# VINEYARD NORTHEAST

# CONSTRUCTION AND OPERATIONS PLAN

## VOLUME II APPENDIX

**MARCH 2024**


**PREPARED BY:**

Epsilon ASSOCIATES INC.

**SUBMITTED BY:**

**VINEYARD NORTHEAST LLC**

VINEYARD OFFSHORE


**PUBLIC VERSION**

# Vineyard Northeast COP

# Appendix II-M Coastal Zone Management Act Consistency Certifications

Prepared by:
Epsilon Associates

Prepared for:
Vineyard Northeast LLC

**March 2024**

# Vineyard Northeast COP

# Appendix II-M1 Vineyard Northeast Massachusetts Coastal Zone Management Act Consistency Certification

Prepared by:
Epsilon Associates

Prepared for:
Vineyard Northeast LLC

## March 2024

| Revision | Date | Description |
|---|---|---|
| 0 | July 2022 | Initial submission. |
| 1 | March 2023 | Updated to address Bureau of Ocean Energy Management (BOEM) Round 1 Comments (dated January 13, 2023) and make minor corrections. |
| 2 | April 2023 | Made updates consistent with revisions to other parts of the COP and made other minor corrections. |
| 3 | November 2023 | Updated to address United States Coast Guard (USCG) Round 3 Comments (dated August 8, 2023) and to be consistent with revisions to other parts of the COP. |
| 3 | March 2024 | Resubmitted without revisions. |

# Vineyard Northeast

# Massachusetts Coastal Zone Management Act

# Consistency Certification

Submitted to:

**BUREAU OF OCEAN ENERGY MANAGEMENT**
45600 Woodland Rd
Sterling, VA 20166

**MASSACHUSETTS OFFICE OF COASTAL ZONE MANAGEMENT**
251 Causeway Street, Suite 800
Boston, MA 02114-2138

Prepared for:

**Vineyard Northeast LLC**

Prepared by:

**Epsilon Associates, Inc.**

**November 2023**

# Table of Contents

# Table of Contents (Continued)



# List of Figures



# List of Tables

# 1 Introduction

Vineyard Northeast LLC (the "Proponent") proposes to develop, construct, and operate offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0522 (the "Lease Area") along with associated offshore and onshore transmission systems. This proposed development is referred to as "Vineyard Northeast." Vineyard Northeast includes 160 total wind turbine generator (WTG) and electrical service platform (ESP) positions within the Lease Area. Up to three of those positions will be occupied by ESPs and the remaining positions will be occupied by WTGs. Two offshore export cable corridors (OECCs)—the Massachusetts OECC and the Connecticut OECC—will connect the renewable wind energy facilities to onshore transmission systems in Massachusetts and Connecticut. Figure 1.0-1 provides an overview of Vineyard Northeast.

Onshore facilities for Vineyard Northeast may be located in Westport, Fall River, or Somerset Massachusetts. Additionally, portions of the Massachusetts OECC are located within Massachusetts state waters (approximately 10 kilometers (km) (6 miles [mi]) of the 126 km (78 mi) length OECC are in Massachusetts state waters) and Massachusetts-based commercial fishermen may operate within the Lease Area.

The Proponent has submitted a Construction and Operations Plan (COP) to BOEM, which will serve as necessary data and information per 15 Code of Federal Regulations (CFR) Part 930.58. The Proponent has prepared this federal Consistency Certification to demonstrate that Vineyard Northeast will comply with and will be conducted in a manner consistent with the enforceable policies of the approved Massachusetts Coastal Management Program (MA CMP). Based upon the analyses presented herein and, in the COP, the Proponent certifies to the Massachusetts Coastal Zone Management (MA CZM) that:

> *The proposed activities described in detail in the Vineyard Northeast COP comply with Massachusetts' approved coastal management program and will be conducted in a manner consistent with such program.*

This certification is made in accordance with the requirements of the Federal Coastal Zone Management Act (16 U.S.C. 1451 et seq.) and implementing regulations at 15 CFR Part 930, Subparts D and E; 301 Code of Massachusetts Regulations (CMR) 20.00; and the relevant statutory and regulatory authorities for the Commonwealth of Massachusetts' Coastal Zone Management Plan and Program Policies.

A summary of Vineyard Northeast is provided in Section 2. Section 3 demonstrates how Vineyard Northeast (as described in Section 2 and more completely in the Vineyard Northeast COP) complies with each of the MA CMP applicable enforceable policies.

G:\Projects2\MA\MA\5410\2023\MXD\Vol_II_REV_April_2023\CZM\Fig1.0-1_MA_CZM_Overview_20231026.mxd

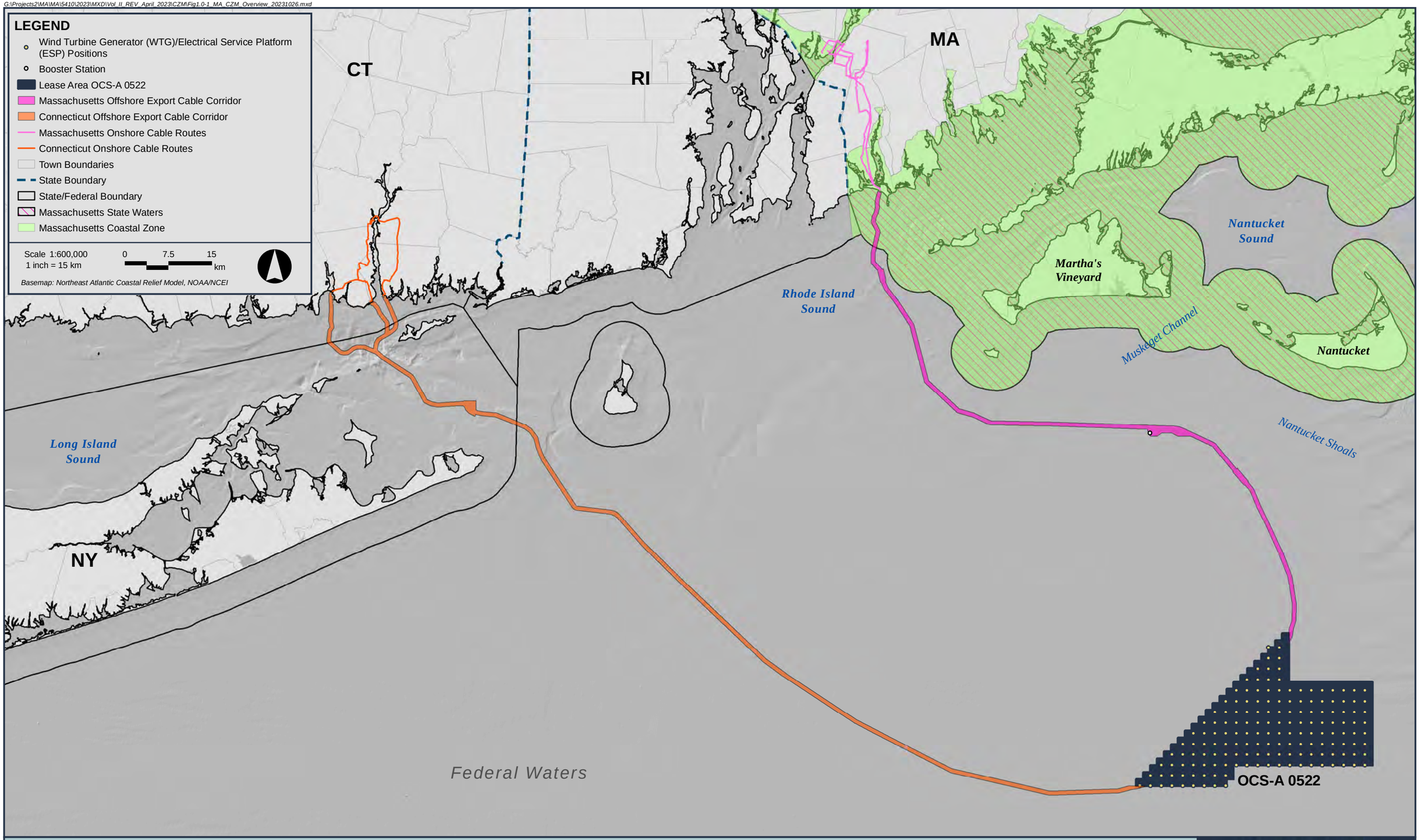


**Figure 1.0-1**
Vineyard Northeast Overview

VINEYARD NORTHEAST
VINEYARD OFFSHORE

# 2 Summary of Vineyard Northeast Facilities and Activities

## 2.1 Overview

Vineyard Northeast LLC (the "Proponent") proposes to develop, construct, and operate offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0522 (the "Lease Area") along with associated offshore and onshore transmission systems. This proposed development is referred to as "Vineyard Northeast."

Vineyard Northeast includes 160 total wind turbine generator (WTG) and electrical service platform (ESP) positions within the Lease Area. Up to three of those positions will be occupied by ESPs[1] and the remaining positions will be occupied by WTGs. As proposed, the WTGs and ESP(s) will be oriented in fixed east-to-west rows and north-to-south columns with 1 nautical mile (NM) (1.9 km) spacing between positions. The WTGs and ESP(s) will be supported by monopiles or piled jacket foundations. The base of the foundations may be surrounded by scour protection. Submarine inter-array cables will transmit power from groups of WTGs to the ESP(s). If two or three ESPs are used, they may be connected with inter-link cables. Offshore export cables will then transmit the electricity collected at the ESP(s) to shore.

The WTGs, ESP(s), and their foundations as well as the inter-array cables, inter-link cables (if used), and a portion of the offshore export cables will be located in Lease Area OCS-A 0522. The Lease Area is within the Massachusetts Wind Energy Area (MA WEA) identified by BOEM, following a public process and environmental review, as suitable for offshore wind energy development. At its closest point, the 536 square kilometer ($km^2$) (132,370 acre) Lease Area is approximately 46 km (29 mi) from Nantucket. Between the Lease Area and shore, the offshore export cables will be installed within two offshore export cable corridors (OECCs)—the Massachusetts OECC and the Connecticut OECC—that connect to onshore transmission systems in Massachusetts and Connecticut.

The Massachusetts OECC travels from the northernmost tip of the Lease Area along the northeastern edge of the MA WEA and Rhode Island/Massachusetts (RI/MA) WEA and then heads across Buzzards Bay towards the Horseneck Beach Landfall Site in Westport, Massachusetts. Up to two high voltage direct current (HVDC) cable bundles or up to three high voltage alternating current (HVAC) cables may be installed within the Massachusetts OECC. If HVAC offshore export cables are used, the cables would connect to a booster station in the northwestern aliquot[2] of Lease Area OCS-A 0534 to boost the electricity's voltage level, reduce

---

1 If two or three ESPs are used, they may be located at separate positions or two of the ESPs may be co-located at the same grid position. Co-located ESPs would be smaller structures installed on monopile foundations.

2 An aliquot is $1/64^{th}$ of a BOEM Outer Continental Shelf (OCS) Lease Block.

transmission losses, and enhance grid capacity. From the Horseneck Beach Landfall Site, onshore export cables will connect to a new onshore substation in Westport, Fall River, or Somerset, Massachusetts. Grid interconnection cables will connect the onshore substation to one of three potential points of interconnection (POIs): the existing Pottersville Substation, a planned substation near Brayton Point, or the existing Bell Rock Substation.

Up to two HVDC offshore export cable bundles may be installed within the Connecticut OECC. The Connecticut OECC travels from the southwestern tip of the Lease Area along the southwestern edge of the MA WEA and then heads between Block Island and the tip of Long Island towards potential landfall sites near New London, Connecticut. As the Connecticut OECC approaches shore, it splits into three variations to connect to three potential landfall sites: the Ocean Beach Landfall Site, the Eastern Point Beach Landfall Site, and the Niantic Beach Landfall Site. Onshore export cables will connect one of the landfall sites to a new onshore substation in Montville, Connecticut, which will be connected to the POI at the existing Montville Substation by grid interconnection cables.

Vineyard Northeast is being developed and permitted using a Project Design Envelope (PDE) based on expected commercial and technological advancements. The PDE outlines a reasonable range of project design parameters (e.g., multiple foundation types) and installation techniques (e.g., use of various cable installation tools). The Proponent has developed the PDE and sited Vineyard Northeast's facilities based on feedback from multiple agencies and stakeholders. For example, the Proponent modified and refined the OECCs through numerous consultations with federal and state agencies as well as fishermen and, based on their feedback, consolidated the offshore export cables with other developers' proposed cables to the extent feasible. Key elements of Vineyard Northeast's PDE are summarized in Table 2.1-1. For a complete description of Vineyard Northeast's offshore and onshore facilities, see COP Volume I.

**Table 2.1-1 Summary of the Project Design Envelope**

| Parameter | Project Design Envelope |
|---|---|
| Maximum number of WTG/ESP positions | 160 |
| **Wind Turbine Generators** | |
| Maximum number of WTGs | 160 |
| Maximum rotor diameter | 320 m (1,050 ft) |
| Maximum tip height | 400 m (1,312 ft) |
| Minimum tip clearance | 27 m (89 ft) |
| **Electrical Service Platforms and Booster Station** | |
| Number of ESPs | 0–3<br>(ESP equipment may be integrated onto WTG foundation[s])[1] |

**Table 2.1-1 Summary of the Project Design Envelope (Continued)**

| Parameter | Project Design Envelope |
|---|---|
| **Electrical Service Platforms and Booster Station** | |
| Maximum number of booster stations | 1 (only for HVAC transmission) |
| Maximum topside height above Mean Lower Low Water[2] (MLLW) | 70 m (230 ft) |
| **Foundations and Scour Protection** | |
| Maximum pile diameter | Monopiles: 14 m (46 ft)<br>Piled jackets: 4.25 m (14 ft) |
| Maximum area of scour protection | Monopiles: 7,238 $m^2$ (1.8 acres)<br>WTG piled jackets: 11,660 $m^2$ (2.9 acres)<br>ESP piled jackets: 32,577 $m^2$ (8.1 acres)<br>Booster station piled jackets: 18,427 $m^2$ (4.6 acres) |
| **Offshore Cables** | |
| Maximum total inter-array cable length | 356 km (192 NM) |
| Maximum total inter-link cable length | 120 km (65 NM) |
| Maximum number of offshore export cables | Massachusetts OECC: 3 HVAC cables or 2 HVDC cable bundles<br>Connecticut OECC: 2 HVDC cable bundles |
| Maximum total offshore export cable length[3] | Massachusetts OECC: 436 km (235 NM)<br>Connecticut OECC: 421 km (227 NM) |
| Target burial depth beneath stable seafloor[4] | 1.5–2.5 m (5–8 ft) |
| **Onshore Facilities** | |
| Massachusetts landfall site | Horseneck Beach Landfall Site |
| Connecticut landfall site | Ocean Beach Landfall Site, Eastern Point Beach Landfall Site, or Niantic Beach Landfall Site |
| Massachusetts onshore cable route | Horseneck Beach Eastern Onshore Cable Route or Horseneck Beach Western Onshore Cable Route (including variants) |
| Connecticut onshore cable route | Ocean Beach Onshore Cable Route, Eastern Point Beach Onshore Cable Route, or Niantic Beach Onshore Cable Route |
| Onshore substation site envelopes[5] | Massachusetts: [redacted]<br>Connecticut: [redacted] |

**Table 2.1-1 Summary of the Project Design Envelope (Continued)**

| Parameter | Project Design Envelope |
|---|---|
| POIs | Massachusetts: Pottersville POI, Brayton Point POI, or Bell Rock POI<br>Connecticut: Montville POI |

Notes:
1. As described in Section 3.4 of COP Volume I, this concept entails placing ESP equipment on one or more expanded WTG foundation platforms rather than having a separate ESP situated on its own foundation.
2. Height includes helipad (if present) but may not include antennae and other appurtenances.
3. Includes the length of the offshore export cables within the Lease Area.
4. Unless the final Cable Burial Risk Assessment (CBRA) indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.
5. Since the Proponent has not yet secured site control for the onshore substation sites, the Proponent has identified one or more "onshore substation site envelopes" for each POI.

## 2.2 Construction

Construction of Vineyard Northeast will likely start with the onshore cables and onshore substations. The onshore cables are expected to be installed primarily underground within public roadway layouts or within existing utility rights-of-way (ROWs) via open trenching. The onshore cables may be installed in a duct bank (i.e., an array of plastic conduits encased in concrete) or within directly buried conduit(s). In most instances, underground trenchless crossing methods are expected to be used where the onshore cables traverse unique features (e.g., busy roadways, railroads, wetlands, and waterbodies). However, the crossing of the Taunton River [redacted] may require a segment of overhead transmission lines.[3] Construction of the onshore substations is expected to involve site preparation (e.g., land clearing and grading), installation of the substation equipment and cables, commissioning, and site clean-up and restoration.

Offshore construction will likely begin with offshore export cable installation and/or foundation installation (including scour protection installation). Once the foundations are in place, the WTGs, ESP topside(s), and booster station topside can be installed. Inter-array cables may be installed before or after the WTGs are installed on their foundations. WTG commissioning is expected to take place after the inter-array cables are installed.

