement (EIS). Bureau of Ocean Energy Mgmt., BOEM 2023-0056, Final Environmental Impact Statement for the Maryland Offshore Wind Project, (2024) [hereinafter Final EIS], https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis.
[3] *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 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).
[4] Unless otherwise noted, all part 585 citations in this memorandum are to the current regulations following the July 15, 2024, effective date of the Renewable Energy Modernization Rule. *See* 89 Fed. Reg. 42,602 (May 15, 2024).

2.0 BACKGROUND AND PROJECT OVERVIEW

Subsection 8(p)(7) of OCSLA, 43 U.S.C. § 1337(p)(7), 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). BOEM formed the BOEM Maryland Renewable Energy Task Force for coordination among the relevant federal agencies and state and local governments throughout the leasing process. The first Maryland Task Force meeting was held on April 14, 2010, with a subsequent meeting held in July 2012. In total, six Task Force meetings were held between April 2010 and June 2013.

2.1 Planning, Analysis, and Leasing

On November 9, 2010, BOEM issued a Request for Interest (RFI) in the Federal Register to specifically gauge if there was interest in commercial development of wind power offshore Maryland.[5] The RFI area was approximately 206.55 square nautical miles (nmi), with an outline that included a Western edge located approximately 10 nmi from Ocean City, Maryland, and an Eastern edge approximately 27 nmi from Ocean City. The RFI area consisted of 29 whole OCS blocks, 3 half blocks, and 1 quarter block. BOEM received nine expressions of interest from eight individual entities during the comment period for the RFI. Based on those responses, BOEM determined that there was competitive interest in the location identified and continued with the competitive leasing process.

On February 9, 2011, BOEM published a Notice of Intent (NOI) to prepare an Environmental Assessment (EA).[6] The EA's purpose was to determine whether significant impacts would be associated with issuing a lease, conducting site characterization surveys, and conducting site assessment activities (e.g., the installation of a meteorological tower and/or buoys) within Wind Energy Areas (WEA) off the coast of New Jersey, Delaware, Virginia, including the RFI area off the coast of Maryland. Through the NOI, BOEM sought public input on the environmental and socioeconomic issues to be considered, as well as alternatives and mitigation measures.

On February 3, 2012, BOEM published a Call for Information and Nominations (Call) for commercial leasing offshore Maryland.[7] In response to the Call, BOEM received six nominations of interest and six comments. The published Call Area was approximately 94.04 square nmi, contained 9 whole OCS lease blocks and 11 partial OCS lease blocks, and was smaller than the previously identified RFI area. From the shoreline to the western edge of the Call Area was unchanged from the RFI area

[5] Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Maryland- Request for Interest (RFI), 75 Fed. Reg. 68,824 (Nov. 9, 2010). https://www.govinfo.gov/content/pkg/FR-2010-11-09/pdf/2010-28269.pdf
[6] Commercial Wind Lease Issuance and Site Characterization Activities; Atlantic Outer Continental Shelf Offshore NJ, DE, MD, and VA, 76 Fed. Reg. 7226 (Feb. 9, 2011). https://www.govinfo.gov/content/pkg/FR-2011-02-09/pdf/2011-2774.pdf
[7] Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Maryland—Call for Information and Nominations (Call), 77 Fed. Reg. 5552 (Feb. 3, 2012). https://www.govinfo.gov/content/pkg/FR-2012-02-03/pdf/2012-2497.pdf

(approximately 10 nmi from Ocean City, Maryland), while the distance from the shoreline to the eastern edge of the Call Area was reduced from 27 to 23 nmi seaward. During public scoping of the Maryland WEA, the U.S. Coast Guard (USCG) identified twenty-two 'Category A' OCS blocks (including sub-blocks) that, if developed for commercial-scale renewable energy facilities, would have an unacceptable effect on navigational safety. Based on the USCG's recommendation and BOEM's preliminary analysis of vessel traffic data, Category A area blocks were eliminated from the Maryland WEA[8]. BOEM delineated the Call Area through consultation with the BOEM Maryland Renewable Energy Task Force, the Department of Defense, and the USCG.

BOEM published a Notice of Availability (NOA) of an EA on February 3, 2012.[9] The EA considered the reasonably foreseeable environmental impacts associated with conducting site assessment activities (e.g., the installation of a meteorological tower and/or buoys) within the proposed area. Based on the analysis in the EA, BOEM issued a Finding of No Significant Impact (FONSI) that concluded that the environmental impacts associated with the preferred alternative (Alternative E: Removal of Inclement Weather Diversion and USCG Category A Areas Offshore Virginia) would not significantly impact the environment; therefore, the preparation of an environmental impact statement (EIS) was not required.

The BOEM Maryland Renewable Energy Task Force met twice in 2013. The first meeting in January was to review responses to the Call for commercial leasing offshore Maryland, public comments, and receive information on the next steps in the competitive leasing process. The second meeting in June provided updates on the proposed sale notice and information on the National Renewable Energy Laboratory's report on leasing areas for the Maryland proposed WEA. The report provided analysis on additional concerns raised by USCG regarding the safety of marine vessels transiting through the Maryland WEA.

On December 17, 2013, BOEM publicly announced the Maryland WEA.[10] The proposed sale notice outlined auctioning two Lease Areas: the North Lease Area consisting of 32,737 acres and the South Lease Area consisting of 46,970 acres. The final sale notice was published on July 3, 2014, outlining information for the 16 companies that underwent a BOEM review process and were determined legally, technically, and financially qualified.[11] As a result of these efforts, BOEM held a competitive

[8] Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia. Final Environmental Assessment. OCS EIA/EA BOEM 2012-003. https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Mid-Atlantic-Final-EA-2012.pdf

[9] Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf (OCS) Offshore New Jersey, Delaware, Maryland, and Virginia, 77 Fed. Reg. 5560 (Feb. 3, 2012). https://www.govinfo.gov/content/pkg/FR-2012-02-03/pdf/2012-2494.pdf

[10] *See* Secretary Jewell Announces Milestone for Commercial Wind Energy Development in Federal Waters (Dec. 17, 2013), https://www.doi.gov/news/pressreleases/secretary-jewell-announces-milestone-for-commercial-wind-energy-development-in-federal-waters

[11] Atlantic Wind Lease Sale 3 (ATLW3) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Maryland- Final Sale Notice 79 Fed. Reg. 38,060 (Jul. 3, 2014), https://www.boem.gov/sites/default/files/regulations/Federal-Register-Notices/2014/79-FR-38060.pdf

lease sale on August 2014, pursuant to 30 C.F.R. § 585.220-223, for Lease Areas within the Maryland WEA. The lease sale for this area was held on August 19, 2014.[12] The auction lasted 19 rounds and US Wind Inc. (US Wind) won with a total bid price of $8,701,098 for Leases OCS-A 0489 (North Lease) and OCS-A 0490 (South Lease). BOEM issued the commercial wind energy leases to US Wind effective December 1, 2014.

2.2 Lease Assignment

After securing the leases and undertaking surveys of the respective Lease Areas, US Wind requested to merge the two Lease Areas into a single lease. On January 10, 2018, BOEM approved US Wind's request to merge commercial leases OCS-A 0489 and OCS-A 0490 into a single lease. By a lease amendment, made effective March 1, 2018, US Wind's commercial leases were merged into a single lease, retaining the lease number OCS-A 0490. Lease OCS–A 0489 automatically terminated.[13] The resulting Lease Area is approximately 79,707 acres.

Lease OCS-A 0490 does not, by itself, authorize any activity, such as construction, by US Wind within the leased area. Under Lease OCS-A 0490[14] and 30 C.F.R. § 585.600, US Wind must submit and receive approval of a COP before any construction activities may take place on the OCS.[15] Submittal and processing of the COP is governed by the provisions set forth in 30 C.F.R. §§ 585.620 through 585.628.

2.3 Site Assessment

In April 2016, US Wind submitted a Site Assessment Plan (SAP) for review. The SAP detailed the methods and procedures US Wind would use to collect and analyze meteorological and oceanographic data and information on the conditions of the marine environment within the Lease Area. On March 22, 2018,[16] BOEM approved the SAP, which allowed for the installation of and data collection from a meteorological tower (Met Tower), a seabed mounted acoustic Doppler current profiler (ADCP) sensor and a conductivity, temperature, and depth (CTD) sensor.

On October 22, 2020, US Wind submitted a second SAP to BOEM for meteorological evaluations and site assessment. The plan detailed the methods and procedures that US Wind would use to collect and

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[12] *See* Interior to Auction Nearly 80,000 Acres Offshore Maryland for Wind Energy Development (Aug. 19, 2014) https://www.doi.gov/news/pressreleases/interior-auctions-80000-acres-offshore-maryland-for-wind-energy-development-advances-presidents-climate-action-plan

[13] *See* Letter from James Bennett, OREP, BOEM to Riccardo Toto, Manager of US Wind Inc. (Mar. 1, 2018). https://www.boem.gov/sites/default/files/documents/renewable-energy/OCS-A-0489_OCS-A-0490-Lease-Consolidation.pdf

[14] *See* Letter from James Bennett, OREP, BOEM to Riccardo Toto, Manager of US Wind Inc. (Mar. 1, 2018). https://www.boem.gov/sites/default/files/documents/renewable-energy/OCS-A-0489_OCS-A-0490-Lease-Consolidation.pdf

[15] *See* 30 C.F.R. § 585.600(a)(2).