Prior to offshore cable installation, the cable alignments may require sand bedform dredging and boulder clearance. Following those activities, pre-lay grapnel runs and pre-lay surveys will be performed to confirm that the cable alignments are suitable for installation. The offshore

[3] As described in Section 3.8.3.3 of COP Volume I, the need for overhead transmission lines at this Taunton River crossing depends on the final location of the onshore substation site and the transmission technology employed (HVAC or HVDC) and will be confirmed through further field data collection and detailed engineering.

cables will then be buried beneath the stable seafloor at a target depth of 1.5 to 2.5 meters (m) (5 to 8 feet [ft])[4] likely using jetting techniques or a mechanical plow. While every effort will be made to achieve sufficient burial, a limited portion of the offshore cables may require cable protection if a sufficient burial depth cannot be achieved. At the landfall sites, the offshore export cables are expected to transition onshore using horizontal directional drilling (HDD) to avoid or minimize impacts to the beach, intertidal zone, and nearshore areas. The offshore export cables will connect to the onshore export cables in underground transition vaults at the landfall sites.

The foundations, WTGs, ESP topside(s), and booster station topside (if used) may be staged at a United States (US) or Canadian port or delivered directly to the Lease Area. The Proponent has identified several potential staging ports in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Canada that may be used for frequent crew transfer and for offloading/loading, storing, and pre-assembling components, among other activities (see Section 3.10.1 of COP Volume I). The foundations, WTGs, and topside(s) will be installed by jack-up vessels or heavy lift vessels (HLVs) using dynamic positioning (DP) or anchors along with necessary support vessels (e.g., tugboats). Seabed preparation may be required prior to foundation installation. Scour protection, which would likely consist of loose rock material placed around the foundation, will likely be needed for monopiles, but may or may not be needed for the smaller diameter jacket pin piles. Once set onto the seabed by the crane of the main installation vessel(s), monopiles or jacket pin piles will be installed using impact pile driving,[5] which will begin with a soft-start (i.e., the impact hammer energy level will be gradually increased). Noise mitigation systems are expected to be applied during pile driving. If monopile foundations are used, a transition piece will be installed on top of the monopile using a vessel's crane (unless an extended monopile concept is employed). Once the foundations are installed, the WTGs, ESP topside(s), and booster station topside will be lifted and secured onto their foundations. Then, the WTGs, ESP(s), and booster station will be commissioned to confirm that they are functioning correctly and ready for energy production. To aid safe navigation, the WTGs, ESP(s), booster station, and their foundations will be equipped with marine navigation and aviation lighting, marking, and signaling in accordance with BOEM, US Coast Guard (USCG), and Federal Aviation Administration (FAA) guidance.

---

[4] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

[5] Prior to impact pile driving, a vibratory hammer or other tool could be used to slowly lower the pile through the top layers of the seabed in a controlled fashion to avoid the potential for a "pile run" (see Section 3.3 of COP Volume I)

## 2.3 Operations and Maintenance

Vineyard Northeast's facilities are expected to operate for approximately 30 years. During operations, the offshore and onshore facilities will be continuously remotely monitored from one or more control center(s) located at the Proponent's operations and maintenance (O&M) facilities and/or a third party's facilities.

The WTGs, ESP(s), and booster station will be designed to operate autonomously and will not be manned. The offshore facilities will be equipped with a supervisory control and data acquisition (SCADA) system. The SCADA system will notify operators of alarms or warnings and enable the operators to remotely interact with and control devices (e.g., sensors, valves, motors), override automatic functions, reset systems, and shut down equipment for maintenance or at the request of grid operators or agencies. The Proponent anticipates that the offshore cables will include a monitoring system, such as distributed temperature sensing (DTS), online partial discharge (OLPD) monitoring, and/or distributed acoustic sensing (DAS), to continuously monitor the cables' status.

The Proponent will regularly conduct inspections and preventative maintenance, including foundation and scour protection inspections, offshore cable surveys, safety inspections and tests, electrical component service, and replacement of consumables, among other activities. Offshore, most scheduled maintenance activities will be performed using service operation vessels (SOVs), service accommodation and transfer vessels (SATVs), crew transfer vessels (CTVs), and/or helicopters. Unscheduled repairs or component replacement may also be necessary, which may require jack-up vessels or other larger vessels similar to those used during construction. The Proponent expects to use one or more onshore O&M facilities to support offshore operations. The O&M facilities, which could be located at or near any of the ports identified in Section 4.4.1 of COP Volume I, would likely be used for dispatching technicians and crew exchange, bunkering, and loading supplies and spare parts onto vessels. The Proponent may also lease space at an airport hangar for aircraft (e.g., helicopters) used to support operations. Onshore maintenance and repair activities are expected to require minimal use of worker vehicles and construction equipment.

## 2.4 Decommissioning

Decommissioning of the offshore and onshore facilities at the end of their operational life is essentially the reverse of the construction process. The WTGs, ESP(s), and booster station (if used) will be disconnected from the offshore cables, disassembled, and removed from their foundations. The foundations will be cut and removed to a depth of 4.5 m (15 ft) below the mudline, unless otherwise authorized by the Bureau of Safety and Environmental Enforcement (BSEE). The removed WTG, ESP, booster station, and foundation components will be shipped to shore and properly disposed of or recycled. The offshore cables may be removed or retired in place (if authorized by BOEM and other appropriate agencies). Any scour protection or cable

protection may be removed or left in place, depending on input from federal and state agencies and relevant stakeholders. The onshore facilities could be retired in place or retained for future use, subject to discussions with local agencies.

## 2.5 Organization of the COP

The COP is being submitted to BOEM, in accordance with 30 CFR Part 585, the stipulations in Lease OCS-A 0522, and applicable guidance, for the development of the entire Lease Area. The Vineyard Northeast COP is comprised of two volumes:

- Volume I describes Vineyard Northeast's offshore and onshore facilities and how the Proponent plans to construct, operate, and decommission those facilities. Volume I also discusses the Proponent's outreach efforts and commitment to health, safety, and environmental (HSE) protection. Volume I is accompanied by several related appendices.

- Volume II assesses the benefits and potential impacts of Vineyard Northeast to physical, biological, socioeconomic, visual, and cultural resources based on the "maximum design scenario" for each resource. Volume II also describes the Proponent's measures to avoid, minimize, and mitigate those potential impacts. Volume II is accompanied by numerous appendices containing detailed resource and site conditions assessments.

## 2.6 Agency, Tribal, and Stakeholder Outreach

Vineyard Northeast LLC is committed to being a good neighbor both onshore and offshore. The Proponent began agency, tribal, and stakeholder outreach specific to Vineyard Northeast in fall 2021 well before the submission of this COP. The Proponent's frequent and early engagement with agencies, Native American tribes,[6] fishermen, local communities, and other stakeholders during the COP planning process enabled the Proponent to incorporate their feedback into the siting and design of the facilities, the methodologies for resources assessments, survey strategies, workforce initiatives and educational opportunities, and/or proposed avoidance, minimization, and mitigation measures. Throughout the development, construction, operational, and decommissioning periods, the Proponent will continue to actively engage with agencies, Native American tribes, fishermen, local communities, and other stakeholders to identify and discuss their interests and concerns regarding Vineyard Northeast.

[6] Throughout the COP, "Native American tribes" generally refers to both federally recognized Tribes/Tribal Nations and other Native American communities. Where appropriate, consultations or communications with federally recognized Tribes/Tribal Nations will be identified.

## 2.7 Benefits of Vineyard Northeast

Vineyard Northeast will generate clean, renewable electricity by as early as 2030 to assist Northeastern states and/or other offtake users in achieving their renewable energy and carbon emission reduction goals. The electricity generated by the WTGs will displace electricity from fossil fuel power plants, resulting in a significant net reduction in air emissions from the regional electric grid. Vineyard Northeast is expected to reduce carbon dioxide equivalent ($CO_2e$) emissions from the electric grid by approximately 4.9 million tons per year (tpy), or the equivalent of taking approximately 970,000 cars off the road.[7] This reduction in greenhouse gas emissions will help mitigate additional effects of ongoing climate change (e.g., sea level rise and increased flooding, changes in agricultural productivity, shifts in species' distributions, and increases in energy system costs) that are impacting the environment and public health. Vineyard Northeast will also reduce regional emissions of air contaminants such as nitrogen oxides (NOx) and sulfur dioxide ($SO_2$), which contribute to acid rain, ocean acidification, and ground level ozone/smog and are linked to increased rates of early death, heart attacks, stroke, and respiratory disorders. Vineyard Northeast will also help diversify the states' electricity supply and increase the reliability of the electric grid.

Beyond these important environmental, public health, and energy reliability benefits, Vineyard Northeast is expected to result in significant long-term economic benefits, including considerable new employment opportunities. Vineyard Northeast is expected to support a minimum of 15,894 direct, indirect, and induced full-time equivalent (FTE) job-years[8] during pre-construction and construction. Construction of Vineyard Northeast is also estimated to generate at least ~$1.63 billion in total labor income and ~$4.65 billion in output.[9] The operation of Vineyard Northeast is projected to generate approximately 17,046 FTE job-years assuming a 30-year operational life (equivalent to 568 direct, indirect, and induced FTEs annually), as well as at least ~$1.19 billion in total annual labor income and ~$4.62 billion in output.

---

[7] Assuming the minimum nameplate capacity of Vineyard Northeast.

[8] One FTE job-year is the equivalent of one person working full time for one year (2,080 hours).

[9] Output is the estimated value of all goods and services sold (i.e., expenditures other than payroll).

# 3 Vineyard Northeast Consistency with Massachusetts Enforceable Policies

## 3.1 Jurisdiction for Federal Consistency Certification

Section 307(c)(3)(B) of the federal Coastal Zone Management Act (CZMA), as amended, requires any applicant who submits an Outer Continental Shelf (OCS) plan[10] to the Department of the Interior to also provide a certification that each activity described in the OCS plan affecting any land or water use or natural resource of a state's coastal zone complies with the enforceable policies of that state's approved coastal management program and will be carried out in a manner consistent with such program (see 16 U.S.C. § 1456(c)(3)(B)). The Proponent submitted an OCS plan– the Vineyard Northeast COP– to BOEM for approval in July 2022. Thus, the portions of Vineyard Northeast, both within and outside of the Massachusetts coastal zone, that have reasonably foreseeable effects on the coastal zone's uses and natural resources are subject to federal consistency review by MA CZM under 15 CFR Part 930, Subpart D and Subpart E (see Figure 3.1-1).

The official Massachusetts coastal zone includes the lands and waters within an area defined by the seaward limit of the state's territorial sea, extending from the Massachusetts-New Hampshire border south to the Massachusetts-Rhode Island border, and landward to 30 meters [m] (100 feet [ft]) inland of specified major roads, rail lines, other visible rights-of-way, or in the absence these, at the coordinates specified by MA CZM. The coastal zone includes all of Cape Cod, Nantucket, Martha's Vineyard, and the Elizabeth Islands. As such, the components of Vineyard Northeast within the Massachusetts coastal zone include the segment of the Massachusetts OECC within state waters, the Horseneck Beach Landfall Site, portions of the onshore cable routes (excluding the Bell Rock point of interconnection [POI]), and the onshore substation site envelopes (excluding [redacted] (see Figure 3.1-1). The offshore WTGs, ESPs, booster station (if used), their foundations, inter-array cable corridors, inter-link cables, and the remainder of the Massachusetts OECC are located in federal waters. Similarly, the Connecticut OECC is located outside of Massachusetts state waters. The Proponent has voluntarily agreed to having CZM's federal consistency review address the portions of Vineyard Northeast in federal waters (along the Massachusetts OECC and in the Lease Area) as well as within the Massachusetts coastal zone. This consistency certification does not include onshore activities in Connecticut or the Connecticut OECC, which is located in federal waters, New York state waters, and Connecticut state waters.

[10] OCS plan means "any plan for the exploration or development of, or production from, any area which has been leased under the Outer Continental Shelf Lands Act (43 U.S.C. 1331 et seq.), and the regulations under that Act, which is submitted to the Secretary of the Interior or designee following management program approval and which describes in detail federal license or permit activities." The Vineyard Northeast COP submitted to BOEM is an OCS plan.

The draft Vineyard Northeast COP will be provided to MA CZM following BOEM's completeness and sufficiency review and is incorporated by reference.

## 3.2 Consistency with MA CZM Enforceable Policies

For those portions of Vineyard Northeast subject to MA CZM federal consistency review, the following sections demonstrate compliance with the enforceable policies of the MA CMP as set forth in the 2011 MA CZM Policy Guide. The sections below rely on detailed information provided in the Vineyard Northeast COP.

### Coastal Hazards

#### *Coastal Hazard Policy #1*

*Preserve, protect, restore, and enhance the beneficial functions of storm damage prevention and flood control provided by natural coastal landforms, such as dunes, beaches, barrier beaches, coastal banks, land subject to coastal storm flowage, salt marshes, and land under the ocean.*

The coastal wetland resource areas located in and near the Horseneck Beach Landfall Site include dunes, beaches, salt marsh, land subject to coastal storm flowage, and land under the ocean, as well as barrier beach. These wetland resource areas are generally not degraded and provide the beneficial functions that are protected interests of the Massachusetts Wetlands Protection Act (WPA). Through careful route selection, compliance with the municipal Conservation Commission's Order of Conditions (once issued), and proper use of construction techniques such as HDD and other trenchless crossings where appropriate, Vineyard Northeast will avoid potential wetlands impacts to the maximum extent practicable and will minimize and mitigate unavoidable impacts.

The proposed Horseneck Beach Landfall Site is located within a paved parking lot. HDD is proposed to accomplish the offshore-to-onshore transition. This will avoid impacts to the most sensitive resource areas along and near the shoreline. While some work in the paved parking lot of Horseneck Beach Landfall Site may be located within 30 m (100 ft) of coastal dune, Vineyard Northeast will have no impacts to coastal dune itself. Similarly, Vineyard Northeast will have no direct impacts to coastal beach, with the only impacts to the beach system being within and beneath paved roadways.

The [redacted] Brayton Point POI are partially located within the FEMA 100-year floodplain. The onshore facilities will be designed to meet all applicable floodplain requirements. The [redacted] Brayton Point POI also contain state-mapped wetlands, and the Brayton Point POI [redacted] overlap with potential vernal pools.

Although the Proponent may select an onshore substation site parcel that contains state-mapped wetlands, the footprint of the onshore substation site would be sited to avoid wetlands.

The onshore cable routes will require some work within wetland resource areas, principally land subject to coastal storm flowage (LSCSF). While there are no significant changes to topography proposed within LSCSF, depending on the final location of the onshore substation site in Massachusetts and the transmission technology employed (HVAC or HVDC), the crossing of the Taunton River [redacted] (see Figure 3.1-1) may require overhead transmission lines if further field data collection and detailed engineering confirms that an underground trenchless crossing at that location is technically or commercially infeasible. At this time, it is envisioned that up to two lattice-type towers would be located [redacted] and up to two lattice-type towers would be located [redacted]. A further description of these overhead transmission lines and associated towers, if needed, is provided in Section 3.8 of COP Volume I. Vineyard Northeast is not anticipated to affect flood velocities or floodplain storage capacity.

The offshore export cables will each be buried within the OECC in Land Under the Ocean. As described in Section 3.5.4 of COP Volume I, impacts from cable installation are expected to include an up to 1 m (3.3 ft) wide cable installation trench and an up to 3 m (10 ft) wide temporary disturbance zone from the skids/tracks of the cable installation equipment that will slide over the surface of the seafloor (each skid/track is assumed to be approximately 9 m [30 ft] wide). Following installation, marine sediments will naturally settle and fill the trench. Limited dredging of the tops of mobile sand waves may also be required in certain locations. Nonetheless, Vineyard Northeast activities along the OECC in Land Under the Ocean are not expected to alter existing bathymetry in a way that would result in any significant or long-term changes to hydrodynamics.

***Coastal Hazard Policy #2***

*Ensure construction in water bodies and contiguous land areas will minimize interference with water circulation and sediment transport. Flood or erosion control projects must demonstrate no significant adverse effects on the project site or adjacent or downcoast areas.*

Vineyard Northeast will not adversely interfere with water circulation or sediment transport because it will not significantly alter the morphology or composition of the seafloor or coastal wetland resource areas. As noted above, the offshore-to-onshore transition is expected to be made using HDD. The offshore cables have a target burial depth of 1.5–2.5 m (5–8 ft) [11] below the stable seafloor.

Any dredging performed for Vineyard Northeast will be discontinuous and limited to the tops of sand wave features where it may be necessary to remove material to achieve sufficient cable burial within the stable seabed. These existing sand waves are in higher energy areas where morphological changes occur regularly; therefore, any bathymetric changes due to dredging are expected to be temporary.

***Coastal Hazard Policy #3***

*Ensure that state and federally funded public works projects proposed for locations within the coastal zone will: (1) not exacerbate existing hazards or damage natural buffers or other natural resources; (2) be reasonably safe from flood and erosion related damage; (3) not promote growth and development in hazard-prone or buffer areas, especially in velocity zones and Areas of Critical Environmental Concern; and (4) not be used on Coastal Barrier Resource Units for new or substantial reconstruction of structures in a manner inconsistent with the Coastal Barrier Resource/Improvements Acts.*

Vineyard Northeast is not a state or federally funded public works project; therefore, this policy does not apply.

***Coastal Hazard Policy #4***

*Prioritize public funds for acquisition of hazardous coastal areas for conservation or recreation use, and relocation of structures out of coastal high hazard areas, giving due consideration to the effects of coastal hazards at the location to the use and manageability of the area.*

Vineyard Northeast does not involve public funds, and therefore this policy does not apply.

[11] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

## Energy

### *Energy Policy #1*

*For coastally dependent energy facilities, consider siting in alternative coastal locations. For non-coastally dependent energy facilities, consider siting in areas outside of the coastal zone. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.*

Large-scale offshore wind energy generation, and the transmission of that energy to shore, is by nature a coastally dependent energy facility. Accordingly, Vineyard Northeast is coastally dependent, since it is necessary to bring the energy generated offshore to an interconnection point onshore. In its analysis of routing alternatives, the Proponent considered and evaluated numerous potential landfall sites and offshore routes for Vineyard Northeast before selecting the Massachusetts OECC (see Section 2.8 of COP Volume I). As previously noted, Vineyard Northeast's offshore renewable wind energy facilities are within the offshore MA WEA in federal waters of the OCS, an area designated by BOEM for offshore wind development due in large part to its distance from coastal locations.

### *Energy Policy #2*

*Encourage energy conservation and the use of alternative sources such as solar and wind power in order to assist in meeting the energy needs of the Commonwealth.*

The purpose of Vineyard Northeast is to generate competitively priced clean, renewable electricity from Lease Area OCS-A 0522 by 2030 to address the needs identified by the Commonwealth of Massachusetts and other Northeastern states and/or other offtake users to achieve their respective renewable energy goals. Vineyard Northeast will help diversify the states' electricity supply, increase electricity reliability, and reduce regional GHGs. In addition to supporting these clean energy goals, Vineyard Northeast will provide substantial environmental, health, community, and economic benefits, including considerable new employment opportunities.

## Growth Management

### *Growth Management Policy #1*

*Encourage sustainable development that is consistent with state, regional, and local plans and supports the quality and character of the community.*

As described above, Vineyard Northeast is a sustainable development of renewable energy and is consistent with the goals of Massachusetts' Global Warming Solutions Act (GWSA). Vineyard Northeast is located in the MA WEA, which was identified by BOEM as suitable for offshore wind energy development and sited far from shore to minimize visual impacts. Within

the Lease Area, the closest WTG is approximately 49 km (31 mi) from Nantucket. A Seascape, Landscape and Visual Impacts Assessment for Vineyard Northeast has been prepared and is included as Appendix II-J.

All offshore cables will be submerged and will not be visible. The onshore cables may be installed in a duct bank (i.e., an array of plastic conduits encased in concrete) or within directly buried conduit(s). In most instances, underground trenchless crossing methods are expected to be used where the onshore cables traverse unique features (e.g., busy roadways, railroads, wetlands, and waterbodies). However, as described above, the crossing of the Taunton River [redacted] may require a segment of overhead transmission lines. [12] A new onshore substation will be constructed in Westport, Fall River, or Somerset, Massachusetts. The need for vegetative or other screening will be determined once the site is selected.

***Growth Management Policy #2***

*Ensure that state and federally funded infrastructure projects in the coastal zone primarily serve existing developed areas, assigning highest priority to projects that meet the needs of urban and community development centers.*

Vineyard Northeast involves private development of wind energy generation; therefore, this policy does not apply.

***Growth Management Policy #3***

*Encourage the revitalization and enhancement of existing development centers in the coastal zone through technical assistance and federal and state financial support for residential, commercial, and industrial development.*

Vineyard Northeast will use regional port facilities. These staging ports could be used for frequent crew transfer and to offload, store, pre-assemble, inspect, pre-commission, and/or load components onto vessels for delivery to the Lease Area and OECC. These activities will help revitalize existing ports. The Proponent does not expect to implement any port improvements. The Proponent may financially support a port's redevelopment as part of an economic incentive package, but any improvements would be independent of Vineyard Northeast. See Sections 3.10 and 4.4.1 of COP Volume I for additional information related to port usage.

[12] As described in Section 3.8.3.3 of COP Volume I, the need for overhead transmission lines at this Taunton River crossing depends on the final location of the onshore substation site and the transmission technology employed (HVAC or HVDC) and will be confirmed through further field data collection and detailed engineering.

Additional information related to the revitalization and enhancement of existing infrastructure is presented in Section 5.1 Demographics, Employment, and Economics; Section 5.2 Environmental Justice; and Section 5.5 Land Use and Coastal Infrastructure of COP Volume II.

## Habitat

### *Habitat Policy #1*

*Protect coastal, estuarine, and marine habitats – including salt marshes, shellfish beds, submerged aquatic vegetation, dunes, beaches, barrier beaches, banks, salt ponds, eelgrass beds, tidal flats, rocky shores, bays, sounds, and other ocean habitats – and coastal freshwater streams, ponds, and wetlands to preserve critical wildlife habitat and other important functions and services including nutrient and sediment attenuation, wave and storm damage protection, and landform movement and processes.*

As described below, Vineyard Northeast is designed to avoid impacts to marine, coastal, and wetland habitats to the maximum extent practicable and to minimize and mitigate unavoidable impacts in accordance with applicable federal, state, and local regulations.

*Coastal, Estuarine, and Marine Habitats*

The Proponent has conducted an analysis of coastal habitats that may be impacted by Vineyard Northeast. HDD is expected to be used at the Horseneck Beach Landfall Site to avoid or minimize impacts to dunes, beaches, and barrier beaches. No impacts to salt marshes, submerged aquatic vegetation, or shellfish beds are anticipated. Section 4.4 of COP Volume II describes the habitats within the Commonwealth of Massachusetts' coastal zone that are located around the Vineyard Northeast landfall sites and within the portion of the OECC in state waters. Section 4.5 Benthic Resources of COP Volume II and Appendix II-D Essential Fish Habitat Assessment provide a thorough analysis of Vineyard Northeast's potential impacts to benthic habitat as well as measures to mitigate those impacts. Section 4.6 of COP Volume II contains an extensive discussion of fish and invertebrate species within the Offshore Development Area. Popular and other important areas to commercial and recreational fisheries are discussed in Sections 5.3 and 5.4 of COP Volume II. Appendix II-B of COP Volume II describes how benthic habitats have been classified according to the Coastal and Marine Ecological Classification Standard (CMECS) modified by National Marine Fisheries Service (NMFS) (2021).

The Proponent has routed the proposed OECC to avoid and minimize impacts to sensitive habitats where feasible. The preliminary routing of the cables has avoided sensitive habitats including eelgrass, hard bottom/complex bottom (i.e., sand waves) where feasible, but avoidance of all sensitive habitats is not always possible.

The Proponent initially identified several offshore cable route concepts to connect the Lease Area to potential landfall sites in Massachusetts and Connecticut. Based on an extensive desktop assessment of publicly available data for the region surrounding the Lease Area and the coastline, the Proponent developed potential routes for further investigation via reconnaissance surveys. This desktop assessment considered mapped resources from the Massachusetts Ocean Management Plan (MA CZM 2021), the Long Island Sound Blue Plan (CT DEEP 2021), the Northeast Ocean Data Portal (NEODP 2021), and the Mid-Atlantic Ocean Data Portal (MARCO 2021), among many other data sources. Data collected during the Proponent's reconnaissance surveys were then used to refine potential routes and delineate the Massachusetts OECC. This information was utilized to develop the proposed route and was surveyed to guide routing further. The Horseneck Beach Landfall Site has been surveyed to identify any sensitive nearshore habitats and continued survey efforts are underway for the Massachusetts OECC. Further information about routing can be found in Sections 2.7 and 2.8 of COP Volume I.

Impacts to shellfish (if present) would result primarily from direct disturbance to the seafloor within the footprint of cable installation activities, as well as temporary increases in sediment suspension and deposition during cable installation, maintenance, and decommissioning, and excavation of the temporary HDD exit pit. Shellfish in the direct path of cable installation (a 10 m [33 ft] zone that includes disturbance from pre-lay grapnel runs, boulder clearance, the 1 m [3.3 ft] wide cable installation trench, and the cable installation equipment's skids/tracks), areas of dredging (if required), anchors, and vessel legs would also experience direct mortality or injury. Burial and mortality of some shellfish may occur where sediment deposition exceeds 20 mm (0.8 in). Sediment transport modeling was conducted to assess the potential impacts of suspended sediment and deposition (see Appendix II-P), and the model results and potential impacts to finfish and invertebrates are discussed in detail in Sections 4.5 and 4.6 of COP Volume II.

To assess impacts to marine and coastal benthic habitat, a benthic habitat monitoring plan framework has been developed (Appendix II-R) to monitor recovery after construction in areas with sensitive habitats where similar post-construction monitoring has not already been conducted for other projects (such as along the OECCs).

*Coastal Freshwater Streams, Ponds, and Wetlands*

The onshore cable routes may traverse wetlands or waterbodies, depending on the final selection. Specialty trenchless crossing methods are expected to be used if the onshore cable routes and grid interconnection routes traverse wetlands or waterbodies in order to avoid impacts to those features.

To protect wetlands and waterways, it is expected that nearly all vehicle fueling, and all major equipment maintenance, will be performed offsite at commercial service stations or a contractor's yard. Field refueling will not be performed within 30 meters (m) (100 feet [ft]) of

wetlands or waterways, within 30 m (100 ft) of known private or community potable wells, or within any Town water supply Zone I area. Proper spill containment gear and absorption materials will be maintained for immediate use in the event of any inadvertent spills or leaks.

While significant changes to topography are not proposed within LSCSF, as described above, the crossing of the Taunton River [redacted] may require a segment of overhead transmission lines. Construction will have no effect on flood velocities or floodplain storage capacity. Further, Vineyard Northeast will protect wetland interests by complying with all performance standards identified in the Massachusetts WPA and the terms and conditions of the applicable municipal Conservation Commissions. Further detail regarding sensitive water resources can be found in Sections 3.2 and 4.1 of COP Volume II.

***Habitat Policy #2***

*Advance the restoration of degraded or former habitats in coastal and marine areas.*

As noted above, the coastal and marine resource areas located in and near Vineyard Northeast are generally not degraded and provide the beneficial functions that are protected interests of the Massachusetts WPA. As described under Habitat Policy #1, Vineyard Northeast is designed to avoid impacts to wetland resource areas to the maximum extent practicable and to minimize and mitigate unavoidable impacts in accordance with applicable federal, state, and local regulations. Through careful route selection and the use of proper construction techniques such as HDD and other trenchless crossings, Vineyard Northeast will not permanently degrade any wetland resource areas.

## Ocean Resources

***Ocean Resources Policy #1***

*Support the development of sustainable aquaculture, both for commercial and enhancement (public shellfish stocking) purposes. Ensure that the review process regulating aquaculture facility sites (and access routes to those areas) protects significant ecological resources (salt marshes, dunes, beaches, barrier beaches, and salt ponds) and minimizes adverse effects on the coastal and marine environment and other water-dependent uses.*

Vineyard Northeast is not an aquaculture project; therefore, this policy does not apply.

***Ocean Resources Policy #2***

*Except where such activity is prohibited by the Ocean Sanctuaries Act, the Massachusetts Ocean Management Plan, or other applicable provision of law, the extraction of oil, natural gas, or marine minerals (other than sand and gravel) in or affecting the coastal zone must protect marine resources, marine water quality, fisheries, and navigational, recreational, and other uses.*

Vineyard Northeast does not involve extracting oil, natural gas, or marine minerals; therefore, this policy does not apply.

***Ocean Resources Policy #3***

*Accommodate offshore sand and gravel extraction needs in areas and in ways that will not adversely affect marine resources, navigation, or shoreline areas due to alteration of wave direction and dynamics. Extraction of sand and gravel, when and where permitted, will be primarily for the purpose of beach nourishment or shoreline stabilization.*

Vineyard Northeast does not involve offshore sand and gravel extraction; therefore, this policy does not apply.

## Port and Harbors

***Ports and Harbors Policy #1***

*Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity, and public health and take full advantage of opportunities for beneficial re-use.*

Vineyard Northeast involves some limited dredging within the OECC[13] to ensure sufficient cable burial depth in areas of the seafloor affected by sand waves (see Section 3.5.3.2 of COP Volume I). For the three offshore export cables within the Massachusetts OECC, dredging may impact approximately 27,884 cubic meters (36,471 cubic yards) of dredged material. Table 3.5-1 in COP Volume I includes more detail. The maximum potential seafloor disturbance for the offshore export cables to Massachusetts assumes the use of three HVAC cables connecting to a booster station in the northwestern aliquot of Lease Area OCS-A 0534. Actual dredge volumes will depend on the final offshore export cable alignments and cable installation method(s); a cable installation method that can achieve a deeper burial depth will require less dredging. As described in Section 3.5.3.2, bottom dumping of dredged material would only occur within sand waves.

Simulations of sand wave dredging are described in Section 3.2 of COP Volume II and Appendix II-P.

[13] Based on preliminary survey data for the Lease Area, dredging may not be necessary prior to inter-array or inter-link cable laying, but this will be confirmed through additional data analyses.

Due to the largely sandy nature of surficial sediments within the Massachusetts OECC, any Vineyard Northeast-generated turbidity related to cable installation or HDD at the landfall sites is expected to be temporary and limited in spatial scope (see the discussion under Water Quality Policy #2). Additional discussion of sediment dispersion modeling is provided in Section 2.0 of Appendix II-B.

***Ports and Harbors Policy #2***

*Obtain the widest possible public benefit from channel dredging and ensure that Designated Port Areas (DPA) and developed harbors are given highest priority in the allocation of resources.*

Vineyard Northeast does not involve dredging any navigation channels or Designated Port Areas (DPAs); therefore, this policy does not apply. However, although Vineyard Northeast itself is not located in a DPA, the Proponent may utilize a number of port facilities, some of which are located within DPAs. Ports that may be utilized to support Vineyard Northeast activities are identified in Sections 3.10 and 4 of COP Volume I. It should be noted that not all listed ports will be utilized for Vineyard Northeast activities.

***Ports and Harbors Policy #3***

*Preserve and enhance the capacity of Designated Port Areas to accommodate water-dependent industrial uses and prevent the exclusion of such uses from tidelands and any other DPA lands over which an EEA agency exerts control by virtue of ownership or other legal authority.*

Although Vineyard Northeast itself is not located within a DPA, it may utilize a number of port facilities, some of which are located within DPAs (see Ports and Harbors Policy #2 for more information).

***Ports and Harbors Policy #4***

*For development on tidelands and other coastal waterways, preserve and enhance the immediate waterfront for vessel-related activities that require sufficient space and suitable facilities along the water's edge for operational purposes.*

Vineyard Northeast will have no impact on the availability of the waterfront for vessel-related activities except for brief periods during construction. The Proponent is identifying a wide range of ports that could be used for Vineyard Northeast. It is not expected that all the ports identified would be used; it is more likely that only some ports would be used during construction depending upon final commercial agreements and construction logistics planning. By identifying a wide range of ports, the Proponent expects to avoid or minimize any potential conflicts over port usage with other offshore wind developers. See Section 5.5 of COP Volume II for further discussion of Vineyard Northeast's potential impacts on coastal infrastructure.

***Ports and Harbors Policy #5***

*Encourage, through technical and financial assistance, expansion of water-dependent uses in Designated Port Areas and developed harbors, re-development of urban waterfronts, and expansion of physical and visual access.*

Vineyard Northeast's facilities are not located in a DPA, developed harbor, or urban waterfront; therefore, this policy does not apply. However, although Vineyard Northeast itself is not located within a DPA, it may utilize a number of port facilities, some of which are located within DPAs.

## Protected Areas

***Protected Areas Policy #1***

*Preserve, restore, and enhance coastal Areas of Critical Environmental Concern (ACEC), which are complexes of natural and cultural resources of regional or statewide significance.*

Vineyard Northeast is not located within or in the immediate vicinity of any ACEC and will therefore not have any adverse impacts on ACEC. Thus, Vineyard Northeast complies with this policy.

***Protected Areas Policy #2***

*Protect state designated scenic rivers in the coastal zone.*

Vineyard Northeast is not located in or near any state designated scenic rivers. Therefore, this policy does not apply.

***Protected Areas Policy #3***

*Ensure that proposed developments in or near designated or registered historic places respect the preservation intent of the designation and that potential adverse effects are minimized.*

Terrestrial and marine cultural resources management (CRM) archaeological studies, field investigations, and assessments of the visual impact assessments of Vineyard Northeast on historic resources have been conducted by qualified independent CRM professionals on behalf of the Proponent. The studies are designed to identify cultural and historic resources that may be affected by Vineyard Northeast activities and are approved in advance by applicable regulatory agencies. Details of relevant studies and findings can be found in Section 6.0 Visual, Historical, and Cultural Resources; Appendix II-L Terrestrial Archaeology; Appendix II-J Seascape, Landscape and Visual Impact Assessment; Appendix II-K Historic Resources Visual Effects Assessment; and Volume II-Q Marine Archaeological Resources Assessment.

Avoidance, minimization, and mitigation measures for terrestrial historical and archaeological resources will be determined in consultation with BOEM, Massachusetts Historical Commission (MHC), Native American tribes, and other relevant consulting parties through the Section 106 and National Environmental Policy Act (NEPA) processes.