[16] BOEM approval of Site Assessment Plan (SAP) for the installation of a meteorological tower (Mar. 22, 2018) https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/MD/SIGNED-BOEM-to-US-Wind-SAP-Approval-Letter-Commercial-Lease-OCS-A-0490.pdf

analyze meteorological and oceanographic data and information about the conditions of the marine environment within its Lease Area. On May 5, 2021, BOEM approved the SAP for Lease OCS-A 0490, allowing for the installation of a meteorological buoy.[17]

2.4 Construction and Operations

Submittal and processing of the COP is governed by the provisions set forth in 30 C.F.R. §§ 585.620 through 585.628. US Wind submitted a COP to BOEM on August 11, 2020, with subsequent revisions, including the most recent revision submitted on July 1, 2024.[18] The COP proposes construction and operation of a three-phase wind facility 8.7 nmi off the coast of Maryland that will connect via offshore substations by way of one export cable route to a single existing Substation near Millsboro, Delaware. The Project Overview is shown in Figure 1. The offshore components of the Project will consist of up to 121 wind turbines generators (WTGs) ranging from 14 to 18-megawatt (MW), four offshore substations, and one Met Tower. In addition, there will be associated support and access structures (for aforementioned wind turbines and offshore substations) and up to 127 miles (202.2 km) of inter-array cables, all of which will be located on the OCS within the Lease Area. Development of the wind energy facility would occur in a three-phase approach, first, MarWin, a wind facility of approximately 300 MW for which the State of Maryland awarded to US Wind Offshore Renewable Energy Certificates (ORECs) in 2017, and second, Momentum Wind, consisting of approximately 808 MW for which the State of Maryland awarded additional ORECs in 2021. Following the first two phases, build-out of the remainder of the Lease Area would occur to fulfill ongoing, government-sanctioned demands for offshore wind energy.

The Preferred Alternative (Alternative B - Proposed Action), which falls within the PDE, would entail the construction, operation, maintenance, and eventual decommissioning of up to an approximately 2.2-gigawatt (GW) facility on the OCS offshore Maryland within Lease Area OCS-A 0490. The Preferred Alternative includes a 1 nmi (1.9 kilometer) setback from the traffic separation scheme (TSS) from Delaware Bay which removes 7 of the 121 WTG positions, resulting in a reduction in the number of WTGs from 121 to a total of up to 114 WTGs. Up to four offshore export cables (installed within one Offshore Export Cable Route) would transition to a landfall at 3R's Beach via horizontal directional drilling (HDD). From the landfall, the cables would continue along the Inshore Export Cable Route within Indian River Bay to connect to an onshore substation adjacent to the point of interconnection (POI) at the Indian River substation owned by Delmarva Power and Light (DPL) near Millsboro, Delaware. The POI will include construction of new US Wind substations adjacent to the existing substation. DPL will construct the interconnection to the US Wind substations and

[17] BOEM approval of second Site Assessment Plan (SAP) for the installation of a meteorological buoy (May 2, 2021) https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/SAP-Approval-Lease-OCS-A-0490.pdf

[18] Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024), https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan.

interconnections are part of the DPL transmission system, owned by and operated by DPL.[19] BOEM does not have authority under OCSLA to approve proposed facilities that would be located within the state of Delaware, and BOEM coordinated with cooperating agencies regarding this aspect of the Preferred Alternative.

2.5 Project Easements

The regulations at 30 C.F.R. § 585.200(b) state 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 and 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), US Wind requested a project easement as part of its COP. As proposed in the COP, the export cable corridor from the Lease Area to US Wind's onshore substations will span between 65-97 km (40-60 miles) in length, dependent on the location of the offshore substation and final routing through Indian River Bay. Up to four High Voltage Alternating Current (HVAC) export cables from the offshore substations will be located within the export cable corridor. In the project easement request, US Wind proposes to include 164 ft (50 m) between each of the four export cables to avoid cultural resources, potential unexploded ordnance, or munitions of explosive concern (OXU/MEC), and sensitive habitats. The project easement would include the spatial area outside of the Lease Area on the OCS approximately 1,968 ft (600 m) in width along an approximate 57 km (35 m) towards shore. The regulations prior to the implementation of the Renewable Energy Modernization Rule (Modernization Rule) limited easements to 200 ft in width. US Wind requested an easement width greater than 200 ft to safely accommodate installation of up to four export cables, as well as spacing of the cables at least three times the water depth to allow for maintenance, repair, and replacement of the export cables as needed.

[19] *See* Section 2.6.1 of Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024), https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan.

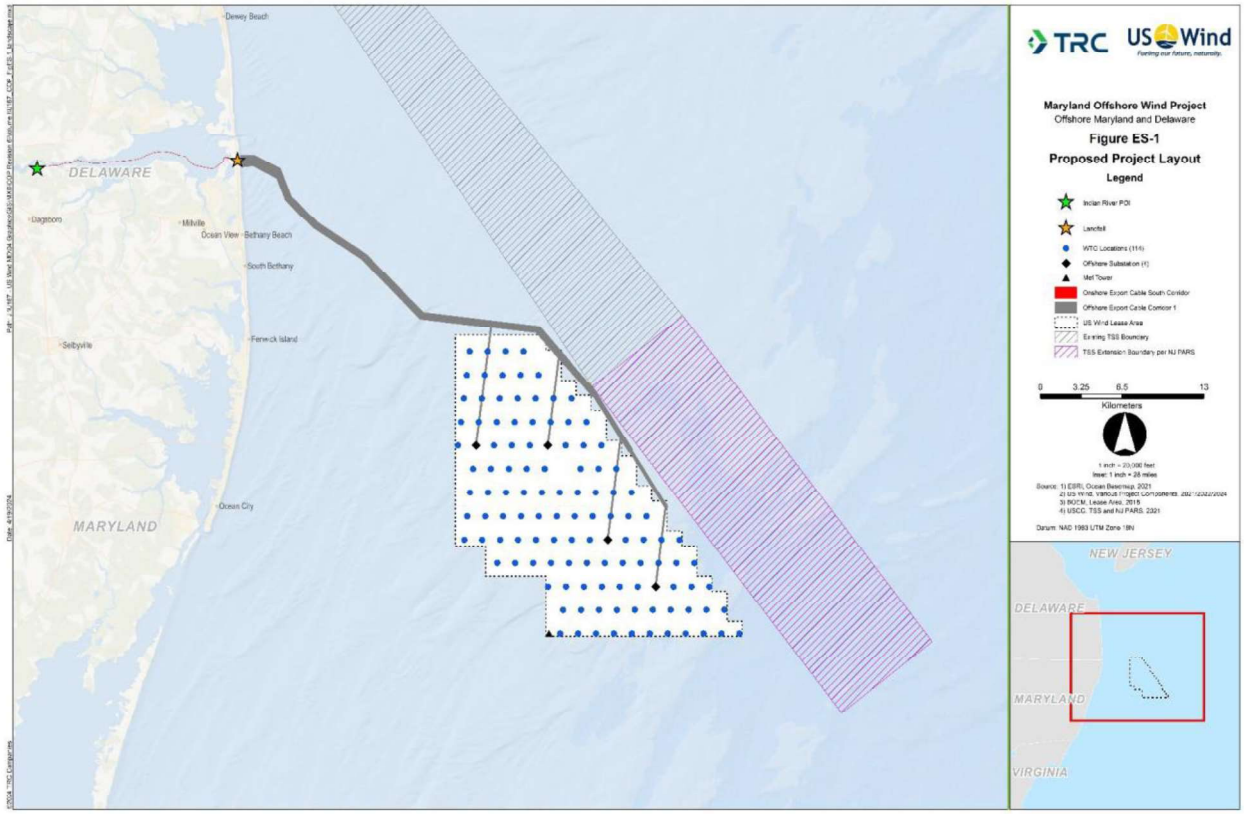

Figure 1: Project Overview – Lease Area and Submarine Export Cable Routes

3.0 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 for BOEM to consider it to be complete and sufficient for BOEM to conduct technical and environmental reviews.[20] 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 US Wind COP.

3.1 Completeness and Sufficiency Review

The BOEM-administered regulations at 30 C.F.R. § 585.620 provide the general requirements of what must be included in a COP. Pursuant to 30 C.F.R. § 585.627, the Lessee must submit information and certifications necessary for BOEM to comply with the National Environmental Policy Act of 1969 (NEPA) and other relevant laws.

In a letter submitted on September 20, 2020, US Wind requested a departure from the regulatory requirements under 30 C.F.R. § 585.626(a)(4)(i-iii)[21], which requires the submittal of reports about in situ testing, boring, and sampling at each foundation location, as well as a minimum of one deep boring (with soil sampling and testing) at each edge of the Project area and within the Project area as part of its COP. Instead of providing these required data and information with the COP, US Wind proposed to provide the data no later than with its submittal of the Facility Design Report (FDR) and Fabrication and Installation Report (FIR). BOEM reviewed the information provided by US Wind in its initial COP submission on August 2020 and in its supplemental submission on September 11, 2020, and requested additional information, which US Wind subsequently provided on February 23, 2021. OREP's Engineering and Technical Review Branch (ETRB) evaluated the departure request and concluded that the geotechnical information provided by the Lessee at that point was sufficient to allow for review of the COP. On March 30, 2022, BOEM approved the departure request, allowing US Wind to submit in situ geotechnical investigations at final foundation locations, updated geotechnical analyses with foundation design parameters, and a final Marine Site Investigation Report (MSIR) with or prior to the FDR.