## Public Access

### *Public Access Policy #1*

*Ensure that development (both water-dependent or nonwater-dependent) of coastal sites subject to state waterways regulation will promote general public use and enjoyment of the water's edge, to an extent commensurate with the Commonwealth's interests in flowed and filled tidelands under the Public Trust Doctrine.*

Construction at the Horseneck Beach Landfall Site and along the onshore cable routes may temporarily limit pedestrian access to limited areas and cause temporary noise and dust. Onshore construction at the landfall sites is planned to occur outside of the period from Memorial Day to Labor Day.

Beach disturbance at the landfall site will largely be avoided through the use of HDD, which will allow the cables to pass under the beach, intertidal zone, and nearshore areas. The cables will come ashore in an existing paved parking area and further avoid disturbing the beach. Because the infrastructure proposed at the landfall site and in nearshore areas will be buried, Vineyard Northeast is not expected to cause any long-term impacts to the public's use or enjoyment of the area.

[redacted] If either site is used for an onshore substation and involves proposed activities within filled tidelands subject to state waterways regulation, the Proponent will demonstrate compliance with all applicable public access standards and obtain a Chapter 91 License.

### *Public Access Policy #2*

*Improve public access to existing coastal recreation facilities and alleviate auto traffic and parking problems through improvements in public transportation and trail links (land- or water-based) to other nearby facilities. Increase capacity of existing recreation areas by facilitating multiple use and by improving management, maintenance, and public support facilities. Ensure that the adverse impacts of developments proposed near existing public access and recreation sites are minimized.*

The timing of onshore construction activities will be coordinated with state and local agencies to avoid seasons or times of peak usage and to align with planned public works projects, where feasible, to minimize traffic disruption. Onshore construction at the landfall sites is planned to occur outside of the period from Memorial Day to Labor Day.

The Proponent will restore the Horseneck Beach Landfall Site to match existing conditions. Any paved areas that have been disturbed will be properly repaved.

Prior to construction, the Proponent will work closely with the Towns of Westport, Fall River, and Somerset to develop a Traffic Management Plan (TMP) for construction. The TMP will be submitted for review and approval by appropriate municipal authorities (typically Department of Public Works [DPW]/Town Engineer and Police). The TMP will be a living document such that any unanticipated change in construction location, timing, or method previously identified will result in revision of the TMP and approval by the appropriate authorities before any construction changes are implemented. The Proponent will utilize various methods of public outreach prior to and during construction to keep residents, business owners, and officials updated on the construction schedules, vehicular access, lane closures, detours, and other traffic management information, local parking availability, emergency vehicle access, construction crew movement and parking, laydown areas, staging, and equipment delivery, nighttime or weekend construction, and road repaving.

### *Public Access Policy #3*

*Expand existing recreation facilities and acquire and develop new public areas for coastal recreational activities, giving highest priority to regions of high need or limited site availability. Provide technical assistance to developers of both public and private recreation facilities and sites that increase public access to the shoreline to ensure that both transportation access and the recreation facilities are compatible with social and environmental characteristics of surrounding communities.*

Vineyard Northeast will not significantly interfere with existing recreational facilities. See Public Access Policy #2.

## Water Quality

### *Water Quality Policy #1*

*Ensure that point-source discharges and withdrawals in or affecting the coastal zone do not compromise water quality standards and protect designated uses and other interests.*

Vineyard Northeast does not propose any new point-source discharges within state waters. Limited withdrawals during construction may include water for offshore cable installation and vessel functions (e.g., for bilge/ballast water). These modest and temporary water withdrawals

are not anticipated to have any meaningful impact on water quality. The Proponent will comply with the conditions contained in its Water Quality Certification under Section 401 of the Clean Water Act.

***Water Quality Policy #2***

*Ensure the implementation of nonpoint source pollution controls to promote the attainment of water quality standards and protect designated uses and other interests.*

Vineyard Northeast will not alter existing stormwater volumes or drainage patterns. Onshore construction-period sedimentation and erosion controls will be implemented. Since onshore construction will disturb more than one acre of land, a National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater will be obtained. As noted under Habitat Policy #1, field refueling will not be performed within 30 meters (m) (100 feet [ft]) of wetlands or waterways, within 30 m (100 ft) of known private or community potable wells, or within any Town water supply Zone I area. Proper spill containment gear and absorption materials will be maintained for immediate use in the event of any inadvertent spills or leaks. Any onshore substation equipment will be equipped with full containment for any components containing dielectric fluid.

The Proponent will require all vessels to comply with regulatory requirements related to the prevention and control of discharges and the prevention and control of accidental spills. The Proponent has also developed a draft Oil Spill Response Plan for Vineyard Northeast, which is included in Appendix I-F. Measures to minimize the already-remote potential for seafloor disturbance through HDD drilling fluid seepage (i.e., frac-out) are described in Section 6.2 of COP Volume I.

Offshore cable installation and dredging will result in some temporary elevated turbidity, but sediment is expected to remain relatively close to the installation activities.

A summary of the sediment dispersion modeling results for dredging is provided under Ports and Harbors Policy #1. Additional discussion of sediment dispersion modeling is provided in Section 3.2 of COP Volume II.

***Water Quality Policy #3***

*Ensure that subsurface waste discharges conform to applicable standards, including the siting, construction, and maintenance requirements for on-site wastewater disposal systems, water quality standards, established Total Maximum Daily Load limits, and prohibitions on facilities in high-hazard areas.*

Vineyard Northeast does not propose any subsurface waste discharges; therefore, this policy is not applicable.

## 3.3 Supplemental Information Related to the Massachusetts Ocean Management Plan

The Massachusetts Ocean Management Plan (OMP) is incorporated into the Massachusetts Coastal Zone Management Plan. Thus, Vineyard Northeast activities with reasonably foreseeable effects on the Massachusetts coastal zone must also comply with and be conducted in a manner consistent with the OMP.

In consultation with MA CZM, the Proponent is providing supplemental information related to key Special, Sensitive, or Unique (SSU) resources and concentrations of water-dependent uses for community-scale wind facilities such as commercial fishing, recreational fishing, and important bird habitat.

The Proponent expects a full review of consistency with the OMP would be provided as part of a future Vineyard Northeast Energy Facilities Siting Board (EFSB) Petition.

### 3.3.1 Commercial Fishing

We understand from MA CZM that one potential coastal effect of concern associated with the Vineyard Northeast development is to Massachusetts-based commercial fishing interests (a coastal use). Section 5.4 Commercial Fisheries and For-Hire Recreational Fishing of COP Volume II provides a thorough analysis of Vineyard Northeast's potential impacts to commercial fisheries and measures to mitigate those impacts. Additionally, Appendix II-F Economic Exposure of Commercial Fisheries considers the economic exposure of commercial fisheries to Vineyard Northeast.

Other sections of the Vineyard Northeast COP most relevant to these issues are located in Volume II and include Section 4.5 Benthic Resources, Section 4.6 Finfish and Invertebrates, Section 5.3 Recreation and Tourism (Including Recreational Fishing), Section 5.6 Navigation and Vessel Traffic, Section 5.8 Other Marine Uses, Appendix II-D Essential Fish Habitat Assessment, Appendix II-G Navigation Safety Risk Assessment, and Appendix I-H Fisheries Communication Plan.

As described further in the COP, during the construction and O&M of Vineyard Northeast, fishing vessels will not be restricted from operating in or transiting through the Lease Area or OECCs other than where the USCG establishes temporary safety zones, per 33 CFR Part 147, that extend 500 m (1,640 ft) around each WTG, ESP, and booster station (if used) during construction and certain maintenance activities. Depending on the construction or O&M activity, the Proponent may also request that mariners give a wide berth to active work sites or maintenance vessel(s) through the issuance of Offshore Wind Mariner Updates.

Within the Massachusetts OECC, the target burial depth for offshore export cables will be 1.5 to 2.5 meters (m) (5 to 8 feet [ft]) [14] below the stable seafloor which the Proponent's offshore cable engineers have determined is more than twice the burial depth required to prevent cables from interfering with fishing activity or fishing vessel transits. While every effort will be made to achieve sufficient burial, a limited portion of the offshore export cables (up to 9% for the cables to Massachusetts) may require cable protection (rocks, rock bags, concrete mattresses, half-shell pipes, or similar) if a sufficient burial depth cannot be achieved. Cable protection will be designed and installed to minimize interfering with bottom fishing gear to the maximum extent practicable and fishermen will be informed of exactly where cable protection exists.

The Proponent's proposed measures to avoid, minimize, and mitigate potential effects to commercial and for-hire recreational fishing during Vineyard Northeast are described in Section 5.4 of COP Volume II and Appendix II-F and are also summarized below:

- The proposed layout is expected to accommodate traditional fishing patterns and activities. The Proponent will work to inform commercial and for-hire recreational fishermen of planned vessel activities during construction, maintenance, and decommissioning. During construction, a Marine Coordinator will manage construction vessel logistics and implement communication protocols with external vessels at ports and offshore. Additionally, the Proponent will provide Offshore Wind Mariner Updates and coordinate with the USCG to issue Notices to Mariners (NTMs) advising other vessel operators of planned offshore activities. The Vineyard Northeast website will be regularly updated to provide information about activities occurring in the Offshore Development Area.

- The Proponent has developed a Fisheries Communication Plan (see Appendix I-I) that defines outreach and engagement with commercial and for-hire recreational fishermen during construction, operations, and decommissioning.

- To aid marine navigation, the WTGs, ESP(s), booster station (if used), and their foundations will be equipped with marine navigation lighting, marking, and signaling in accordance with USCG and BOEM guidance.

- Each WTG, ESP, and booster station will be maintained as a Private Aid to Navigation (PATON).

- The Proponent has developed a fishing gear loss and compensation protocol that provides a standard approach to fishing gear loss and compensation.

[14] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

- The offshore export, inter-array, and inter-link cables will be buried at a target depth of 1.5 to 2.5 m (5 to 8 ft) to avoid interaction with fishing gear.

- The amount of cable protection will be limited. Cable protection will be designed and installed to minimize interfering with bottom fishing gear to the maximum extent practicable and fishermen will be informed of areas where cable protection exists.

### 3.3.2 Recreational Fishing

Section 5.3 Recreation and Tourism (Including Recreational Fishing) and Section 5.4 Commercial Fisheries and For-Hire Recreational Fishing of COP Volume II provide a thorough analysis of Vineyard Northeast's potential impact to recreational fisheries, including for-hire reactional fishing, and measures to mitigate those impacts. A brief summary is provided below.

During construction of Vineyard Northeast, the construction vessels operating in the Lease Area and along the Massachusetts OECC may temporarily preclude recreational boating and fishing activities in the immediate vicinity of construction vessels or cause recreational fishermen to slightly alter their navigation routes. While the Lease Area is targeted by recreational fishermen, other areas within and outside the MA WEA and RI/MA WEA have higher concentrations of recreational fishing activity (Kneebone and Capizzano 2020). The proximity of the Lease Area and Massachusetts OECC to numerous productive recreational fishing areas suggests that the highly localized impacts of construction and installation activities will result in only minimal impacts to recreational species.

During O&M, recreational fisheries may be impacted by fish aggregation and potential navigation hazards due to the presence of structures in the Offshore Development Area. As noted under Section 3.3.1, the 1 x 1 NM WTG/ESP layout will facilitate safe navigation through the Lease Area. Given the typically smaller size of recreational vessels, navigation impacts through the Lease Area are not anticipated.

In fact, Vineyard Northeast could result in modest, positive impacts to recreational fisheries. The addition of foundations and scour protection, as well as cable protection (if used) may act as an artificial reef and provide rocky habitat previously absent from the area. Increases in biodiversity and abundance of fish have been observed around WTG foundations due to attraction of fish species to new structured habitat (Riefolo et al. 2016; Raoux et al. 2017). In the event WTGs aggregate recreationally targeted species, based on the intensity of recreational fishing within the Lease Area and its geographic scale, neither congestion effects nor gear conflicts are expected. Anglers' interest in visiting the Lease Area may also lead to an increased number of fishing trips out of nearby ports which could support an increase in angler expenditures at local bait shops, gas stations, and other shoreside dependents (Kirkpatrick et al. 2017).

The Proponent's proposed measures to avoid, minimize, and mitigate potential effects to recreational fishing during Vineyard Northeast are described in Sections 5.3 and 5.4 of COP Volume II and summarized below:

- The Proponent will provide Offshore Wind Mariner Updates and coordinate with the USCG to issue NTMs advising other vessel operators of planned offshore activities. The Vineyard Northeast website will be regularly updated to provide information about vessel activities occurring in the Offshore Development Area.

- The Proponent may request that the USCG establish temporary safety zones, per 33 CFR Part 147, that extend 500 m (1,640 ft) around each WTG, ESP, and booster station (if used) during construction and certain maintenance activities. The safety zones would be limited in size and duration and would not affect the entire Lease Area at any given time.

- The 1 x 1 NM layout is consistent with the USCG recommendations contained in the Massachusetts and Rhode Island Port Access Route Study (MARIPARS) (USCG 2020).

- The Proponent has developed a Fisheries Communication Plan (see Appendix I-I) that defines outreach and engagement with commercial and for-hire recreational fishermen during construction, operations, and decommissioning.

- The WTGs, ESP(s), booster station (if used), and their foundations will be equipped with marine navigation lighting, marking, and signaling in accordance with USCG and BOEM guidance. Each WTG, ESP, and booster station will be maintained as a PATON. The WTGs, ESP(s), booster station (if used) will also be identified on National Oceanic and Atmospheric Administration (NOAA) nautical charts.

### 3.3.3 Fisheries Studies and Monitoring Plans

As described in Section 4.5, Section 4.6, and Appendix II-D of COP Volume II, impacts to finfish and invertebrates within the Lease Area and along the Massachusetts OECC from construction of Vineyard Northeast, including those species targeted by commercial fishermen, are expected to be short-term and localized. Only a small portion of available habitat in the area will be impacted by Vineyard Northeast construction activities and recovery is expected.

A fisheries monitoring plan will be developed to monitor key indicators before and after construction; such monitoring may be part of regional monitoring efforts. Working with the Massachusetts School for Marine Science and Technology (SMAST), the Proponent conducted seasonal trawl surveys starting in spring 2019 through fall 2021. In recognition of the nature of fisheries science, the Proponent expects that such during- and post-construction studies will involve coordination with other offshore wind energy developers in the MA WEA and RI/MA WEA, especially since there may be some offshore wind energy construction occurring concurrently in multiple lease areas. The survey and monitoring work conducted by the

Proponent will generate a substantial body of environmental, fisheries, and other data, which will be available in the public domain in a manner consistent with other academic research. The Proponent plans to make all fisheries monitoring data generated publicly available on its website.

In addition, to assess impacts to marine and coastal benthic habitat, a benthic habitat monitoring plan framework has been developed (Appendix II-R) to monitor recovery after construction in areas with sensitive habitats where similar post-construction monitoring has not already been conducted for other projects (such as along the OECCs).

### 3.3.4 Cable Installation and Monitoring

Offshore export cable installation is described in Section 2.2 and in further detail in Section 3.5.4 of COP Volume I. The following section provides a brief summary of offshore export cable installation activities and monitoring.

Prior to cable installation, the offshore export cable alignments may require boulder clearance and sand bedform dredging. Following those activities, pre-lay grapnel runs, and pre-lay surveys will be performed to confirm that the cable alignments are suitable for installation. The Proponent will communicate with the fishing industry following the protocols outlined in its Fisheries Communication Plan (see Section 8.2 and Appendix I-I of COP Volume I) before beginning offshore export cable laying preparatory activities.

Some dredging of the upper portions of sand waves may also be required prior to cable laying to achieve sufficient burial depth below the stable sea bottom (see Section 3.5.3.2 of COP Volume I). Dredging will be limited only to the extent required to achieve adequate cable burial depth during cable installation. Where dredging is necessary, it is conservatively assumed that the dredge corridor will typically be 20 m (66 ft) wide at the bottom (to allow for equipment maneuverability) with approximately 1:4 side slopes. Actual dredge volumes will depend on the final cable alignments and cable installation method(s); a cable installation method that can achieve a deeper burial depth will require less dredging.

Following installation, the Proponent anticipates that the offshore cables will include a monitoring system, such as DTS, OLPD monitoring, and/or DAS, to continuously monitor the cables' status. DTS uses the fiber optic cables within the offshore cables to measure the cables' temperature along their entire length; significant changes in temperature can indicate cable exposure. An OLPD monitoring system can detect and locate areas of potential insulation damage within the cables, which can be an early indicator of cable failure. A DAS system uses the offshore cables' fiber optics to detect acoustic vibrations along the entire length of the cables, which can indicate potential damage or other anomalous conditions. If the cables' monitoring system detects an anomalous condition, the Proponent will carefully review the issue and determine whether an ad-hoc cable survey is necessary. In the unlikely scenario that

cable monitoring or surveys detect that a segment of cable no longer meets a sufficient burial depth, additional measures (e.g., cable reburial or application of cable protection) will be undertaken as necessary.

# 4 Conclusion

The Proponent has demonstrated that the proposed action described herein and in the Vineyard Northeast COP complies with the applicable enforceable policies of the approved Massachusetts Coastal Program and will be conducted in a manner consistent with such Program.

# 5 References and Incorporation by Reference


[CT DEEP] Connecticut Department of Energy and Environmental Protection. 2021. Long Island Sound Blue Plan map viewer. https://cteco.uconn.edu/viewer/index.html?viewer=blueplan

Kirkpatrick AJ, Benjamin S, DePiper G, Murphy T, Steinbeck S, Demarest C. 2017. Socio-Economic impact of outer continental shelf wind energy development on fisheries in the U.S. Atlantic. OCS Study BOEM 2017-012. Prepared under BOEM Interagency Agreement No: M12PG00028 by National Oceanic and Atmospheric Administration National Marine Fisheries Service Northeast https://espis.boem.gov/final%20reports/5580.pdf

Kneebone J, Cappizzano C. 2020. A multifaceted assessment of baseline recreational fishing effort for highly migratory species in southern New England and the associated wind energy areas.

[MA CZM] Massachusetts Coastal Zone Management. 2021. Massachusetts Ocean Management Plan viewer. https://mass-eoeea.maps.arcgis.com/apps/webappviewer/index.html?id=c424acf25d5c4841971d690886126c80

[MARCO] Mid-Atlantic Regional Council on the Ocean. 2021. Mid-Atlantic ocean data portal. https://portal.midatlanticocean.org/

[NEODP] Northeast Ocean Data Portal. 2021. Northeast ocean data: maps and data for ocean planning in the northeastern United States. http://www.northeastoceandata.org/data-explorer/

[NMFS] National Marine Fisheries Service. 2021. Recommendations for Mapping Fish Habitat. NMFS Greater Atlantic Fisheries Office Habitat Conservation and Ecosystem Services Division. March 2021. 22 p.

Raoux A, Tecchio S, Pezy JP, Lassalle G, Degraer S, Wilhelmsson D, Cachera M, Ernande B, Le Guen C, Haraldsson M, Grangeré K. 2017. Benthic and fish aggregation inside an offshore wind farm: Which effects on the trophic web functioning? Ecological Indicators, 72, pp.33-46.

Riefolo L, Lanfredi C, Azzellino A, Tomasicchio GR, Felice DA, Penchev V, Vicinanza D. Offshore wind turbines: An overview of the effects on the marine environment. Presented at: 26th International Ocean and Polar Engineering Conference 2016. International Society of Offshore and Polar Engineers. 2016 June; Rhodes, Greece.

[USCG] United States Coast Guard. 2020. The areas offshore of Massachusetts and Rhode Island port access route study (MARIPARS). USCG-2019-0131. [accessed 2022 May 27]. https://www.regulations.gov/document?D=USCG-2019-0131-0101

# Vineyard Northeast COP

# Appendix II-M2 Vineyard Northeast Rhode Island Coastal Zone Management Act Consistency Certification

Prepared by:
Epsilon Associates

Prepared for:
Vineyard Northeast LLC

## March 2024

| Revision | Date | Description |
|---|---|---|
| 0 | July 2022 | Initial submission. |
| 1 | March 2023 | Updated to address Bureau of Ocean Energy Management (BOEM) Round 1 Comments (dated January 13, 2023) and make minor corrections. |
| 2 | April 2023 | Made updates consistent with revisions to other parts of the COP and made other minor corrections. |
| 3 | November 2023 | Updated to address United States Coast Guard (USCG) Round 3 Comments (dated August 8, 2023) and to be consistent with revisions to other parts of the COP. |
| 3 | March 2024 | Resubmitted without revisions. |

# Vineyard Northeast

# Rhode Island Coastal Zone Management Act

# Consistency Certification

Submitted to:

**BUREAU OF OCEAN ENERGY MANAGEMENT**
45600 WOODLAND RD
STERLING, VA 20166

**RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL**
STEDMAN GOVERNMENT CENTER, SUITE 3
4808 TOWER HILL ROAD
WAKEFIELD, RI 02879-1900

Prepared for:

**Vineyard Northeast LLC**

Prepared by:

**Epsilon Associates, Inc.**

**November 2023**

# Table of Contents



# List of Figures



# List of Tables

# 1 Introduction

Vineyard Northeast LLC (the "Proponent") proposes to develop, construct, and operate offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0522 (the "Lease Area") along with associated offshore and onshore transmission systems. This proposed development is referred to as "Vineyard Northeast." Vineyard Northeast includes 160 total wind turbine generator (WTG) and electrical service platform (ESP) positions within the Lease Area. Up to three of those positions will be occupied by ESPs and the remaining positions will be occupied by WTGs. Two offshore export cable corridors (OECCs)–the Massachusetts OECC and the Connecticut OECC–will connect the renewable wind energy facilities to onshore transmission systems in Massachusetts and Connecticut. Figure 1.0-1 provides an overview of Vineyard Northeast.

Portions of Vineyard Northeast are located within Rhode Island's 2011 and/or 2018 Geographic Location Descriptions (GLD). Specifically, while the Lease Area itself is outside of both the 2011 and 2018 GLDs, portions of the Massachusetts OECC are located within the Rhode Island Coastal Resources Management Council's (RI CRMC's) 2011 and 2018 GLDs and portions of the Connecticut OECC are located within RI CRMC's 2011 GLD (see Figure 1.0-1). (No portions of the Massachusetts OECC or Connecticut OECC are located within Rhode Island waters.)

The Proponent has submitted a Construction and Operations Plan (COP) to BOEM, which will serve as necessary data and information per 15 Code of Federal Regulations (CFR) Part 930.58. The Proponent has prepared this Consistency Certification to demonstrate that Vineyard Northeast is consistent with the enforceable policies of the Rhode Island Coastal Resources Management Program (RICRMP). Based upon the analyses presented herein and in the COP, the Proponent certifies to the RI CRMC that:

> *The proposed activities described in detail in the Vineyard Northeast COP shall comply with Rhode Island's approved Coastal Resource Management Program and will be conducted in a manner consistent with such Program*.

This certification is made in accordance with the requirements of the Coastal Zone Management Act (16 U.S.C. 1451 et seq.) and implementing regulations at 15 CFR Part 930, Subparts D and E.

A summary of Vineyard Northeast is provided in Section 2. Section 3 demonstrates how Vineyard Northeast activities in the Massachusetts OECC and Connecticut OECC (as described in Section 2 and more completely in the Vineyard Northeast COP) comply with each of the RICRMP's applicable enforceable policies.

G:\Projects2\MA\MA\5410\2023\MXD\Vol_II_REV_April_2023\CZM\Fig1.0-1_RI_Geographic_Location_Descriptions_20230419.mxd

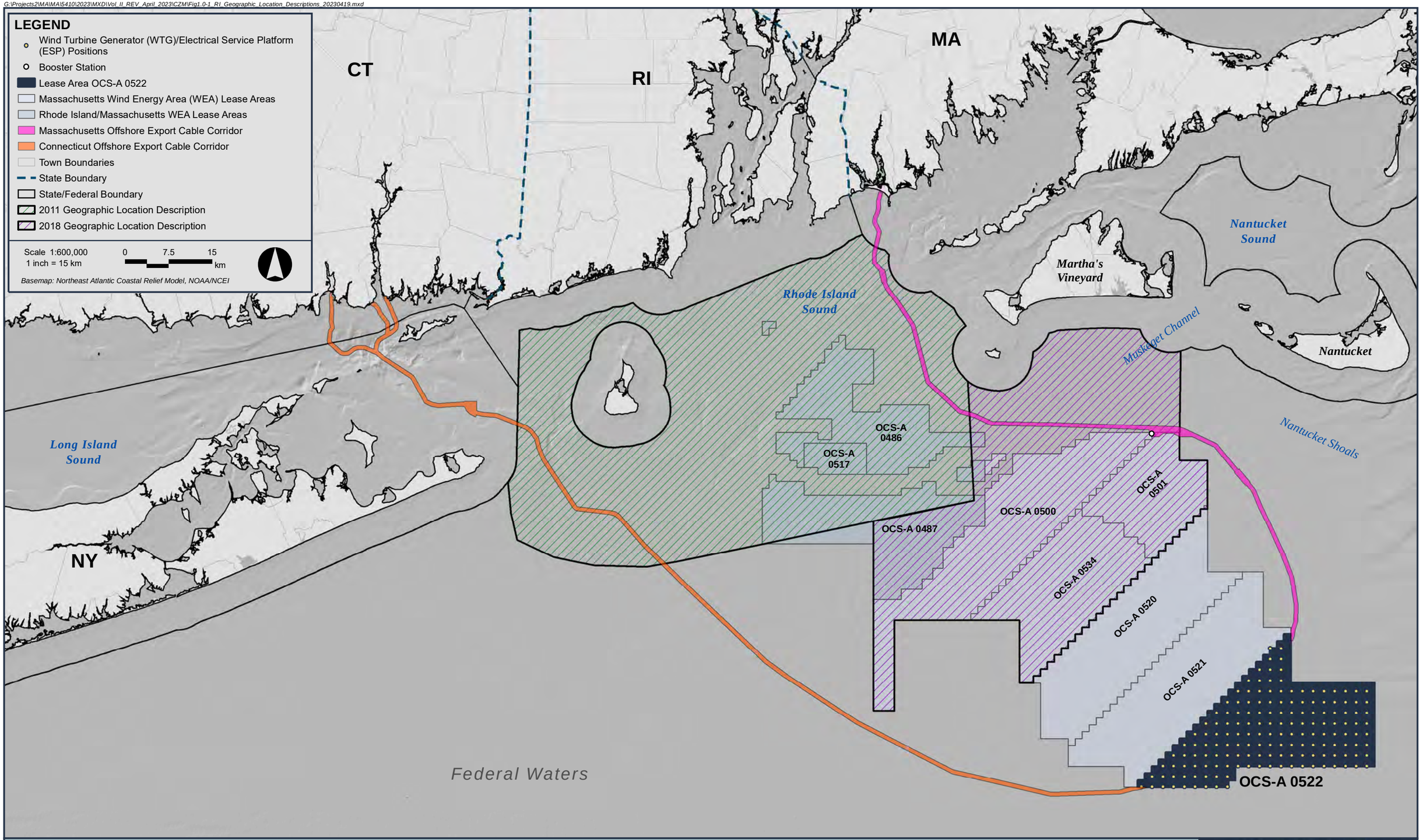


**Figure 1.0-1**
Overview of Vineyard Northeast's Offshore Facilities Within the 2011 and 2018 GLDs

VINEYARD NORTHEAST
VINEYARD OFFSHORE

# 2 Summary of Vineyard Northeast

## 2.1 Overview of Vineyard Northeast

Vineyard Northeast LLC (the "Proponent") proposes to develop, construct, and operate offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0522 (the "Lease Area") along with associated offshore and onshore transmission systems. This proposed development is referred to as "Vineyard Northeast."

Vineyard Northeast includes 160 total wind turbine generator (WTG) and electrical service platform (ESP) positions within the Lease Area. Up to three of those positions will be occupied by ESPs[1] and the remaining positions will be occupied by WTGs. As proposed, the WTGs and ESP(s) will be oriented in fixed east-to-west rows and north-to-south columns with 1 nautical mile (NM) (1.9 km) spacing between positions. The WTGs and ESP(s) will be supported by monopiles or piled jacket foundations. The base of the foundations may be surrounded by scour protection. Submarine inter-array cables will transmit power from groups of WTGs to the ESP(s). If two or three ESPs are used, they may be connected with inter-link cables. Offshore export cables will then transmit the electricity collected at the ESP(s) to shore.

The WTGs, ESP(s), and their foundations as well as the inter-array cables, inter-link cables (if used), and a portion of the offshore export cables will be located in Lease Area OCS-A 0522. The Lease Area is within the Massachusetts Wind Energy Area (MA WEA) identified by BOEM, following a public process and environmental review, as suitable for offshore wind energy development. At its closest point, the 536 square kilometer ($km^2$) (132,370 acre) Lease Area is approximately 46 km (29 mi) from Nantucket. Between the Lease Area and shore, the offshore export cables will be installed within two offshore export cable corridors (OECCs)—the Massachusetts OECC and the Connecticut OECC—that connect to onshore transmission systems in Massachusetts and Connecticut.

The Massachusetts OECC travels from the northernmost tip of the Lease Area along the northeastern edge of the MA WEA and Rhode Island/Massachusetts (RI/MA) WEA and then heads across Buzzards Bay towards the Horseneck Beach Landfall Site in Westport, Massachusetts. Up to two high voltage direct current (HVDC) cable bundles or up to three high voltage alternating current (HVAC) cables may be installed within the Massachusetts OECC. If HVAC offshore export cables are used, the cables would connect to a booster station in the northwestern aliquot[2] of Lease Area OCS-A 0534 to boost the electricity's voltage level, reduce transmission losses, and enhance grid capacity. From the Horseneck Beach Landfall Site, onshore export cables will connect to a new onshore substation in Westport, Fall River, or

[1] If two or three ESPs are used, they may be located at separate positions or two of the ESPs may be co-located at the same grid position. Co-located ESPs would be smaller structures installed on monopile foundations.

[2] An aliquot is $1/64^{th}$ of a BOEM Outer Continental Shelf (OCS) Lease Block.

Somerset, Massachusetts. Grid interconnection cables will connect the onshore substation to one of three potential points of interconnection (POIs): the existing Pottersville Substation, a planned substation near Brayton Point, or the existing Bell Rock Substation.

Up to two HVDC offshore export cable bundles may be installed within the Connecticut OECC. The Connecticut OECC travels from the southwestern tip of the Lease Area along the southwestern edge of the MA WEA and then heads between Block Island and the tip of Long Island towards potential landfall sites near New London, Connecticut. As the Connecticut OECC approaches shore, it splits into three variations to connect to three potential landfall sites: the Ocean Beach Landfall Site, the Eastern Point Beach Landfall Site, and the Niantic Beach Landfall Site. Onshore export cables will connect one of the landfall sites to a new onshore substation in Montville, Connecticut, which will be connected to the POI at the existing Montville Substation by grid interconnection cables.

Vineyard Northeast is being developed and permitted using a Project Design Envelope (PDE) based on expected commercial and technological advancements. The PDE outlines a reasonable range of project design parameters (e.g., multiple foundation types) and installation techniques (e.g., use of various cable installation tools). The Proponent has developed the PDE and sited Vineyard Northeast's facilities based on feedback from multiple agencies and stakeholders. For example, the Proponent modified and refined the OECCs through numerous consultations with federal and state agencies as well as fishermen and, based on their feedback, consolidated the offshore export cables with other developers' proposed cables to the extent feasible. Key elements of Vineyard Northeast's PDE are summarized in Table 2.1-1. For a complete description of Vineyard Northeast's offshore and onshore facilities, see COP Volume I.

**Table 2.1-1 Summary of the Project Design Envelope**

| Parameter | Project Design Envelope |
|---|---|
| Maximum number of WTG/ESP positions | 160 |
| **Wind Turbine Generators** | |
| Maximum number of WTGs | 160 |
| Maximum rotor diameter | 320 m (1,050 ft) |
| Maximum tip height | 400 m (1,312 ft) |
| Minimum tip clearance | 27 m (89 ft) |
| **Electrical Service Platforms and Booster Station** | |
| Number of ESPs | 0–3<br>(ESP equipment may be integrated onto WTG foundation[s])[1] |
| Maximum number of booster stations | 1 (only for HVAC transmission) |
| Maximum topside height above Mean Lower Low Water[2] (MLLW) | 70 m (230 ft) |

## Table 2.1-1 Summary of the Project Design Envelope (Continued)

| Parameter | Project Design Envelope |
|---|---|
| **Foundations and Scour Protection** | |
| Maximum pile diameter | Monopiles: 14 m (46 ft)<br>Piled jackets: 4.25 m (14 ft) |
| Maximum area of scour protection | Monopiles: 7,238 $m^2$ (1.8 acres)<br>WTG piled jackets: 11,660 $m^2$ (2.9 acres)<br>ESP piled jackets: 32,577 $m^2$ (8.1 acres)<br>Booster station piled jackets: 18,427 $m^2$ (4.6 acres) |
| **Offshore Cables** | |
| Maximum total inter-array cable length | 356 km (192 NM) |
| Maximum total inter-link cable length | 120 km (65 NM) |
| Maximum number of offshore export cables | Massachusetts OECC: 3 HVAC cables or 2 HVDC cable bundles<br>Connecticut OECC: 2 HVDC cable bundles |
| Maximum total offshore export cable length[3] | Massachusetts OECC: 436 km (235 NM)<br>Connecticut OECC: 421 km (227 NM) |
| Target burial depth beneath stable seafloor[4] | 1.5–2.5 m (5–8 ft) |
| **Onshore Facilities** | |
| Massachusetts landfall site | Horseneck Beach Landfall Site |
| Connecticut landfall site | Ocean Beach Landfall Site, Eastern Point Beach Landfall Site, or Niantic Beach Landfall Site |
| Massachusetts onshore cable route | Horseneck Beach Eastern Onshore Cable Route or Horseneck Beach Western Onshore Cable Route (including variants) |
| Connecticut onshore cable route | Ocean Beach Onshore Cable Route, Eastern Point Beach Onshore Cable Route, or Niantic Beach Onshore Cable Route |
| Onshore substation site envelopes[5] | Massachusetts: [redacted]<br>Connecticut: [redacted] |
| POIs | Massachusetts: Pottersville POI, Brayton Point POI, or Bell Rock POI<br>Connecticut: Montville POI |

Notes:
1. As described in Section 3.4 of COP Volume I, this concept entails placing ESP equipment on one or more expanded WTG foundation platforms rather than having a separate ESP situated on its own foundation.
2. Height includes helipad (if present), but may not include antennae and other appurtenances.
3. Includes the length of the offshore export cables within the Lease Area.
4. Unless the final Cable Burial Risk Assessment (CBRA) indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.
5. Since the Proponent has not yet secured site control for the onshore substation sites, the Proponent has identified one or more "onshore substation site envelopes" for each POI.