On August 11, 2020, US Wind submitted a COP to BOEM for review and approval. On February 3, 2021, PCB, in coordination with OREP's 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.

[20] See 30 C.F.R. §§ 585.620 through 585.628.
[21] Citation of regulation in effect at the time of request (September 20, 2020).

§§ 585.626 and 585.627, for BOEM to begin reviewing the sufficiency of that information. PCB coordinated BOEM's sufficiency review of the Maryland Offshore Wind Project COP. Throughout the review process, BOEM evaluated the information provided in response to its requests for additional information, as well as the updated COPs that US Wind submitted, and determined that the information provided was sufficient in accordance with the regulations.

BOEM considered revisions to 30 C.F.R. §§ 585.626 and 585.627 that became effective on July 15, 2024. The information requirements of these regulations are substantially similar to the requirements of the previous regulations. These regulations became effective after submission of US Wind's COP and during BOEM's review of the COP. BOEM verified that the information US Wind submitted in its COP, and information submitted in response to RFIs, as well as in updated COPs submitted during BOEM's review process, meets the information requirements under the updated regulations. This information enabled BOEM to comply with NEPA and to complete environmental consultations under the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Coastal Zone Management Act (CZMA), as well as consultations with Tribal Nations, all of which are discussed in Subsection 3.3 below.

BOEM has determined that the COP includes all the information required in 30 C.F.R. §§ 585.626 and 585.627. Prior to the implementation of the Modernization Rule on July 15, 2024, BOEM had approved a regulatory departure for the information described in 30 C.F.R. § 585.626(a)(4)(ii) under the previous regulations. This departure is no longer necessary under the updated regulations and US Wind will submit the information following COP approval when it submits its FIR and FDR in accordance with requirements in 30 C.F.R. part 285. This information includes the result of:

- testing to investigate the stratigraphic and engineering properties of the sediment that may affect foundations.
- in situ testing, boring, and sampling at each foundation location.
- deep borings within the Project Area.

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 radar interference.
- Federal Aviation Administration (FAA), for aviation and radar interference.
- USCG, for vessel navigation and Search and Rescue (SAR).

Furthermore, ETRB and BSEE reviewed the statement of work and qualification submitted in the COP for the CVA nomination. On March 16, 2022, BOEM approved the nomination of Bureau Veritas North America to be the CVA for the Project.[22] Bureau Veritas will review and certify that the project facilities are designed, fabricated, and installed in conformance with accepted engineering practices, as described in the FDR and the FIR, to be submitted by US Wind after COP approval.

As a result of these reviews, ETRB has determined that the technical information and supporting data provided with the COP meet the requirements of 30 C.F.R. § 585.626 and 30 C.F.R § 585.627, where appropriate, and are sufficient to allow the safe installation of the Project on the OCS. 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 (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 8, 2022, BOEM published the NOI to prepare an EIS for US Wind's COP,[23] which started BOEM's formal scoping process pursuant to NEPA. The NOA of the draft EIS for the Project was published on October 6, 2023.[24] The U.S. Army Corps of Engineers (USACE); the USCG; the U.S. Environmental Protection Agency (USEPA); the U.S. Maritime Administration; BSEE, the NOAA's National Marine Fisheries Service (NMFS); and the National Park Service (NPS) were cooperating federal agencies during the development and review of the final EIS. Cooperating state agencies included Delaware Department of Natural Resources and Environmental Control (DNREC).

BOEM invited federally recognized Tribes to participate in government-to-government or Tribal consultation meetings with BOEM after public scoping and prior to publication of the draft EIS. On June 8, 2022, BOEM initiated consultation with the following federally recognized tribes: Absentee-Shawnee Tribe of Indians of Oklahoma, Chickahominy Indian Tribe, Chickahominy Indian Tribe-Eastern Division, Delaware Nation, Delaware Tribe of Indians, Eastern Shawnee Tribe of Oklahoma, Mashantucket (Western) Pequot Tribal Nation, Mashpee Wampanoag Tribe, Monacan Indian Nation, Nansemond Indian Nation, Narragansett Indian Tribe, Pamunkey Indian Tribe, Rappahannock Indian Tribe, Seneca-Cayuga Nation, Shawnee Tribe, Shinnecock Indian Nation, Stockbridge-Munsee Community Band of Mohican Indians, Tuscarora Nation, Upper Mattaponi Indian Tribe, and Wampanoag Tribe of Gay Head (Aquinnah). BOEM held a government-to-government consultation meeting with the Chickahominy Indian Tribe, the Delaware Nation, and the Shinnecock Indian Nation on the Maryland Offshore Wind NOI on September 30, 2022.

[22] *See* Letter from James Bennett, OREP, BOEM to Riccardo Toto, Manager of US Wind Inc. (March 16, 2022).
[23] Notice of Intent to Prepare an EIS for US Wind's Proposed Wind Energy Facility Offshore Maryland, 87 Fed. Reg. 34,901 (June 8, 2022), https://www.govinfo.gov/content/pkg/FR-2022-06-08/pdf/2022-12308.pdf
[24] Notice of Availability of a Draft EIS for US Wind's Inc's Proposed Wind Energy Facility Offshore Maryland, 88 Fed. Reg. 69,658 (Oct. 6, 2023), https://www.govinfo.gov/content/pkg/FR-2023-10-06/pdf/2023-21749.pdf

On August 2, 2024, BOEM published the NOA of the final EIS in the *Federal Register*.[25] Alternative B (Proposed Action) was identified as the Preferred Alternative in the final EIS. The final EIS included in Appendix O BOEM's responses to comments on the draft EIS. The final EIS found that the Alternative B would have negligible to moderate adverse impacts on most resources and only the potential for major adverse impacts on (i) North Atlantic Right Whale (NARW), (ii) visual resources, (iii) commercial fisheries, and (iv) scientific research. The final EIS also found that the Project could have, to some extent, beneficial impacts on the following resources: (i) benthic resources, (ii) birds, (iii) marine mammals (odontocetes and pinnipeds), (iv) finfish, invertebrates, and essential fish habitat, (v) for-hire recreational fishing, (vi) air quality, (vii) land use and coastal infrastructure, (viii) recreation and tourism, (ix) environmental justice, and (x) demographics, employment, and economics.

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: NARW, scenic and visual resources, some commercial fisheries, and scientific research. The final EIS also found that future planned actions could potentially have beneficial impacts on the following resources: benthic resources, hard bottom associated demersal finfish and invertebrate species, for-hire recreational fishing operations, birds, air quality, land use and coastal infrastructure, environmental justice, and demographics, employment, and economics. Cumulative impacts on all resources range from negligible to major. The 30-day waiting period for the final EIS closed on September 3, 2024.

Several consultations were conducted as part of the environmental review process. On May 31, 2024, USFWS transmitted a Biological Opinion (BiOp) and concluded consultation and conference for the Project under Section 7 of the ESA.[26] The BiOP concluded that the Project is not likely to jeopardize the continued existence of the federally listed piping plover, rufa red knot, roseate tern, or the Monarch butterfly. The Project may affect but is not likely to adversely affect the eastern black rail, northern long eared and tricolored bats. USFWS concurred with BOEM's determination that the Project will have no effect on seabeach amaranth or the petitioned Bethany Beach firefly.[27]

On June 18, 2024, NMFS issued a BiOp for the Project under Section 7 of the ESA. The BiOp concluded that the Project will likely adversely affect but is not likely to jeopardize the continued existence of fin, sei, sperm, or NARW, North Atlantic distinct population segment (DPS) of loggerhead sea turtles, North Atlantic DPS of green turtles, Kemp's ridley or leatherback sea turtles,

[25] Notice of Availability of a Final Environmental Impact Statement for US Wind Inc.'s Proposed Wind Energy Facility Offshore Maryland, 89 Fed. Reg. 63,221 (Aug. 2, 2024). https://www.federalregister.gov/documents/2024/08/02/2024-17035/notice-of-availability-of-a-final-environmental-impact-statement-for-us-wind-incs-proposed-wind
[26] https://www.fws.gov/law/endangered-species-act
[27] *See* Letter from Genevieve LaRouche, Field Supervisor, U.S. Fish and Wildlife Service, to Lorena Edenfield, OREP, BOEM (May 31, 2024).

shortnose sturgeon, or any of the five DPSs of Atlantic sturgeon.[28] The Project is likely to have adverse effects but is not likely to destroy or adversely modify critical habitat designated for the New York Bight DPS of Atlantic sturgeon. The BiOp also determined that the Project will have no effect on the Gulf of Maine DPS of Atlantic salmon, Gulf sturgeon, Nassau grouper, the Southwest Atlantic DPS of scalloped hammerhead sharks, smalltooth sawfish, ESA-listed corals or critical habitat designated for the NARW, the Northwest Atlantic DPS of loggerhead sea turtles, the Gulf of Maine and Carolina DPSs of Atlantic sturgeon, or Elkhorn and Staghorn corals. NMFS concurs with BOEM's determination that the proposed action is not likely to adversely affect sperm whales, Rice's whales, blue whales, giant manta rays, hawksbill sea turtles, or oceanic whitetip sharks. To be exempt from the prohibitions of Section 9 of the ESA, BOEM, USACE, and NMFS' Office of Protected Resources must comply with the Reasonable and Prudent Measures (RPMs) and implementing Terms and Conditions issued as part of the BiOp.