## 2.2 Construction

Construction of Vineyard Northeast will likely start with the onshore cables and onshore substations. The onshore cables are expected to be installed primarily underground within public roadway layouts or within existing utility rights-of-way (ROWs) via open trenching. The onshore cables may be installed in a duct bank (i.e., an array of plastic conduits encased in concrete) or within directly buried conduit(s). In most instances, underground trenchless crossing methods are expected to be used where the onshore cables traverse unique features (e.g., busy roadways, railroads, wetlands, and waterbodies). However, the crossing of the Taunton River [redacted] may require a segment of overhead transmission lines.[3] Construction of the onshore substations is expected to involve site preparation (e.g., land clearing and grading), installation of the substation equipment and cables, commissioning, and site clean-up and restoration.

Offshore construction will likely begin with offshore export cable installation and/or foundation installation (including scour protection installation). Once the foundations are in place, the WTGs, ESP topside(s), and booster station topside can be installed. Inter-array cables may be installed before or after the WTGs are installed on their foundations. WTG commissioning is expected to take place after the inter-array cables are installed.

Prior to offshore cable installation, the cable alignments may require sand bedform dredging and boulder clearance. Following those activities, pre-lay grapnel runs and pre-lay surveys will be performed to confirm that the cable alignments are suitable for installation. The offshore cables will then be buried beneath the stable seafloor at a target depth of 1.5 to 2.5 meters (m) (5 to 8 feet [ft])[4] likely using jetting techniques or a mechanical plow. While every effort will be made to achieve sufficient burial, a limited portion of the offshore cables may require cable protection if a sufficient burial depth cannot be achieved. At the landfall sites, the offshore export cables are expected to transition onshore using horizontal directional drilling (HDD) to avoid or minimize impacts to the beach, intertidal zone, and nearshore areas. The offshore export cables will connect to the onshore export cables in underground transition vaults at the landfall sites.

The foundations, WTGs, ESP topside(s), and booster station topside (if used) may be staged at a United States (US) or Canadian port or delivered directly to the Lease Area. The Proponent has identified several potential staging ports in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Canada that may be used for frequent crew transfer and for

[3] As described in Section 3.8.3.3 of COP Volume I, the need for overhead transmission lines at this Taunton River crossing depends on the final location of the onshore substation site and the transmission technology employed (HVAC or HVDC) and will be confirmed through further field data collection and detailed engineering.

[4] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

offloading/loading, storing, and pre-assembling components, among other activities (see Section 3.10.1 of COP Volume I). The foundations, WTGs, and topside(s) will be installed by jack-up vessels or heavy lift vessels (HLVs) using dynamic positioning (DP) or anchors along with necessary support vessels (e.g., tugboats). Seabed preparation may be required prior to foundation installation. Scour protection, which would likely consist of loose rock material placed around the foundation, will likely be needed for monopiles, but may or may not be needed for the smaller diameter jacket pin piles. Once set onto the seabed by the crane of the main installation vessel(s), monopiles or jacket pin piles will be installed using impact pile driving,[5] which will begin with a soft-start (i.e., the impact hammer energy level will be gradually increased). Noise mitigation systems are expected to be applied during pile driving. If monopile foundations are used, a transition piece will be installed on top of the monopile using a vessel's crane (unless an extended monopile concept is employed). Once the foundations are installed, the WTGs, ESP topside(s), and booster station topside will be lifted and secured onto their foundations. Then, the WTGs, ESP(s), and booster station will be commissioned to confirm that they are functioning correctly and ready for energy production. To aid safe navigation, the WTGs, ESP(s), booster station, and their foundations will be equipped with marine navigation and aviation lighting, marking, and signaling in accordance with BOEM, US Coast Guard (USCG), and Federal Aviation Administration (FAA) guidance.

## 2.3 Operations and Maintenance

Vineyard Northeast's facilities are expected to operate for approximately 30 years. During operations, the offshore and onshore facilities will be continuously remotely monitored from one or more control center(s) located at the Proponent's operations and maintenance (O&M) facilities and/or a third party's facilities.

The WTGs, ESP(s), and booster station will be designed to operate autonomously and will not be manned. The offshore facilities will be equipped with a supervisory control and data acquisition (SCADA) system. The SCADA system will notify operators of alarms or warnings and enable the operators to remotely interact with and control devices (e.g., sensors, valves, motors), override automatic functions, reset systems, and shut down equipment for maintenance or at the request of grid operators or agencies. The Proponent anticipates that the offshore cables will include a monitoring system, such as distributed temperature sensing (DTS), online partial discharge (OLPD) monitoring, and/or distributed acoustic sensing (DAS), to continuously monitor the cables' status.

The Proponent will regularly conduct inspections and preventative maintenance, including foundation and scour protection inspections, offshore cable surveys, safety inspections and tests, electrical component service, and replacement of consumables, among other activities.

---

[5] Prior to impact pile driving, a vibratory hammer or other tool could be used to slowly lower the pile through the top layers of the seabed in a controlled fashion to avoid the potential for a "pile run" (see Section 3.3 of COP Volume I)

Offshore, most scheduled maintenance activities will be performed using service operation vessels (SOVs), service accommodation and transfer vessels (SATVs), crew transfer vessels (CTVs), and/or helicopters. Unscheduled repairs or component replacement may also be necessary, which may require jack-up vessels or other larger vessels similar to those used during construction. The Proponent expects to use one or more onshore O&M facilities to support offshore operations. The O&M facilities, which could be located at or near any of the ports identified in Section 4.4.1 of COP Volume I, would likely be used for dispatching technicians and crew exchange, bunkering, and loading supplies and spare parts onto vessels. The Proponent may also lease space at an airport hangar for aircraft (e.g., helicopters) used to support operations. Onshore maintenance and repair activities are expected to require minimal use of worker vehicles and construction equipment.

## 2.4 Decommissioning

Decommissioning of the offshore and onshore facilities at the end of their operational life is essentially the reverse of the construction process. The WTGs, ESP(s), and booster station (if used) will be disconnected from the offshore cables, disassembled, and removed from their foundations. The foundations will be cut and removed to a depth of 4.5 m (15 ft) below the mudline, unless otherwise authorized by the Bureau of Safety and Environmental Enforcement (BSEE). The removed WTG, ESP, booster station, and foundation components will be shipped to shore and properly disposed of or recycled. The offshore cables may be removed or retired in place (if authorized by BOEM and other appropriate agencies). Any scour protection or cable protection may be removed or left in place, depending on input from federal and state agencies and relevant stakeholders. The onshore facilities could be retired in place or retained for future use, subject to discussions with local agencies.

## 2.5 Organization of the COP

The COP is being submitted to BOEM, in accordance with 30 CFR Part 585, the stipulations in Lease OCS-A 0522, and applicable guidance, for the development of the entire Lease Area. The Vineyard Northeast COP is comprised of two volumes:

- Volume I describes Vineyard Northeast's offshore and onshore facilities and how the Proponent plans to construct, operate, and decommission those facilities. Volume I also discusses the Proponent's outreach efforts and commitment to health, safety, and environmental (HSE) protection. Volume I is accompanied by several related appendices.

- Volume II assesses the benefits and potential impacts of Vineyard Northeast to physical, biological, socioeconomic, visual, and cultural resources based on the "maximum design scenario" for each resource. Volume II also describes the Proponent's measures to avoid, minimize, and mitigate those potential impacts. Volume II is accompanied by numerous appendices containing detailed resource and site conditions assessments.

## 2.6 Agency, Tribal, and Stakeholder Outreach

Vineyard Northeast LLC is committed to being a good neighbor both onshore and offshore. The Proponent began agency, tribal, and stakeholder outreach specific to Vineyard Northeast in fall 2021 well before the submission of this COP. The Proponent's frequent and early engagement with agencies, Native American tribes,[6] fishermen, local communities, and other stakeholders during the COP planning process enabled the Proponent to incorporate their feedback into the siting and design of the facilities, the methodologies for resources assessments, survey strategies, workforce initiatives and educational opportunities, and/or proposed avoidance, minimization, and mitigation measures. Throughout the development, construction, operational, and decommissioning periods, the Proponent will continue to actively engage with agencies, Native American tribes, fishermen, local communities, and other stakeholders to identify and discuss their interests and concerns regarding Vineyard Northeast.

## 2.7 Benefits of Vineyard Northeast

Vineyard Northeast will generate clean, renewable electricity by as early as 2030 to assist Northeastern states and/or other offtake users in achieving their renewable energy and carbon emission reduction goals. The electricity generated by the WTGs will displace electricity from fossil fuel power plants, resulting in a significant net reduction in air emissions from the regional electric grid. Vineyard Northeast is expected to reduce carbon dioxide equivalent ($CO_2e$) emissions from the electric grid by approximately 4.9 million tons per year (tpy), or the equivalent of taking approximately 970,000 cars off the road.[7] This reduction in greenhouse gas emissions will help mitigate additional effects of ongoing climate change (e.g., sea level rise and increased flooding, changes in agricultural productivity, shifts in species' distributions, and increases in energy system costs) that are impacting the environment and public health. Vineyard Northeast will also reduce regional emissions of air contaminants such as nitrogen oxides (NOx) and sulfur dioxide ($SO_2$), which contribute to acid rain, ocean acidification, and ground level ozone/smog and are linked to increased rates of early death, heart attacks, stroke, and respiratory disorders. Vineyard Northeast will also help diversify the states' electricity supply and increase the reliability of the electric grid.

Beyond these important environmental, public health, and energy reliability benefits, Vineyard Northeast is expected to result in significant long-term economic benefits, including considerable new employment opportunities. Vineyard Northeast is expected to support a

---

[6] Throughout the COP, "Native American tribes" generally refers to both federally recognized Tribes/Tribal Nations and other Native American communities. Where appropriate, consultations or communications with federally recognized Tribes/Tribal Nations will be identified.

[7] Assuming the minimum nameplate capacity of Vineyard Northeast.

minimum of 15,894 direct, indirect, and induced full-time equivalent (FTE) job-years[8] during pre-construction and construction. Construction of Vineyard Northeast is also estimated to generate at least ~$1.63 billion in total labor income and ~$4.65 billion in output.[9] The operation of Vineyard Northeast is projected to generate approximately 17,046 FTE job-years assuming a 30-year operational life (equivalent to 568 direct, indirect, and induced FTEs annually), as well as at least ~$1.19 billion in total annual labor income and ~$4.62 billion in output.

[8] One FTE job-year is the equivalent of one person working full time for one year (2,080 hours).

[9] Output is the estimated value of all goods and services sold (i.e., expenditures other than payroll).

# 3 Vineyard Northeast Consistency with Rhode Island Enforceable Policies

## 3.1 Jurisdiction for Federal Consistency Certification

Section 307(c)(3)(B) of the Coastal Zone Management Act (CZMA), as amended, requires any applicant who submits an Outer Continental Shelf (OCS) plan[10] to the Department of the Interior to also provide a certification that each activity described in the OCS plan affecting any land or water use or natural resource of a state's coastal zone complies with the enforceable policies of that state's approved coastal management program and will be carried out in a manner consistent with such program (see 16 U.S.C. § 1456(c)(3)(B)). The Proponent submitted an OCS plan– the Vineyard Northeast COP– to BOEM for approval in July 2022.

Approximately 78 km (42 NM) of the 126-km (68 NM)[11] long Massachusetts OECC is located within RI CRMC's 2011 and 2018 GLD (35 km (19 NM) in the 2011 GLD and 43 km (23 NM) in the 2018 GLD), and approximately 37 km (20 NM) of the 171–179-km (92–96 NM)[12] long Connecticut OECC is located within RI CRMC's 2011 GLD; therefore, these segments of each OECC are subject to federal consistency review by RI CRMC (see Figure 1.0-1). Lease Area OCS-A 0522 is located outside the RI CRMC 2011 and 2018 GLD; therefore, this area is not subject to federal consistency review by RI CRMC. No portion of Vineyard Northeast (including the Massachusetts OECC, the Connecticut OECC, and the Lease Area) is located within Rhode Island state waters.

For those portions of Vineyard Northeast subject to RI CRMC federal consistency review, the following sections demonstrate compliance with the applicable enforceable policies of the RICRMP contained in Chapter 11 of RI CRMC's Ocean Special Area Management Plan (Ocean SAMP) (650-RICR-20-05-11.10). The sections below provide relevant data and analysis supporting the Massachusetts OECC and Connecticut OECC for Vineyard Northeast and incorporate by reference detailed information in the Vineyard Northeast COP.

---

[10] *OCS plan* means "any plan for the exploration or development of, or production from, any area which has been leased under the Outer Continental Shelf Lands Act (43 U.S.C. 1331 et seq.), and the regulations under that Act, which is submitted to the Secretary of the Interior or designee following management program approval and which describes in detail federal license or permit activities." The Vineyard Northeast COP submitted to BOEM is an OCS plan.

[11] The length of the Massachusetts OECC is measured from the Lease Area boundary to the offshore edge of the corridor at the landfall site.

[12] The length of the Connecticut OECC is measured from the Lease Area boundary to the offshore edge of the corridor at each landfall site.

## 3.2 Overall Regulatory Standards (§ 11.10.1)

### *§ 11.10.1(A)*

*All offshore developments regardless of size, including energy projects, which are proposed for or located within state waters of the Ocean SAMP area, are subject to the policies and standards outlined in §§ 11.9 and 11.10 of this Part. The Council shall not use § 11.9 of this Part for CRMC concurrences or objections for CZMA federal consistency reviews.*

As described in Section 3.1, Vineyard Northeast is subject to CZMA federal consistency review by RI CRMC for the portions of the Massachusetts OECC which pass through the 2011 and 2018 GLDs and the portion of the Connecticut OECC which passes through the 2011 GLD; therefore, the enforceable policies of the RICRMP contained in Chapter 11 of RI CRMC's Ocean SAMP (650-RICR-20-05-11.10) are reviewed. No portion of Vineyard Northeast (including the Massachusetts OECC, the Connecticut OECC, and the Lease Area) is located within Rhode Island state waters. Vineyard Northeast meets the definition of a "large-scale offshore development" pursuant to RICR-20-05-11.3(H)(1) and RICR-20-05-11.10.1(A)(1).

### *§ 11.10.1(B)*

*In assessing the natural resources and existing human uses present in state waters of the Ocean SAMP area, the Council finds that the most suitable area for offshore renewable energy development in the state waters of the Ocean SAMP area is the renewable energy zone depicted in Figure 1 in § 11.10.1(O) of this Part, below. The Council designates this area as Type 4E waters. In the Rhode Island Coastal Resources Management Program (Subchapter 00 Part 1 of this Chapter) these waters were previously designated as Type 4 (multipurpose) but are hereby modified to show that this is the preferred site for large scale renewable energy projects in state waters. The Council may approve offshore renewable energy development elsewhere in the Ocean SAMP area, within state waters, where it is determined to have no significant adverse impact on the natural resources or human uses of the Ocean SAMP area. Large-scale offshore developments shall avoid areas designated as Areas of Particular Concern consistent with § 11.10.2 of this Part. No large-scale offshore renewable energy development shall be allowed in Areas Designated for Preservation consistent with § 11.10.3 of this Part.*

As mentioned in Section 2.1, the location of the Massachusetts OECC and Connecticut OECC were developed based upon careful consideration of multiple technical, environmental, and commercial factors. Based on an extensive desktop assessment of publicly available data for the region surrounding the Lease Area and the coastline, the Proponent developed potential routes for further investigation via reconnaissance surveys. This desktop assessment considered mapped resources from the Massachusetts Ocean Management Plan (MA CZM 2021), the Long Island Sound Blue Plan (CT DEEP 2021), the Northeast Ocean Data Portal (NEODP 2021), and the Mid-Atlantic Ocean Data Portal (MARCO 2021), among many other data sources. Data collected during the Proponent's reconnaissance surveys were then used to refine potential routes and delineate the Massachusetts OECC and Connecticut OECC.

Throughout the OECC routing process, the Proponent consulted with numerous federal and state agencies, including BOEM, National Oceanic and Atmospheric Administration (NOAA) Fisheries (on several occasions), United States Army Corps of Engineers (USACE), USCG, Department of Homeland Security (DHS), and the Connecticut Department of Energy and Environmental Protection (CT DEEP), as well as the RI CRMC in February 2022, and stakeholders (including fishermen). Agency and stakeholder outreach is further described in Section 8 and Appendix I-G of COP Volume I.