BOEM also completed an Essential Fish Habitat (EFH) consultation under the MSA[29] and received conservation recommendations from NMFS on May 2, 2024, pursuant to Section 305(b)(4)(A) of the MSA. According to Section 304(b)(4)(B) of the MSA, BOEM is required to provide NMFS with a detailed response to each EFH conservation recommendation within 30 days of receipt. BOEM provided interim responses to NMFS on May 23, 2024, and issued a detailed response letter to NMFS on July 12, 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[30] Section 106 review of the Project as proposed in the COP pursuant to the Section 106 implementing regulations, "Protection of Historic Properties" (36 C.F.R. part 800). BOEM elected to use NEPA substitution pursuant to 36 C.F.R. § 800.8(c) to fulfill the requirements of Section 106 in lieu of the procedures set forth in 36 C.F.R. §§ 800.3 through 800.6. Through the Section 106 consultation, BOEM made a finding that three aboveground historic properties within the visual area of potential effects (APE) would be adversely affected; one historic property within the terrestrial APE would be adversely affected; and there would be no adverse effect on 18 marine archaeological resources and 14 ancient submerged landform features as a result of COP approval. BOEM documented this process and finding in Appendix J of the final EIS, Finding of Adverse Effect for the Maryland Offshore Wind Project COP. The Section 106 review and consultation conducted for the Project as proposed in the COP resulted in the development of measures included in the Section 106 Memorandum of Agreement (MOA) to resolve the adverse effects. Consultation under Section 106 of the NHPA concluded with the execution of the MOA, which was signed by the Lessee, BOEM, the Advisory Council on Historic Preservation (ACHP), and the State Historic Preservation Offices (SHPOs) of Delaware, Maryland, and Virginia, and fully executed on August 27, 2024.

[28] *See* Letter from Michael Pentony, Regional Administrator, Greater Atlantic Regional Office, NOAA/ National Marine Fisheries Service, to Karen Baker, Chief, OREP, BOEM (June 18, 2024).
[29] https://www.fisheries.noaa.gov/resource/document/magnuson-stevens-fishery-conservation-and-management-act
[30] https://www.nps.gov/subjects/archeology/national-historic-preservation-act.htm

US Wind submitted requests for Federal Consistency Certification to the States of Maryland and Delaware under the CZMA.[31] Acting under Section 307 of the Federal CZMA (Pub. L. No. 92-583), as amended, the coastal management program for the State of Maryland concurred with US Wind's consistency certification, finding that the Project is consistent to the maximum extent practicable with the enforceable policies of Maryland's coastal management plan. Acting under Section 307 of the Federal CZMA (Pub. L. No. 92-583), as amended, the coastal management program for the State of Delaware conditionally concurred with US Wind's consistency certification, finding the Project is consistent to the maximum extent practicable with the enforceable policies of Delaware's coastal management plan. US Wind provided BOEM with the CZMA concurrence letters issued by Maryland on July 8, 2024, and Delaware on July 9, 2024.

4.0 COMPLIANCE REVIEW[32]

The regulations at 30 C.F.R. part 585 set forth responsibilities for both BOEM and US Wind that are similar to those imposed by the 8(p)(4) factors. 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 US Wind 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 US Wind 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 US Wind (e.g., using properly trained personnel). The discussion in the following sections, 4.1 to 4.12, provides an overview of how BOEM has ensured the selected alternative provides for 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 Conforms to all applicable laws, regulations, and lease provisions of US Wind's commercial lease[33]

Consultations and reviews for the Project under NEPA, ESA, CZMA, MSA, and NHPA are complete.[34] Further, BOEM's approval of the COP includes a condition prohibiting US Wind from commencing construction activities before obtaining all applicable permits and authorizations, including permits and permissions requested by US Wind under Section 10 of the Rivers and Harbors Act of 1899 (RHA), Section 404 of the Clean Water Act (CWA), and Section 14 of the RHA from USACE; Incidental Take Regulations and an associated Letter of Authorization under the Marine Mammal Protection Act from NMFS; and CWA Section 401 Permit and Water Quality Certifications from Maryland Department of Environment and Delaware Department of Natural Resources and Environmental Control (Division of Water). Section 8.1 of the COP (Regulatory Framework) lists all

[31] *See* 16 U.S.C. §§ 1451 *et seq*.
[32] *See* 43 U.S.C. § 1337(p)(4) (OCSLA Subsection 8(p)(4)); 30 C.F.R. §§ 585.102, 585.621.
[33] *See* 30 C.F.R. §§ 585.102(b), 585.621(b).
[34] *See* discussion *supra* sec. 3.3.

expected Federal, Maryland and Delaware State, regional (county), and local-level reviews and permits for the Project.[35]

4.2 Safety, best available and safest technology, best management practices, and properly trained personnel[36]

The Project COP proposed the following major offshore components:

- Up to 121 WTGs supported by monopile foundations;
- Up to four offshore substations supported by monopile, piled jacket or suction bucket foundations;
- One meteorological tower supported by a braced caisson foundation;
- Inter-array cables with an operating voltage of 66 kilovolts (kV);
- Up to four submarine high voltage alternating current export cables operating at 230-275 kV and buried to a target depth of 3.3 to 9.8 feet (1-3 meters).

As documented in ETRB's Review Memo (Appendix B.1 to the ROD), BOEM expects US 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 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(f), 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 withstanding hurricane-level events–is independently evaluated by a CVA when reviewing the FDR and FIR according to international standards. One of these standards calls for the WTG 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 are designed to withstand the oceanographic and meteorological conditions expected in the Lease Area, including hurricane force winds.

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 incorporated into the proposed conditions of approval for the COP to ensure that this Project is carried out in a safe manner.[37] Additionally, oversight of the review of future submissions (e.g., FDR and FIR activities)

[35] *See* Section 8.1 of Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024), https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan
[36] *See* 43 U.S.C. § 1337(p)(4)(A); 30 C.F.R. §§ 585.102(a)(1), 585.621(c), 585.621(f)-(h).
[37] *See* infra. Anticipated Conditions of COP Approval, Appendix A to the ROD.

will allow BSEE to evaluate whether the "facilities are designed, fabricated, and installed in conformance with accepted engineering practices."[38]

The COP also provides a description of its proposed SMS,[39] as required by 30 C.F.R. § 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 C.F.R. § 285.810(a)-(f), and US Wind's proposed implementation thereof. Furthermore, the finalized SMS must describe the methods that are used and maintained to control the identified risks. BSEE determined that US Wind's proposal is consistent with acceptable industry practices and standards.

For these reasons, ETRB concluded that the technical information and supporting data provided with the COP is sufficient to allow the safe installation of the proposed project on the OCS, uses best available and safest technology, best management practices, and uses properly trained personnel, pursuant to 30 C.F.R. § 585.621(c), (f), (g), and (h).

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[40]

Minimizing environmental impacts through the assessment of 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 would be to NARW, visual resources, commercial fisheries, and scientific research. The final EIS also found that the Project could have, to some extent, beneficial impacts on the following resources: (i) benthic resources, (ii) birds, (iii) marine mammals (odontocetes and pinnipeds), (iv) finfish, invertebrates, and essential fish habitat, (v) for-hire recreational fishing, (vi) air quality, (vii) land use and coastal infrastructure, (viii) recreation and tourism, (ix) environmental justice, and (x) demographics, employment, and economics.

The numerous consultations performed under various federal statutes, and the analysis in the final EIS, indicate that approval of the Project 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 G of the final EIS specifically references measures to be taken or mitigation measures recommended to protect the

[38] *See* 30 C.F.R. § 285.705(a)(1).
[39] *See* Vol I App. B of Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024), https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan
[40] *See* 43 U.S.C. § 1337(p)(4)(B); 30 C.F.R. §§ 585.102(a)(2), 585.621(e).

environment. BOEM has also engaged in consultations under the ESA, the MSA, and the NHPA. As a result of the ESA consultation, USFWS issued a BiOp for the Project on May 31, 2024, and NMFS issued a BiOp for the Project on June 18, 2024. 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 of the COP. 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 12, 2024.[41] NMFS issued a letter on May 2, 2024, in which the agency provided 44 conservation recommendations to avoid and minimize impacts to EFH for activities within the OCS and state waters. Thirteen of the 39 EFH conservation recommendations, and five recommendations provided by NMFS under the Fish and Wildlife Coordination Act, apply to activities in state waters and are under USACE's jurisdiction for implementation. BOEM provided a detailed response to NMFS via a letter on July 12, 2024, regarding how each of the conservation recommendations would be applied to the Project. BOEM fully or partially adopted 21 of the 29 conservation recommendations under BOEM's jurisdiction as authorized under OCSLA. BOEM did not fully adopt, or only partially adopted, some conservation recommendations based on technical and economic feasibility concerns.

BOEM also conducted NHPA Section 106 consultation with consulting parties made up of federal agencies (including NPS and the ACHP), federally recognized Tribes, State agencies (including the Delaware, Maryland, New Jersey, and Virginia Historic Preservation Officers), local governments, nongovernmental organizations and/or groups with a demonstrated interest in the affected historic properties, private property owners representing historic properties, and US Wind. BOEM held four consulting party meetings.[42] Through that consultation, BOEM identified and determined that 18 marine archaeological resources and 14 ancient submerged landform features would not be adversely affected by activities resulting from COP approval, in accordance with avoidance measures stipulated in the NHPA Section 106 MOA. Additionally, BOEM identified and determined through consultation that three aboveground historic properties would be visually adversely affected and one terrestrial archaeological property would be physically adversely affected by activities resulting from COP approval. Through the Section 106 consultation, BOEM developed and finalized measures to resolve these adverse effects. On [August 21, 2024], an NHPA Section 106 MOA[43] was executed stipulating how the adverse effects of the Project on historic properties will be resolved. As discussed above in section 3.3,

[41] *See* BOEM, OREP, MD Offshore Wind Project Essential Fish Habitat Assessment (July 2024), https://www.boem.gov/sites/default/files/documents/renewable-energy/state activities/Maryland%20Offshore%20Wind%20EFH%20Assessment.pdf
[42] The list of invited and participating consulting parties is included in Attachment 2 of the Section 106 MOA.
[43] Memorandum of Agreement Among BOEM, et al., Regarding the Maryland Offshore Wind Project, (Lease Number OCS-A 0490).

BOEM also conducted government-to-government and consultation meetings with Tribes in which potential impacts to the environment and cultural 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. A summary of measures proposed by US Wind can be found in section 1 of the COP, with subsequent details provided at the end of sections 3 through 17 of the COP Volume II, and include measures to avoid, minimize, and mitigate impacts to resources, such as air quality, birds, and bats, among others.[44] As described in the ROD, BOEM will incorporate US Wind's proposed measures as COP conditions of approval and require US Wind 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 G of the final EIS contains a comprehensive list of mitigation and monitoring measures, which are analyzed in the respective Chapter 3 resource sections.

4.4 Prevention of waste and conservation of natural resources[45]

Under 30 C.F.R. § 585.113, "Natural resources" "include, without limiting the generality thereof, renewable energy, oil, gas, and all other minerals (as defined in Section 2(q) of the OCS Lands Act), 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 this COP, BOEM considered how the Project would prevent waste by considering 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 Sections 6-13 of the US Wind COP Vol II 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 similar reasons, BOEM has determined that the project conserves natural 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(e). See section 4.3, above.

BOEM's issuance of Lease OCS-A 0490 was the result of a comprehensive planning process, as discussed in 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 in the area covered by Lease OCS-A 0490. The analysis conducted

[44] *See* Vol. II of Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024), https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan
[45] *See* 43 U.S.C. §§ 1337(p)(4)(C)-(D); 30 C.F.R. §§ 585.102(a)(3)-(4), 585.105(a).

in section 3.5.2 of the final EIS concluded that the Project would result in moderate impacts on non-energy marine minerals (primarily sand and gravel) because the Project would intersect some sand borrow and sand resource areas that could be targeted for future beach renourishment efforts. There are no existing oil and gas leases in the Atlantic at this time and there are no oil and gas lease sales in the Atlantic included in the next National OCS oil and gas leasing program, which was approved on December 14, 2023.[46] 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 deconflicting OCS uses and maximizing wind energy harvesting in the proposed Project Area.

4.5 Coordination with relevant Federal agencies[47]

Throughout BOEM's regulatory process, BOEM engaged with relevant Federal agencies to obtain expert advice, comply with regulatory requirements, and ensure proper coordination. Documentation of this 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 sections 1.1 through 1.4 and Appendix A of the final EIS. Throughout the environmental and technical review of the COP, BOEM met with various federal agencies, including BSEE, the Department of Defense (DoD), USEPA, 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 and Participating Agencies with the preliminary draft EIS on June 2, 2023, for review and comment. Before publishing the draft EIS, 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. The Cooperating Agencies also supported preparation of the final EIS. BOEM provided Cooperating Agencies with the preliminary final EIS on April 23, 2024, for review and comment. Before publishing the final EIS, BOEM considered and addressed comments received, and provided a revised preliminary final EIS on July 26, 2024. During the EIS process, BOEM met with all the Cooperating and Participating agencies three times (May 5, 2022, August 24, 2022, and October 25, 2022), met with agencies individually on numerous

[46] *See* Bureau of Ocean Energy Mgmt., National OCS Oil and Gas Leasing Program, https://www.boem.gov/oilgas-energy/national-program/national-ocs-oil-and-gas-leasing-program.

[47] Throughout the COP review and approval process, DOI engaged in meaningful, government-to-government consultation with federally recognized Tribes. For more detail see Final EIS, appendix A. https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis. *See also* 43 U.S.C. § 1337(p)(4)(E); 30 C.F.R. § 585.102(a)(5).

occasions, and hosted three public meetings during the scoping period and four public meetings to receive comments on the draft EIS.[48] NOAA has indicated an intention to adopt the final EIS and sign a joint ROD with BOEM. USACE has indicated intentions 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 0490, BOEM has consulted with the DoD for the purposes of assessing national security considerations in its decision-making processes. On February 3, 2012, BOEM published a Call in the *Federal Register*[50] (under Docket ID: BOEM-2011-0058) to help BOEM determine whether competitive interest exists in the identified Call Area offshore Maryland. The Call also requested information from the public on issues relevant to BOEM's review of nominations for potential leasing in the area. The Call Area was identified through consultation with the BOEM Maryland Renewable Energy Task Force, which included federal, state, and tribal government partners, including DoD, USCG, and the State of Maryland. Furthermore, BOEM consulted with DoD on the EA (described in section 4.5 above), which examined the potential environmental effects of issuing commercial wind energy leases and approving site assessment activities in the Maryland WEA. Section 4.1.3.7.1 of the EA discusses military activities within the 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 a review of the COP within the DoD. As a result of this review, DoD identified potential impacts on Department of Navy (DON), United States Army (Army), and the North American Aerospace Defense Command (NORAD) operations. BOEM and the DoD Clearinghouse coordinated to address these concerns and to avoid or mitigate them. The DoD Clearinghouse requested the specific mitigation measures listed below to be accomplished by the lessee via entering into an agreement with DoD:

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[48] *See* Final EIS, App. A (detailing consultation and coordination process with other federal and state agencies). https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis

[49] *See* 43 U.S.C. § 1337(p)(4)(F); 30 C.F.R. §§ 585.102(a)(6), 585.621(d).

[50] Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Maryland—Call for Information and Nominations (Call), 77 Fed. Reg. 5552 (Feb. 3, 2012). https://www.govinfo.gov/content/pkg/FR-2012-02-03/pdf/2012-2497.pdf

- Notify NORAD 30-60 days ahead of project completion and when the project is complete and operational for Radar Adverse Impact Management (RAM) scheduling;
- Contribute funds ($80,000) toward the execution of the RAM for each affected radar;
- Curtail activities for National Security of Defense purposes as described in the leasing agreement.

Additionally, DON requested the following conditions:

- Require the developer to coordinate prior to mobilization and provide schedule updates to U.S. Fleet Forces Command (USFFC) and the Naval Air Warfare Center Aviation Division (NAWCAD);
- Following construction, require coordination with the USFFC and NAWCAD on relevant operations and maintenance activities;
- Include a condition related to the deployment of distributed fiber optic sensing technology and passive acoustic monitoring by the developer, to facilitate a DON risk assessment and require the developer to mitigate risk to national security if identified; and
- Impose a condition to provide DoD/DON notification and opportunity to assess risk related to foreign investment and material vendors for the project, and to address risk to national security requiring mitigation, if identified.

To protect the security interests of the United States, BOEM has included these measures that are within its jurisdiction as conditions of approval in Appendix A of the ROD.

Section 3c of Lease OCS-A 0490 also includes a provision allowing for BOEM to suspend operations in accordance with the national security and defense provisions of section 12 of OCSLA.[51]

4.7 Protection of the rights of other authorized users of the OCS[52]

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.[53] 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, 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

[51] Commercial Wind Lease OCS-A 0490, https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/MD/SIGNED-Fully-Executed-Lease-Amendment-OCS-A-0490.pdf.
[52] *See* 43 U.S.C. § 1337(p)(4)(G); 30 C.F.R. § 585.102(a)(7).
[53] 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.

be authorized by the COP do not restrict equitable access and sharing of the seabed in a manner that significantly interferes with those 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) that would be affected by the activities proposed in the COP. There are three nearby wind energy Lease Areas northeast of OCS-A 0490 and off the Delaware coast: OCS-A 0482 (GSOE), OCS-A 0519 (Skipjack), and the recently auctioned OCS-A 0557.