As described in Section 2.8 of COP Volume I, to consolidate infrastructure with other developers, the Proponent considered three options for siting the location of the Massachusetts OECC adjacent to New England Wind's South Coast Variant and Mayflower's cables. The Proponent evaluated these three options for siting the Massachusetts OECC by considering the amount of hard bottom substrate present along the route, commercial fishing activity, navigational safety risks, adequate spacing between cable projects, and minimizing the number of cable crossings necessary. The Proponent determined that a route that parallels Mayflower's cables to the west was preferred because it would significantly reduce the length of cables through hard bottom habitat (particularly near Nomans Land and the Elizabeth Islands) and would avoid areas of higher commercial fishing density near Noman's Land. A route west of Mayflower's cables also avoids the congested area between Mayflower's cables, the South Coast Variant, and Nomans Land and associated conflicts that could arise as those routes are refined and finalized.

Additionally, the Proponent considered numerous options for the Connecticut OECC and focused on consolidating its offshore export cables with the cables proposed by other offshore wind developers based on feedback from numerous agencies and stakeholders. Thus, the Proponent considered several initial route concepts that paralleled Beacon Wind's proposed cable routes between the Lease Area and the tip of Long Island. Between the tip of Long Island and shore, the Proponent considered numerous alternative routes into Long Island Sound and Fishers Island Sound as well as multiple options to candidate landfall sites. These routing options were analyzed and refined through numerous consultations with federal and state agencies, including three consultations with NOAA Fisheries and meetings with DHS, USACE, CT DEEP, University of Connecticut Avery Point staff, the Connecticut Siting Council, and the New York State Office of Parks, Recreation and Historic Preservation. The selected Connecticut OECC was sited specifically to avoid or minimize overlap with areas of hard bottom substrate, deep channel slopes which make cable installation difficult, cable crossings, USCG navigational channels, commercial and recreational fisheries hotspots, military dredging and disposal locations, and sediment contamination sites. Siting of both the Massachusetts OECC and Connecticut OECC took into consideration the RI Ocean SAMP studies as well as additional studies conducted by the Proponent, as described in Section 2.8 of COP Volume I.

Both the Massachusetts OECC and Connecticut OECC are located outside of Rhode Island state waters. However, the Massachusetts OECC crosses along the northern edge of RI CRMC's 2011 GLD and 2018 GLD within federal waters. The Connecticut OECC crosses through RI CRMC's southwestern corner of the 2011 GLD within federal waters between Long Island and Block Island.

No significant adverse impact on the natural resources or human uses of the Ocean SAMP area is expected through the pre-construction, construction, operation, or decommissioning phases within either the Massachusetts OECC or Connecticut OECC. See Sections 3.3 and 3.4 below for further discussion of Areas of Particular Concern (APC) and Areas Designated for Preservation.

The Massachusetts OECC crosses through a small portion of the northern edge of glacial moraines identified within the Ocean SAMP as APC (see Figure 3.2-1). Although a wider corridor is shown for the potential offshore export cable(s), maximum seafloor disturbance from cable installation will be a 10 m (33 ft) wide temporary disturbance zone in this area (see Section 3.5.7 of COP Volume I). The temporary impacts associated with the scenario of up to three cables installed within the Massachusetts OECC only results in impacts to approximately 0.05% of the total mapped end moraine area within the APC. Additionally, the offshore export cable length includes a 5% allowance for micro-siting within the Massachusetts OECC for avoidance to sensitive habitat areas, or other environmental or technical reasons. The Connecticut OECC does not cross the glacial moraines identified in the Ocean SAMP between Long Island and Block Island (see Figure 3.2-1).

### *§ 11.10.1(C)*

*Offshore developments shall not have a significant adverse impact on the natural resources or existing human uses of the Rhode Island coastal zone, as described in the Ocean SAMP. In making the evaluation of the effect on human uses, the Council will determine, for example, if there is an overall net benefit to the Rhode Island marine economic sector from the development of the project or if there is an overall net loss. Where the Council determines that impacts on the natural resources or human uses of the Rhode Island coastal zone through the pre-construction, construction, operation, or decommissioning phases of a project constitute significant adverse effects not previously evaluated, the Council shall, through its permitting and enforcement authorities in state waters and through any subsequent CZMA federal consistency reviews, require that the applicant modify the proposal to avoid and/or mitigate the impacts or the Council shall deny the proposal.*

As summarized throughout COP Volume II, the Proponent is already implementing measures to avoid and minimize impacts associated with Vineyard Northeast, particularly to commercial fishing interests. Appendix II-F contains an analysis of the value of commercial fishing harvest from the Massachusetts OECC and Connecticut OECC based on the most recent available

G:\Projects2\MA\MA\5410\2023\MXD\Vol_II_REV_April_2023\CZM\Fig3.2-1_RI_GLD_Glacial_Moraines_20230419.mxd

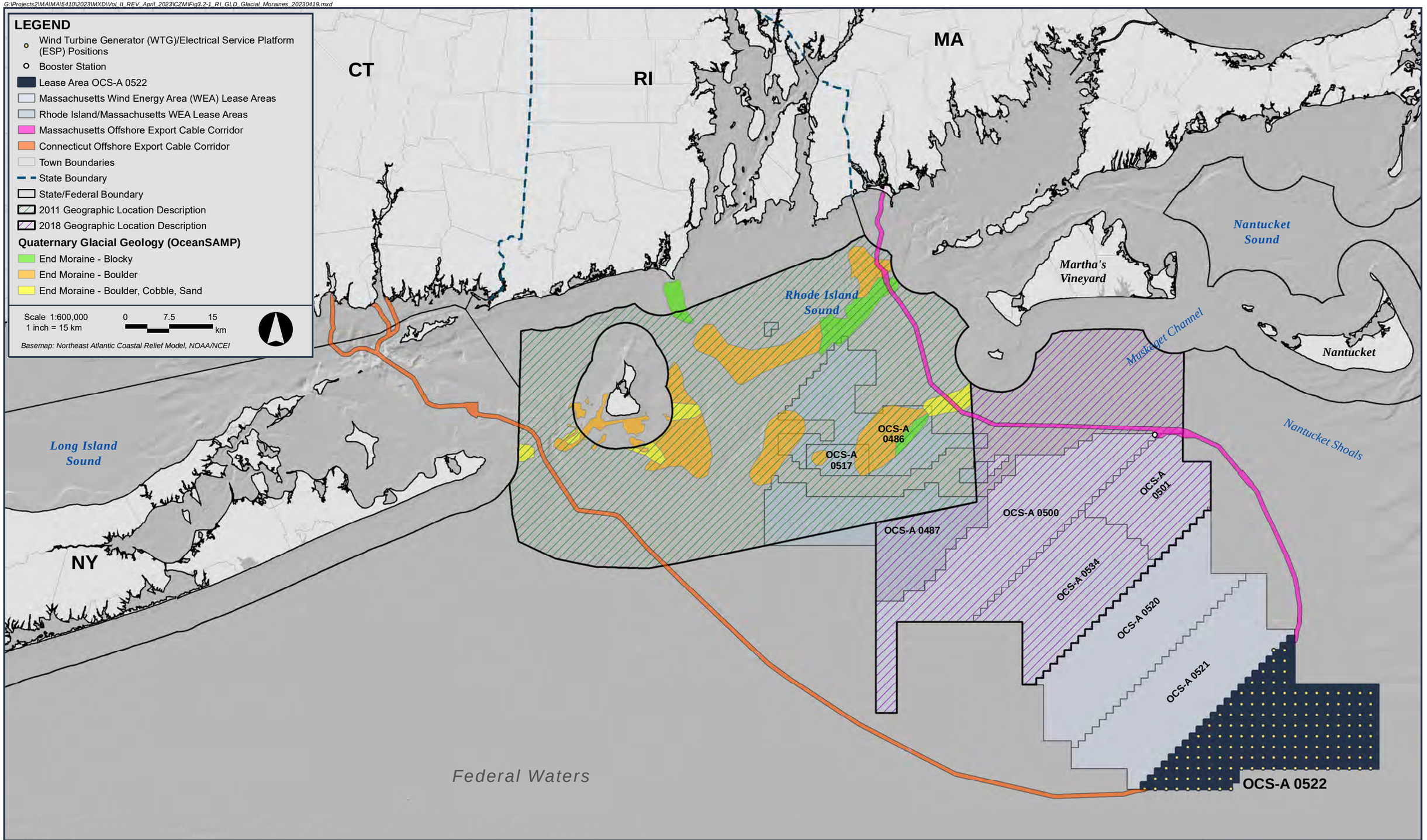


**Figure 3.2-1**
Location of Vineyard Northeast's Offshore Facilities and Glacial Moraines Within the 2011 and 2018 GLDs

VINEYARD NORTHEAST
VINEYARD OFFSHORE

data. Accordingly, it is anticipated that construction activities within the Massachusetts OECC and Connecticut OECC will not have a significant adverse impact on the natural resources or existing human uses of the Rhode Island coastal zone.

**Cable Protection**

The installation of submarine cables along the Massachusetts OECC and Connecticut OECC will be planned and implemented in a manner to avoid or minimize impacts to commercial fishing activities. The offshore export cables will have a target burial depth of 1.5 to 2.5 m (5 to 8 ft) below the stable seafloor[13], which the Proponent's engineers have determined is more than twice the burial depth required to protect the cables and prevent them from interfering with commercial fishing operations. While the Proponent will make every effort to achieve that target burial depth below the stable seafloor, a limited portion of the offshore export cables (up to approximately 9% for the cables to Massachusetts and up to approximately 6% for the cables to Connecticut)[14] may require remedial cable protection if a sufficient burial depth cannot be achieved. For additional information on cable protection, including avoidance and minimization measures, see Section 3.5 of COP Volume I.

**Access to the Massachusetts OECC and Connecticut OECC**

The construction of Vineyard Northeast is not expected to have an adverse impact on the existing human uses, specifically commercial and recreational fishing, of the Rhode Island coastal zone since fishing vessels will not be restricted from operating in or transiting through the Massachusetts OECC and Connecticut OECC other than where the USCG establishes temporary safety zones, per 33 CFR Part 147, that extend 500 m (1,640 ft) around the booster station (if used). Accordingly, the majority of the Massachusetts OECC and Connecticut OECC will remain accessible to commercial fishing vessels throughout the construction of Vineyard Northeast.

During O&M, the Massachusetts OECC and Connecticut OECC will be open to marine traffic, and no permanent vessel restrictions are proposed. If in-water maintenance activities are required, the Proponent may request that mariners give a wide berth to active work sites or maintenance vessel(s) through the issuance of Offshore Wind Mariner Updates in limited areas of the Massachusetts OECC and Connecticut OECC.

---

[13] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

[14] These percentages are based on the total length of the offshore export cables, including the portion of the cables within the Lease Area.

## Economic Exposure of Rhode Island Commercial Fisheries

As summarized in Section 5.4 of COP Volume II, the Proponent is implementing several key measures to minimize impacts to commercial fisheries (e.g., establishing a gear loss/damage protocol). An overview of potential impacts to commercial fisheries from construction, O&M, and decommissioning of the OECCs is provided in Section 5.4 of COP Volume II.

The economic exposure of commercial fisheries, including Rhode Island-based commercial fisheries, are analyzed in detail in Appendix II-F. The analysis is based on the most recent fishing revenue data from NOAA Fisheries that are available to estimate expected fishing revenues in the Massachusetts OECC and Connecticut OECC, which indicate that the Massachusetts OECC and Connecticut OECC do not include high-value commercial fishing grounds (see Appendix II-F).

Overall, commercial fishing activity in the Massachusetts OECC and Connecticut OECC is low to modest. Fishing trips that transect the Massachusetts OECC and Connecticut OECC spend most of their time and generate most of their revenues in nearby fishing areas outside the OECCs. As discussed in Section 2.8 of COP Volume I, the Massachusetts OECC and the Connecticut OECC were specifically sited to avoid commercial fishing activity and navigation lanes.

## Fisheries Studies

The Proponent is committed to fisheries science and research as it relates to offshore wind energy development. To characterize fish species occurring within the Lease Area on a seasonal basis, the Proponent contracted the Massachusetts School for Marine Science and Technology (SMAST) to conduct seasonal trawl surveys starting in spring 2019 through fall 2021. This ongoing survey was adapted from the Northeast Area Monitoring and Assessment Program (NEAMAP) nearshore trawl survey. Ten randomly selected tow locations, one in each of ten sub-areas (~53.6 $km^2$ [20.69 $miles^2$]/sub-area), were determined for each sampling season.

In addition to these pre-construction studies, a fisheries monitoring plan will be developed to monitor key indicators before and after construction; such monitoring may be part of regional monitoring efforts.

## Avoidance, Minimization, and Mitigation Measures

Avoidance, minimization, and mitigation measures are summarized in Section 5.4 of COP Volume II. As mentioned in the introduction, the Proponent has taken measures to engage with stakeholders during the planning process prior to submitting the COP to avoid, minimize, and mitigate the impact to commercial fisheries in the region. Additionally, Section 2.8 of COP Volume I discusses the siting process for both the Massachusetts OECC and the Connecticut OECC, which was coordinated with multiple agencies and stakeholders (including numerous

fishermen) and specifically sited to avoid impacts to commercial fishing activities in the area. The Proponent has developed a Fisheries Communication Plan (FCP) to facilitate effective and regular engagement with fisheries stakeholders throughout the life of Vineyard Northeast (see Appendix I-I).

As described further in the COP, during the construction and O&M of Vineyard Northeast, fishing vessels will not be restricted from operating in or transiting through the OECCs other than where the USCG establishes temporary safety zones, per 33 CFR Part 147, that extend 500 m (1,640 ft) around the booster station (if used) during construction and certain maintenance activities. Depending on the construction or O&M activity, the Proponent may also request that mariners give a wide berth to active work sites or maintenance vessel(s) through the issuance of Offshore Wind Mariner Updates. Accordingly, the majority of both the Massachusetts OECC and Connecticut OECC will remain accessible to commercial fishing vessels throughout the construction and O&M.

### *§ 11.10.1(D)*

*Any large-scale offshore development, as defined in § 11.3(H) of this Part, shall require a meeting between the Fisherman's Advisory Board (FAB), the applicant, and the Council staff to discuss potential fishery-related impacts, such as, but not limited to, project location, wind turbine configuration and spacing, construction schedules, alternative locations, project minimization and identification of high fishing activity or habitat edges. For any state permit process for a large-scale offshore development this meeting shall occur prior to submission of the state permit application. The Council cannot require a pre-application meeting for federal permit applications, but the Council strongly encourages applicants for any large-scale offshore development, as defined in § 11.3(H) of this Part, in federal waters to meet with the FAB and the Council staff prior to the submission of a federal application, lease, license, or authorization. These pre-application meetings, however, do not constitute a formal meeting to satisfy the necessary data and information required for federal consistency reviews, unless mutually agreed to between the CRMC and the applicant. However, for federal permit applicants, a meeting with the FAB as described within this section shall be necessary data and information required for federal consistency reviews for purposes of starting the CZMA 6-month review period for federal license or permit activities under 15 C.F.R. Part 930, Subpart D, and OCS Plans under 15 C.F.R. Part 930, Subpart E, pursuant to 15 C.F.R. § 930.58(a)(2).*

The Proponent will meet with the FAB and RI CRMC staff in accordance with § 11.10.1(D) to satisfy the necessary data and information requirement on a date and time provided by RI CRMC.

### *§ 11.10.1(E)*

*The Council shall prohibit any other uses or activities that would result in significant long-term negative impacts to Rhode Island's commercial or recreational fisheries. Long-term impacts are defined as those that affect more than one or two seasons.*

The construction, operation, and maintenance of offshore export cables within the Massachusetts OECC and Connecticut OECC will not result in significant long-term negative impacts to Rhode Island's commercial or recreational fisheries. Please see the discussion under § 11.10.1(C) above in addition to Sections 5.3 and 5.4 of COP Volume II and Appendix II-F. The FCP is included as Appendix I-I. As mentioned above, Section 2.8 of COP Volume I provides a description pertaining to both the Massachusetts OECC and the Connecticut OECC as sited specifically to avoid commercial fishing and fishermen navigational areas, as well as recreational fishing and boating APCs).

As summarized under § 11.10.1(F) below and described in more detail in Sections 4.5 and 4.6 of COP Volume II and Appendix II-D, the Massachusetts OECC and Connecticut OECC are not expected to result in significant long-term adverse impacts to benthic, finfish, and invertebrate species of commercial and recreational importance. Overall, localized impacts from the alteration of habitat along the Massachusetts OECC and Connecticut OECC are expected to be minimal and recovery of natural assemblages is expected.

### *§ 11.10.1(F)*

*The Council shall require that the potential adverse impacts of offshore developments and other uses on commercial or recreational fisheries be evaluated, considered and mitigated as described in § 11.10.1(G) of this Part.*

The Proponent has fully analyzed the potential impacts of the Massachusetts OECC and Connecticut OECC on commercial and recreational fisheries and has considered, avoided, minimized, and mitigated those potential impacts. The resource areas related to commercial and recreational fisheries are discussed below.

**Potential Impacts to Benthic Resources and Mitigation Measures**

*Potential Impacts*

Sections 4.5 and 4.6 of COP Volume II, along with Appendix II-D, provide an analysis of the potential impacts to benthic habitat, including commercially important species, as well as measures to mitigate those impacts. Impact producing factors considered include seafloor disturbance and habitat modification, suspended sediments and deposition, entrainment and impingement, electromagnetic fields (EMF), and noise.