4.8 A fair return to the United States[54]

BOEM has determined that the high bid resulting from the lease auction and lease terms provides a fair return to the United States. As described in Section 2.2 above, BOEM auctioned the Maryland WEA on August 19, 2014, for the two separate leases referred to as Leases OCS-A 0489 (North Lease) and OCS-A 0490 (South Lease). The North Lease Area consisted of about 32,737 acres and the South Lease Area consisted of about 46,970 acres. US Wind was the winner of both leases, with the auction lasting 19 rounds, and a resulting total bid price of $8,701,098. At the time of the lease sale, BOEM determined that the minimum bid for these Lease Areas constituted a fair return to the United States, in addition to allowing for non-monetary factors to be considered. As published in the final sale notice for this lease sale,[55] the minimum bid for the North Lease Area was $2 per acre, or $65,474. The minimum bid for the South Lease Area was $2 per acre, or $93,940. US Wind Inc.'s winning monetary bid exceeded these minimum bid amounts at $109.16 per acre and, therefore, exceeded the minimum amount necessary to qualify as a fair return for the United States.

Lease payments are enumerated in Lease OCS-A 0490, 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. The annual rent for Lease OCS-A 0490 is $239,121. Once a project begins commercial generation of electricity, a lessee must pay an operating fee, which is calculated in accordance with the formula in Addendum B and the BOEM-administered regulations.[56] 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, US Wind 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 0490.

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[54] *See* 43 U.S.C. § 1337(p)(4)(H); 30 C.F.R. § 585.102(a)(8).
[55] *See* Atlantic Wind Lease Sale 3 (ATLW3) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Maryland Final Sale Notice, 79 Fed. Reg. 38,060 (July 3, 2014), https://www.boem.gov/sites/default/files/regulations/Federal-Register-Notices/2014/79-FR-38060.pdf
[56] *See* 30 C.F.R. § 585.506.

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[57]

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;[58] and that activities authorized by the Secretary will "not unreasonably interfere with other uses of the OCS."[59]

Throughout the planning and leasing process for Lease OCS-A 0490, 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 WEA, BOEM worked closely with the Maryland Renewable Energy Task Force, Federal agencies, federally recognized Tribes, the public, and other stakeholders between November 2009 and December 2013.

Before lease issuance, BOEM selected a Lease Area to strike a rational balance between identifying an area suitable for wind energy development and preventing interference with other reasonable uses of the OCS. Moreover, BOEM specifically selected the Lease Area to reduce potential use conflicts between the wind energy industry and maritime users by proactively avoiding established traffic separation schemes and traditional navigation routes.

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, fishing activities, and NOAA scientific research and surveys. The discussion below summarizes how BOEM considered these other OCS uses in the Lease Area 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 interference with those uses.

- **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.

- **Navigation and Vessel Traffic**

  The Lease Area is just south of the Delaware Bay and River, which offers access to several ports of call (such as Wilmington, Philadelphia, and Trenton) for large commercial deep-draft ships, tug/barge units, as well as smaller commercial and non-

[57] *See* 43 U.S.C. § 1337(p)(4)(I); 30 C.F.R. §§ 585.102(a)(9), 585.621(d). 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).
[58] *See* 43 U.S.C. § 1337(p)(4)(I); 30 C.F.R. § 585.102(a)(9).
[59] *See* 30 C.F.R. § 585.621(d).

commercial vessels. Other ports with traffic navigating in the vicinity of the project include Atlantic City, Paulsboro, New York Harbor, Hope Creek, and Port Elizabeth. The closest port from the Lease Area is Ocean City, MD, at 11 nmi to the West, while the Delaware Bay inlet and Cape May are respectively 24 nmi and 29 nmi to the North, and the main deep draft ports in the vicinity are along the Delaware River.

The Navigation Safety Risk Assessment (NSRA) for the Project shows that it is technically feasible for mariners and USCG SAR helicopters to navigate through the Project Area. The Project will maintain a minimum spacing distance of 1 nmi wide oriented north-south, by 0.76 nmi wide oriented east-west. US Wind consulted with USCG to ensure that the layout will meet the requirement for navigation safety, and SAR operation for the Project Area. The highest vessel traffic density in the geographic analysis area was in the vicinity of Cape May, Delaware Bay, the Ocean City Inlet, and the TSS, consisting of an Eastern Approach, a Southeastern Approach, a Two-way Traffic Route, and a Precautionary Area (33 C.F.R. § 167.170). The Southeastern Approach of the TSS is adjacent to the northeastern boundary of the Lease Area and is primarily a shipping route for deep-draft vessels. Most vessels that enter the Lease Area are Cargo/Tanker vessels.

The USCG participated alongside BOEM in the review of the NSRA. While there are no restrictions on navigation in the Project area, vessels would need to navigate with greater caution. Navigation within the Lease Area would be aided by marked and lit WTGs and Offshore Substations, and other structures (i.e., met towers). US Wind would ensure proper marking, lighting, and signaling of Private Aids to Navigation (PATON) in accordance with USCG requirements and BOEM[60] guidelines.

As described in the final EIS, US Wind committed to continuing stakeholder engagement and public outreach with, but not limited to, federal, state, tribal, and local officials; non-governmental organizations; fishermen; shipping organizations; and other stakeholders. US Wind will communicate project updates to minimize impacts to mariners.[61]

- **Commercial Fisheries and For-Hire Recreational Fishing**

  Federally permitted fishing occurs in the Lease Area. The value of commercial landings in the New England and MidAtlantic NMFS regions has been generally increasing- since 2000, reaching a revenue of $2.45 billion in 2021.[62] Commercial fishing vessel trips in

[60] BOEM, OREP, Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Dev. (2021), https://www.boem.gov/sites/default/files/documents/renewable-energy/2021-Lighting-and-Marking-Guidelines.pdf.
[61] *See* Navigation Safety Risk Assessment, Appendix K1 of Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024). https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan
[62] *See* Chapter 3.6.1 in the Final EIS, https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis

the Lease Area have decreased in recent years when compared with the previous 14 years.[63] During the 14-year period from 2008 to 2021, NMFS data show that 75 percent of the permitted vessels that fished the Lease Area derived less than 0.15 percent of their total annual revenue from the area.[64] Although a few outlier vessels derived a higher proportion of their annual revenue from the Lease Area in comparison to other vessels fishing in the Lease Area, the revenue for most of these outliers was below 5 percent of annual revenue for commercial fishing permit holders. This analysis demonstrated that while some vessels depended heavily on the Lease Area for their commercial fishing revenue, most derived a small percentage of their total annual revenue from the area. The fishing communities most likely to be exposed to impacts from the Project include Ocean City, MD; Cape May, NJ New Bedford, MA and Indian River, DE. The final EIS concluded that the Project would result in minor to major long-term impacts, depending on the fishery and fishing operation. Minor beneficial impacts to some for-hire recreational fishing operations could also occur. The final EIS states that the cumulative impacts of future planned actions, including future offshore wind approvals, could result in major impacts because some commercial and for-hire recreational fisheries and fishing operations would experience substantial disruptions indefinitely.

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 commercial fishing within the Project Area.[65] For example, temporary safety zones may be established in coordination with the USCG around active construction. During this time, all fishing and other vessels transiting the Project Area 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.

[63] *See* Chapter 3.6.1 in the Final EIS, https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis
[64] *See* Chapter 3.6.1 in the Final EIS, https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis
[65] *See* Chapter 3.6.1 in the Final EIS, https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis

While BOEM expects that, with time, some fishing vessel operators will adapt to the spacing and be able to fish successfully in the Project Area,[66] the Lessee has identified using the Fishing Communication Plan to reduce space-use conflicts with commercial fisheries from the Project.[67] As proposed in the COP, US Wind would implement measures to avoid, minimize, and mitigate impacts of navigational hazards on commercial and for-hire recreational fisheries, including marking all offshore structures with marine navigation lighting in accordance with USCG and BOEM guidance.

US Wind will establish a process for gear loss compensation for commercial fisheries and will work cooperatively with commercial/recreational fishing entities and interests to review planned activities and ensure that the construction and operation activities will minimize potential conflicts. Including these measures described above would mitigate some of the impacts that the Project is expected to have on commercial and fisheries for-hire recreational fisheries.

- **Scenic and Visual**

  US Wind submitted its COP with visual simulations of the proposed development plan and a visual impact report. BOEM used the project description, information regarding the affected visual environment, affected viewshed data, the visual simulations in the COP, and other sources of information to conduct a thorough analysis of the impacts of the Proposed Action on visual and scenic resources. The geographic analysis area (GAA) for the US Wind Project encompasses 40 miles (64.4-kilometer) of New Jersey, Delaware, Maryland, and Virginia coastlines from Cape May, New Jersey, to Chincoteague, Virginia. The offshore visual analysis area encompasses 8,043 square miles (20,831 square kilometers) and includes 90 miles (145 kilometers) of oceanfront shoreline in Maryland, Delaware, Virginia, and New Jersey (excluding Delaware Bay). Approximately 1,766 square miles (4,574 square kilometers, 22 percent) of the area is landward of the shoreline (i.e., the shoreward geographic analysis area), of which approximately 14 percent would have views of Project facilities; other portions of the shoreward geographic analysis area would not have views due to screening by buildings, topography, and/or vegetation. Impacts by the proposed project to visual character of the onshore and offshore environment are based on an inventory of the landscape similarity zones (LSZ). The inventory delineates discrete character units based on visual continuity of the physical elements that contribute to the character and identity that define the individual LSZs. The National Land Cover Databased classifications serve as the basis for the inventory delineations and character descriptions.

[66] *See* Chapter 3.6.1 in the Final EIS, https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis

[67] *See* Section 17.5.2 of Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024). https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan

Thirteen key observation points (KOP) in New Jersey, Delaware, Maryland, and Virginia were selected from the affected areas defined in the computer-generated viewshed model. The closest distance between KOPs and WTGs ranges from 10.8 to 39.7 miles. In addition, BOEM included a theoretical offshore (open ocean) KOP to represent typical views of the Lease Area from boats, cruise ships, and commercial ships. The proposed WTGs would be visible from the majority of KOPs ranging from 10.8 miles at the closest proximity to 50.8 at the farthest. The visible proportions of the WTGs would vary from the full WTG to limited to the tips of blades depending on elevation of the viewer and distance between the viewer and the WTGs. Lighting angle and atmospheric conditions also affects actual visibility which will vary through the day.

Aviation warning lighting affixed to the wind turbines would be potentially visible as far as 40 miles from beaches and coastlines within the GAA with impacts on scenic and visual resources. Nighttime impacts would be reduced by implementing an aircraft detection lighting system (ADLS) on WTGs and offshore substations. Use of ADLS would reduce the duration of obstruction lighting system activation by more than 99 percent compared to continuously illuminated lights in a system without ADLS.

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 facility 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 will 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 condition 7.2 in ROD Appendix A).

- **NOAA Scientific Research and Surveys.**

  As described in section 3.6.7 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) to address these adverse impacts. As described in section 3.6.7.5, the Project will have major adverse impacts on NMFS scientific surveys.

  There are 14 NMFS scientific surveys that overlap with wind energy development in the northeast region. Twelve 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 impacts on the 12 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.

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[68]

For a discussion on how BOEM selected the Lease Area, see section 2.1. For a discussion on how BOEM considered potential conflicts with fisheries, sealanes, deepwater ports, and navigation, see section 4.9.

4.11 Public notice and comment on any proposal submitted for a lease or easement[69]

For a detailed discussion on public notice and comment opportunities associated with the issuance of the lease, please see Chapter 1 and Appendix A of the final EIS[70] and Section 5.1 of the Mid-Atlantic EA.[71]

Before preparing the draft EIS, BOEM held three virtual public scoping meetings (on June 21, 23, and 27, 2022) to solicit feedback and to identify issues and potential alternatives for consideration. The topics most referenced in the scoping comments included commercial fisheries and for-hire recreational fishing, mitigation and monitoring, birds, NEPA/public involvement, cumulative effects, climate change, and marine mammals.[72] 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-2022-0025.

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[68] *See* 43 U.S.C. § 1337(p)(4)(J); 30 C.F.R. § 585.102(a)(10).
[69] *See* 43 U.S.C. § 1337(p)(4)(K); 30 C.F.R. § 585.102(a)(11).
[70] *See* Appendix A of the Final EIS, https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis
[71] BOEM, OCS EIS/EA BOEM 2012-003, Com. Wind Lease Issuance and Site Assessment Activities on the Atl. Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia. (2012), https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/Smart_from_the_Start/Mid-Atlantic_Final_EA_012012.pdf.
[72] *See* Bureau of Ocean Energy Mgmt, US Wind Construction and Operations Plan Scoping Report, July 2022 https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/USWind-Scoping-Report.pdf

On October 6, 2023, 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.[73] 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 two virtual public hearings (on October 19 and 30, 2023) and two in-person public meetings (on October 24 and 26, 2023) to solicit 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. The topics most referenced during the draft EIS comment period included commercial fisheries and for-hire recreational fishing, birds, 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-2023-0050.

On August 2, 2024 BOEM published an NOA for the final EIS in the *Federal Register*.[74] The final EIS was also made available in electronic form at https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Maryland%20Offshore%20Wind%20Final%20EIS.pdf. BOEM's 30-day waiting period for the final EIS closed on September 3, 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[75]

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.[76] 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.

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[73] *See* Notice of Availability of a Draft Environmental Impact Statement for US Wind Inc's Proposed Wind Energy Facility Offshore Maryland, 88 Fed. Reg. 69,658 (October 6, 2023), https://www.federalregister.gov/documents/2023/10/06/2023-21749/notice-of-availability-of-a-draft-environmental-impact-statement-for-us-wind-incs-proposed-wind

[74] *See* Notice of Availability of a Final Environmental Impact Statement for US Wind Inc's Proposed Wind Energy Facility Offshore Maryland, 89 Fed. Reg. 63,221 (Aug. 2, 2024). https://www.federalregister.gov/documents/2024/08/02/2024-17035/notice-of-availability-of-a-final-environmental-impact-statement-for-us-wind-incs-proposed-wind

[75] *See* 43 U.S.C. § 1337(p)(4)(L); 30 C.F.R. § 585.102(a)(12).

[76] "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.

On January 31, 2023, DOI published a final rule in the *Federal Register*[77] 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 0490, as authorized under the lease, OCSLA, and its implementing regulations. BOEM still retains its authority for enforcing compliance, including safety and environmental compliance, with all 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 0490 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 will be included as COP conditions of approval.

5.0 STATUS OF THE LEASE

US Wind is currently in compliance with the terms of Lease OCS-A 0490. US Wind has maintained the lease in full force and effect by virtue of annual rent payments, all of which have been timely paid by US Wind and received by BOEM.

6.0 FINANCIAL ASSURANCE

As required by 30 C.F.R. § 585.626(a)(17), Section 1.5 of the COP[78] contains US Wind'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. § 585.516 and §§ 585.525 through 585.529. US Wind has provided and currently maintains Bond No. 09275795 to cover $100,000 lease-specific financial assurance requirement and $239,121 for 1 year's worth of rent; and Bond No. 09376605 in the amount of $94,000 to meet SAP supplemental financial assurance requirements on lease OCS-A 0490 to guarantee compliance with all terms and obligations of the lease. BOEM's regulations at 30 C.F.R. § 585.516(a)(3) require the lessee to provide a supplemental bond or other financial assurance in an amount determined by BOEM based on anticipated decommissioning costs of the facility. US Wind must also 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

[77] *See* Reorganization of Title 30-Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 88 Fed. Reg. 6376 (Jan. 31, 2023).
[78] *See* Section 17.5.2 in the Final COP. of Maryland Offshore Wind (OCS-A 0490) Construction and Operations Plan (July 1, 2024). https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-construction-and-operations-plan

supplemental financial assurance at any time if BOEM determines it is necessary to guarantee compliance with the terms and conditions of the lease.[79]

7.0 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 strategies to mitigate potential environmental impacts and interference with other OCS uses. In 2009, OREP established and began meeting with an Intergovernmental Renewable Energy Task Force, and with other stakeholders and ocean users, to identify areas of interest for wind energy offshore Maryland as well as areas that were less suitable. OREP then prepared an EA and issued a FONSI, which 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 August of 2014, BOEM held the lease sale that led to the issuance of lease OCS-A 0490 to US Wind. US Wind submitted its COP in August 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, 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 ROD for the Project, the Preferred Alternative, i.e., Alternative B (Proposed Action), plus the mitigation measures required by BOEM, balance the need to prevent interference with other 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, would have negligible to moderate adverse impacts on most resources and only the potential for major adverse impacts on (i) North Atlantic Right Whale (NARW), (ii) visual resources, (iii) commercial fisheries, and (iv) scientific research. The final EIS also found that the Project could have, to some extent, beneficial impacts on the following resources: (i) benthic resources, (ii) birds, (iii) marine mammals (odontocetes and pinnipeds), (iv) finfish, invertebrates, and essential fish habitat, (v) for-hire recreational fishing, (vi) air quality, (vii) land use and coastal

[79] *See* 30 C.F.R. § 585.517.

infrastructure, (viii) recreation and tourism, (ix) environmental justice, and (x) demographics, employment, and economics.

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.[80] In conclusion, OREP has evaluated all the information that US Wind 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.

[80] *See* Chapters 3.4 and 3.5 in the Final EIS, https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis ;
Section A.3 of Appendix A on Consultations in the Final EIS, https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis
And Consultation documents: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Maryland%20Offshore%20Wind%20FWS%20Biological%20Assessment.pdf;
https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-nmfs-biological-assessment;
https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-efh-assessment

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
Chief, Engineering and Technical Review Branch

MARILYN SAULS
Digitally signed by MARILYN SAULS
Date: 2024.08.08 12:41:29 -04'00'

Subject: Review of the Maryland Wind Offshore Wind Project Construction and Operations Plan (COP) for Commercial Lease OCS-A 0490

US Wind Inc. (US Wind) submitted a COP to the Bureau of Ocean Energy Management (BOEM) on August 11, 2020, for the Maryland Wind Offshore Wind Project (Project) on commercial wind lease OCS-A 0490. The COP for the Project proposes the installation of the following major offshore components:

- Up to 121[1] wind turbine generators (WTGs) supported by monopile;
- Up to 4 offshore substations supported by monopile, piled jacket, or suction bucket foundations;
- One meteorological tower supported by a braced caisson foundation;
- Inter-array cables with an operating voltage of 66-150 kilovolts (kV); and
- Up to 4 submarine high voltage alternating current export cables with an operating of 230-275 kV and buried to a target depth of 3.3 to 9.8 feet (1-3 meters)

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]), Oil Spill Response Plan (OSRP), and Certified Verification Agent (CVA) Nomination;
- Federal Aviation Administration (FAA) for aviation and radar interference;
- National Oceanic and Atmospheric Administration (NOAA), for radar interference; and
- The United States Coast Guard (USCG), for vessel navigation, marine radar interference and Search and Rescue (SAR).

[1] US Wind's proposed layout includes a 1 nautical mile (1.9 kilometer) setback from the traffic separation scheme (TSS) from for the Southeastern approach to Delaware Bay which removes 7 of the 121 WTG positions, resulting in a total of 114 WTGs. *See* Maryland Offshore Wind Construction and Operation Plan, Volume I, Figure 2-3.

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, projects currently being built in the United States, and individual expertise to assess the information provided in the COP. ETRB determined that the technical information and supporting data submitted by US Wind meets the requirements of 30 CFR §585.626 and 30 CFR §585.627[2] including the recent revisions to 30 CFR 585.626 and 585.627 that became effective on July 15, 2024[3]. The information requirements of the new regulations are substantially similar to the requirements of the previous regulations, which, as relevant here, were revised for clarification and to provide flexibility in the timing—not substance—of submittal of certain data. ETRB has verified that the information US Wind submitted in its COP and updated COPs submitted during ETRB's review process, meets the information requirements under the new regulations. This review is documented in BOEM's COP Review Matrix located on the Office of Renewable Energy Program's share drive at AEAU: S:\State of Maryland\US Wind\OCS-A 0490\COP.

ETRB expects US Wind to use the most current technology available for commercial production that meets or exceeds current industry standards. In some cases, this includes technologies currently in prototyping and/or working toward type certification by a recognized industry standards organization but may not yet be 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 which will meet or exceed the current international industry standards.

The COP also provides a description of its proposed SMS,[4] as required by 30 C.F.R. § 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 C.F.R. § 285.810(a)-(f), and US Wind's proposed implementation thereof. BOEM determined that US 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 any prescribed safety standards and awareness training.

OREP has consulted with BSEE and the USCG on safety requirements and best practices during the COP review process. Their recommendations and relevant requirements have been incorporated into the anticipated conditions of approval for the COP to ensure that the Project is carried out in a safe manner. Additionally, oversight of the review of future submissions (e.g., Facility Design Report [FDR] and Fabrication and Installation Report [FIR]) will allow BSEE to ensure that the "facilities are designed, fabricated, and installed in conformance with accepted engineering practices."[5]

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[2] Where ETRB review is appropriate inclusive of 30 CFR 585.627(a)(1) and portions of 585.627(a)(8), vessel traffic.
[3] The Department of Interior published the Renewable Energy Modernization Rule on May 15, 2024 which became effective on July 15, 2024. This final rule not only finalized amendments to the Department's existing renewable regulations administered by BOEM, but also regulatory amendments previously proposed by BOEM that are now administered by BSEE. *See* 89 FR42602
[4] See US Wind's Maryland Offshore Wind Project Construction and Operations Plan Volume I, Appendix B.
[5] See 30 C.F.R. § 285.705(a)(1).

Furthermore, ETRB and BSEE reviewed the statement of work and qualifications submitted in the COP for the CVA nomination. US Wind nominated Bureau Veritas North America, Inc. (Bureau Veritas) to be the CVA for the Project. On March 16, 2022, BOEM approved the CVA nomination. Bureau Veritas will review US Wind's 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 and consultations, ETRB has determined the technical information and supporting data provided with the COP is sufficient to allow the safe installation of the Project on the Outer Continental Shelf (OCS), does not unreasonably interfere with other uses of the OCS, uses best available and safest technology, best management practices, and properly trained personnel, pursuant to 30 CFR §585.621(b), (c), (e), (f), and (g).

ETRB recommends approval of the COP, along with the inclusion of the following terms and conditions (T&C), provided as Appendix A – Anticipated Terms and Conditions of COP Approval 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 G: Mitigation and Monitoring of the Final Environmental Impact Statement (FEIS). The table below provides a cross-reference.

#	Terms and Conditions	Regulation[6]	Information Requirement
2.1	Munitions and Explosives of Concern/Unexploded Ordnance Investigation	§585.627(a)(1)	Hazard information – manmade hazards
2.2	MEC/UXO Investigation Survey Plan	§585.627(a)(1)	Hazard information – manmade hazards
2.3	MEC/UXO Investigation Survey Report	§585.627(a)(1)	Hazard information – manmade hazards
2.4	MEC/UXO Identification Survey Plan	§585.627(a)(1)	Hazard information – manmade hazards
2.5	MEC/UXO Identification Survey Report	§585.627(a)(1)	Hazard information – manmade hazards
2.6	MEC/UXO ALARP Certification	§585.627(a)(1)	Hazard information – manmade hazards
2.7	MEC/UXO Discovery Notification	§585.627(a)(1)	Hazard information – manmade hazards
2.8	Munitions Response Plan for Confirmed MEC/UXO	§585.627(a)(1)	Hazard information – manmade hazards
2.9	Munitions Response After Action Report	§585.627(a)(1)	Hazard information – manmade hazards

[6] Indicates appropriate regulation from the 2024 Modernization Rule. See 89 FR42602

#	Terms and Conditions	Regulation[6]	Information Requirement
2.10	Safety Management System	§585.627(d)	Safety Management System
2.11	Emergency Response Procedure	§585.626(b)(12)(ii) [§585.626(a)(10)(ii)]	Operating procedures – accidents or emergencies
2.12	Oil Spill Response Plan	§585.627(c)	Oil Spill Response Plan
2.13	Cable Routings	§585.626(b)(7) [§585.626(a)(5)]	Cables
2.14	Cable Burial	§585.626(b)(7) [§585.626(a)(5])	Cables
2.15	Cable Protection Measures	§585.626(b)(7) [§585.626(a)(5])	Cables
2.16	Crossing Agreements	§585.626(b)(7) [§585.620(a)(6)] [§585.620(a)(15)]	Cables
2.17	Post-Installation Cable Monitoring	§585.626(b)(7) [§585.620(a)(6)] [§585.626(a)(10])	Cables
2.18	WTG and OSS Foundation Depths	§585.626(a)(4) [§585.626(b)(1)]	Geotechnical survey
2.19	Structural Integrity Monitoring	§585.626(b)(12) §285.824 [§585.626(a)(10)]	Operating procedures, self-inspections
2.20	Foundation Scour Protection Monitoring	§585.626(a)(6) [§585.626(b)(1)] [§585.626(a)(10)]	Overall site investigation – scouring of the seabed
2.21	Post-Storm Event Monitoring Plan	§585.627(a)(1) [§585.626(b)(4)] [§585.626(a)(10)]	Hazard information – meteorology, oceanography
2.22	High Frequency Radar Interference Analysis and Mitigation	§585.626(b)(23); FEIS [§585.626(a)(21)]	Other information as required by BOEM

#	Terms and Conditions	Regulation[6]	Information Requirement
2.23	Critical Safety Systems and Equipment	§585.626(b)(20); [§585.626(a)(18)]	CVA nomination and reports
2.24	Engineering Drawings	§585.626(b)(20); [§585.626(a)(18)]	CVA nomination and reports
2.25	Construction Status	§585.626(b)(21); [§585.626(a)(19)]	Construction Schedule
2.26	Maintenance Schedule	§585.626(b)(12); [§585.626(a)(10)]	Operating procedures
2.27	Pre-lay Grapnel Run Plan	§585.626(b)(7); §585.626(b)(15) [§585.626(b)(13])	Cables; Environmental Impacts
3	Navigational and Aviation Safety Conditions	§585.626(b)(23) [§585.626(a)(21)]	Other information as required by BOEM
5.3.3	Micrositing Plan(s)	§585.626(b)(15) [§585.626(a)(13)]	Environmental Impacts
5.3.4	Boulder Identification and Relocation Plan	§585.627(a)(1); §585.626(b)(15) [§585.626(a)(13)] [§585.626(b)(1)]	Hazard Information-Shallow Geological Hazards; Environmental Impacts
5.3.6	Boulder Relocation	§585.627(a)(1); §585.626(b)(15) [§585.626(a)(13)] [§585.626(b)(1)]	Hazard Information-Shallow Geological Hazards; Environmental Impacts
5.3.7	Boulder Relocation Report	§585.627(a)(1); §585.626(b)(15) [§585.626(a)(13)] [§585.626(b)(1)]	Hazard Information-Shallow Geological Hazards; Environmental Impacts
5.3.8	Scour and Cable Protection Plan	§585.626(b)(7) [§585.626(a)(5)] [§585.626(a)(13)]	Cables; Environmental Impacts