As described in Sections 3.5.3 and 3.5.4 of COP Volume I, activities within the Massachusetts OECC and Connecticut OECC that may result in impacts to benthic organisms include pre-installation activities (such as sand bedform dredging, boulder clearance, and a pre-lay grapnel run) and usage of equipment that contacts the seafloor (such as jack-up vessels, vessel anchors or spud legs). The amount of habitat disturbance is outlined in Table 3.5-1 of COP Volume I.

Overall, construction period impacts from the alteration of habitat in the Massachusetts OECC and Connecticut OECC are expected to be minimal and recovery of natural assemblages is expected. Long-term habitat alteration may occur in a small area of the Massachusetts OECC and Connecticut OECC (see Table 3.5-1 of COP Volume I) from the potential installation of cable protection (if required), which alters habitat through the addition of hard substrate. The Proponent is working to minimize the amount of cable protection needed. A limited portion of the offshore export cables (up to approximately 9% for the cables to Massachusetts and up to approximately 6% for the cables to Connecticut) may require remedial cable protection if a sufficient burial depth cannot be achieved. Cable protection may also be used if the cables need to cross other infrastructure (e.g., existing cables, pipelines, etc.), to secure the cable entry protection system in place, or where a cable splice requires protection. Should cable protection be required, it will be designed to minimize impacts to fishing gear to the extent feasible, and fishermen will be informed of the areas where protection is used. As described in Section 2.8 of COP Volume I, the Massachusetts OECC and Connecticut OECC were specifically sited to avoid hard bottom substrate, cable crossings, and infrastructure to minimize the need for cable protection.

*Avoidance, Minimization, and Mitigation Measures*

Section 4.5 of COP Volume II includes several mitigation measures that will be employed to avoid and minimize potential impacts to benthic resources within both the Massachusetts OECC and Connecticut OECC. Offshore export cable installation will avoid important habitats such as eelgrass beds and hard bottom sediments where feasible, although it is recognized that it may not be possible to avoid all hard bottom sediments where they are widespread. For vessels other than cable laying vessels (which must maintain tension on anchor lines), where it is considered impossible or impracticable to avoid a sensitive seafloor habitat when anchoring, the use of mid-line anchor buoys will be considered (where feasible and considered safe) as a potential measure to reduce impacts from anchor line sweep. A benthic habitat monitoring plan framework has been developed (Appendix II-R) to monitor recovery after construction in areas with sensitive habitats where similar post-construction monitoring has not already been conducted for other projects (such as along the OECCs).

## Potential Impacts to Finfish and Invertebrates and Mitigation Measures

*Potential Impacts*

Section 4.6 of COP Volume II and Appendix II-D address the potential impacts of the Massachusetts OECC and Connecticut OECC development on finfish and invertebrates, which include seafloor disturbance and habitat modification, suspended sediments and deposition, entrainment and impingement, EMF, and noise.

*Avoidance, Minimization, and Mitigation Measures*

Avoidance, minimization, and mitigation measures are discussed in Section 4.6 of COP Volume II and Appendix II-D.

**Potential Impacts to Recreational Fishing and Mitigation Measures**

*Potential Impacts*

Sections 5.3 and 5.4 of COP Volume II provide a thorough analysis of Vineyard Northeast's potential impacts to recreational fisheries, including for-hire recreational fishing, and these include vessel activity, presence of structures, and noise.

*Avoidance, Minimization, and Mitigation Measures*

As discussed under § 11.10.1(C), Section 5.3 and Section 5.4 of COP Volume II, and Appendix I-I, the Proponent will implement measures to avoid, minimize, and mitigate potential impacts to recreational fisheries. Additionally, Section 2 of COP Volume II includes a summary of potential benefits, impacts, and mitigation measures.

**Potential Impacts to Commercial Fishing and Mitigation Measures**

*Potential Impacts*

Section 5.4 of COP Volume II and Appendix II-F provides an analysis of the potential impacts from construction activities in the Massachusetts OECC and Connecticut OECC to commercial fisheries and for-hire recreational fishing.

Impacts to finfish and invertebrates along the OECCs, including those species targeted by commercial fishermen, are expected to be short-term and localized. Only a small portion of available habitat in the area will be impacted by construction activities along the Massachusetts OECC and Connecticut OECC and recovery is expected.

Commercial fishing vessels will continue to have access to the Massachusetts OECC and Connecticut OECC throughout operations. As mentioned above under § 11.10.1(C), Section 8.4 of COP Volume I and Section 5.6 of COP Volume II provide a detailed description of safety zones established by the USCG and vessel access to the OECCs during construction. Depending on the construction or O&M activity, the Proponent may also request that mariners give a wide berth to active work sites or maintenance vessel(s) through the issuance of Offshore Wind Mariner Updates. Section 5.4 of COP Volume II and Appendix II-F provide a detailed description of potential economic exposure and fishing congestion impacts. Potential impacts from decommissioning activities would be similar to those associated with construction.

*Avoidance, Minimization, and Mitigation Measures*

The measures that the Proponent will implement to avoid, minimize, and mitigate potential impacts to commercial fisheries are described under § 11.10.1(C) and in Section 5.4 of COP Volume II.

### *§ 11.10.1(G)*

*For the purposes of fisheries policies and standards as summarized in Ocean SAMP Chapter 5, Commercial and Recreational Fisheries, §§ 5.3.1 and 5.3.2 of this Subchapter, mitigation is defined as a process to make whole those fisheries user groups, including related shore-side seafood processing facilities, that are adversely affected by offshore development proposals or projects. Mitigation measures shall be consistent with the purposes of duly adopted fisheries management plans, programs, strategies and regulations of the agencies and regulatory bodies with jurisdiction over commercial and recreational fisheries, including but not limited to those set forth above in § 11.9.4(B) of this Part. Mitigation shall not be designed or implemented in a manner that substantially diminishes the effectiveness of duly adopted fisheries management programs. Mitigation measures may include, but are not limited to, compensation, effort reduction, habitat preservation, restoration and construction, marketing, and infrastructure and commercial fishing fleet improvements. Where there are potential impacts associated with proposed projects, the need for mitigation shall be presumed (see § 11.10.1(F) of this Part). Mitigation shall be negotiated between the Council staff, the FAB, the project developer, and approved by the Council. The final mitigation will be the mitigation required by the CRMC and included in the CRMC's Assent for the project or included within the CRMC's federal consistency decision for a project's federal permit application.*

Measures to mitigate impacts to benthic resources and fish species are summarized under § 11.10.1(F) above and described in detail in Sections 4.5 and 4.6 of COP Volume II and Appendix II-D.

Measures to mitigate impacts to recreational and commercial fisheries are described in Sections 5.3 and 5.4 of COP Volume II, respectively, and summarized under § 11.10.1(C) and § 11.10.1(F) above. The Proponent has developed an assessment of the economic exposure of commercial fisheries to the Massachusetts OECC and Connecticut OECC (see Appendix II-F).

### *§ 11.10.1(H)*

*The Council recognizes that moraine edges, as illustrated in Figures 3 and 4 in § 11.10.2 of this Part, are important to commercial and recreational fishermen. In addition to these mapped areas, the FAB may identify other edge areas that are important to fisheries within a proposed project location. The Council shall consider the potential adverse impacts of future activities or projects on these areas to Rhode Island's commercial and recreational fisheries. Where it is determined that there is a significant adverse impact, the Council will modify or deny activities*

*that would impact these areas. In addition, the Council will require assent holders for offshore developments to employ micro-siting techniques in order to minimize the potential impacts of such projects on these edge areas.*

The Proponent is developing a Marine Site Investigation Report (MSIR) for both the Massachusetts OECC and Connecticut OECC, which is expected to be completed in 2023. This MSIR is included in Appendix II-B, which provides the geophysical, geotechnical, and biological data collected for the Offshore Development Area, including both the Massachusetts OECC and Connecticut OECC.

As described in § 11.10.1(B), the installation of offshore export cables within the Massachusetts OECC and Connecticut OECC is not expected to have a significant adverse impact to the moraines. Although a wider corridor is shown for the potential offshore export cable(s), seafloor disturbance from cable installation only results in a 10 m (33 ft) wide temporary disturbance zone (see Section 3.5.7 of COP Volume I). The temporary impacts associated with the scenario of up to three cables in the Massachusetts OECC only results in impacts to approximately 0.05% of the total mapped end moraine area within the RI Ocean SAMP. The Connecticut OECC is not expected to impact moraine areas identified in the RI Ocean SAMP. Additionally, the offshore export cable length includes a 5% allowance for micro-siting within the Massachusetts OECC and Connecticut OECC for avoidance to sensitive habitat areas, or other environmental or technical reasons.

The locations of both the Massachusetts OECC and Connecticut OECC were developed based upon careful consideration of multiple technical, environmental, and commercial factors. In particular, as outlined in Section 2.8 of COP Volume I, based on an extensive desktop assessment of publicly available data for the region surrounding the Lease Area and the coastline, the Proponent developed potential routes for further investigation via reconnaissance surveys. This desktop assessment considered mapped resources from the Massachusetts Ocean Management Plan, the Long Island Sound Blue Plan, the Northeast Ocean Data Portal, and the Mid-Atlantic Ocean Data Portal, among many other data sources. Data collected during the Proponent's reconnaissance surveys were then used to refine potential routes and delineate the Massachusetts OECC and Connecticut OECC.

As mentioned in Section 3.2.1 above, throughout the OECC routing process, the Proponent consulted with numerous federal and state agencies, and agency and stakeholder outreach is further described in Section 8 and Appendix I-G of COP Volume I. As described in Section 2.8 of COP Volume I, to consolidate infrastructure, the cable routes were designed to follow other existing or proposed cables to the maximum extent possible. Routes were also designed to avoid or minimize cable crossings, which are technically complex and likely require cable protection, and to avoid traversing other developers' lease areas.

Measures to mitigate impacts to benthic resources and fish species are summarized under § 11.10.1(F) above and described in detail in Sections 4.5 and 4.6 of COP Volume II, and Appendix II-D.

Measures to mitigate impacts to recreational and commercial fisheries are described in Sections 5.3 and 5.4 of COP Volume II, respectively, and summarized under § 11.10.1(C) and § 11.10.1(F) above. The Proponent has also developed an assessment of the economic exposure of commercial fisheries to both the Massachusetts OECC and Connecticut OECC (see Appendix II-F).

### *§ 11.10.1(I)*

*The finfish, shellfish, and crustacean species that are targeted by commercial and recreational fishermen rely on appropriate habitat at all stages of their life cycles. While all fish habitat is important, spawning and nursery areas are especially important in providing shelter for these species during the most vulnerable stages of their life cycles. The Council shall protect sensitive habitat areas where they have been identified through the Site Assessment Plan or Construction and Operation Plan review processes for offshore developments as described in § 11.10.5(C) of this Part.*

Section 4.5 of COP Volume II contains a description of benthic habitats within the Massachusetts OECC and Connecticut OECC. Section 4.6 of COP Volume II contains a discussion of fish and invertebrate species within Massachusetts OECC and Connecticut OECC. Essential Fish Habitat is discussed in Appendix II-D. These sections specifically address the life histories of fish found in both the Massachusetts OECC and Connecticut OECC, including species targeted by commercial and recreational fishermen, and their habitats.

Impacts to finfish, shellfish, and crustacean species (as described in Sections 4.5 and 4.6 of COP Volume II) are summarized above under § 11.10.1(F). Most potential impacts to finfish, shellfish, and crustacean species are expected to be temporary. Long-term habitat alteration may occur from the potential installation of cable protection (if required), which alters habitat through the addition of hard substrate.

### *§ 11.10.1(J)*

*Any large-scale offshore development, as defined in this Part, shall require a meeting between the HAB, the applicant, and the Council staff to discuss potential marine resource and habitat-related issues such as, but not limited to, impacts to marine resource and habitats during construction and operation, project location, construction schedules, alternative locations, project minimization, measures to mitigate the potential impacts of proposed projects on habitats and marine resources, and the identification of important marine resource and habitat areas. For any state permit process for a large-scale offshore development, this meeting shall occur prior to submission of the state permit application. The Council cannot require a pre-application meeting for federal permit applications, but the Council strongly encourages applicants for any large-scale offshore development, as defined in this Part, in federal waters to meet with the HAB and the Council staff prior to the submission of a federal application, lease, license, or authorization. However, for federal permit applicants, a meeting with the HAB shall be necessary data and information required for federal consistency reviews for purposes of*

*starting the CZMA six-month review period for federal license or permit activities under 15 C.F.R. Part 930, Subpart D, and OCS Plans under 15 C.F.R. Part 930, Subpart E, pursuant to 15 C.F.R. § 930.58(a)(2).*

As noted under § 11.10.1(D), the Proponent will meet with RI CRMC staff to provide an introductory overview of Vineyard Northeast. The Proponent will meet with the Habitat Advisory Board (HAB) and the RI CRMC staff to discuss potential marine resource and habitat-related issues associated with Vineyard Northeast, including ongoing and planned fisheries studies, on a date and time provided by RI CRMC.

The Vineyard Northeast COP includes detailed information on location, construction schedules, the identification of important marine resource and habitat areas, the potential impacts to marine resources and habitats during construction and operation, and mitigation measures for unavoidable potential impacts on habitats and marine resources.

### *§ 11.10.1(K)*

*The potential impacts of a proposed project on cultural and historic resources will be evaluated in accordance with the National Historic Preservation Act and Antiquities Act, and the Rhode Island Historical Preservation Act and Antiquities Act as applicable. Depending on the project and the lead federal agency, the projects that may impact marine historical or archaeological resources identified through the joint agency review process may require a marine archaeology assessment that documents actual or potential impacts the completed project will have on submerged cultural and historic resources.*

The Proponent is conducting a Marine Archaeological Resources Assessment (MARA) for the Offshore Development Area, including the Massachusetts OECC and Connecticut OECC, which will be included with the COP in early 2023. Potential mitigation measures for unavoidable impacts will be presented in the MARA. Avoidance, minimization, and mitigation measures for submarine historical and archaeological resources are determined in consultation with BOEM, state historical preservation officers (SHPOs), and other relevant consulting parties through the National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) Section 106 processes (36 CFR § 800.3 – 800.13).

### *§ 11.10.1(L)*

*Guidelines for marine archaeology assessment in the Ocean SAMP area can be obtained through the RIHPHC in their document, "Performance Standards and Guidelines for Archaeological Projects: Standards for Archaeological Survey" (RIHPHC 2007), or the lead federal agency responsible for reviewing the proposed development.*

As described under § 11.10.1(K), the Proponent is preparing a MARA in accordance with the requirements of the federal agency responsible for reviewing Vineyard Northeast (i.e., BOEM).

### *§ 11.10.1(M)*

*The potential non-physical impacts of a proposed project on cultural and historic resources shall be evaluated in accordance with 36 C.F.R. § 800.5, assessment of adverse effects, including the introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features. Depending on the project and the lead federal agency, the Ocean SAMP Interagency Working Group may require that a project undergo a visual impact assessment that evaluates the visual impact a completed project will have on onshore cultural and historic resources.*

Rhode Island (including Block Island) falls beyond the maximum theoretical area of expected visibility of Vineyard Northeast due to the Earth's curvature.

Export cables within both the Massachusetts OECC and Connecticut OECC will not result in any long-term visual impacts.

### *§ 11.10.1(N)*

*A visual impact assessment may require the development of detailed visual simulations illustrating the completed project's visual relationship to onshore properties that are designated National Historic Landmarks, listed on the National Register of Historic Places, or determined to be eligible for listing on the National Register of Historic Places. Assessment of impacts to specific views from selected properties of interest may be required by relevant state and federal agencies to properly evaluate the impacts and determination of adverse effect of the project on onshore cultural or historical resources.*

Currently, there are no areas along the Rhode Island coast from which Vineyard Northeast is visible.

See the response to § 11.10.1(M).

### *§ 11.10.1(O)*

*A visual impact assessment may require description and images illustrating the potential impacts of the proposed project.*

Currently, there are no areas along the Rhode Island coast from which Vineyard Northeast is visible.

See the response to § 11.10.1(M).

## 3.3 Areas of Particular Concern (§ 11.10.2)

### *§ 11.10.2(A)*

*Areas of Particular Concern (APCs) have been designated in state waters through the Ocean SAMP process with the goal of protecting areas that have high conservation value, cultural and historic value, or human use value from large-scale offshore development. These areas may be limited in their use by a particular regulatory agency (e.g., shipping lanes), or have inherent risk associated with them (e.g., unexploded ordnance locations), or have inherent natural value or value assigned by human interest (e.g., glacial moraines, historic shipwreck sites). Areas of Particular Concern have been designated by reviewing habitat data, cultural and historic features data, and human use data that has been developed and analyzed through the Ocean SAMP process. Currently designated Areas of Particular Concern are based on current knowledge and available datasets; additional Areas of Particular Concern may be identified by the Council in the future as new datasets are made available. Areas of Particular Concern may be elevated to Areas Designated for Preservation in the future if future studies show that Areas of Particular Concern cannot risk even low levels of large-scale offshore development within these areas. Areas of Particular Concern include:*

1. *Areas with unique or fragile physical features, or important natural habitats;*
2. *Areas of high natural productivity;*
3. *Areas with features of historical significance or cultural value;*
4. *Areas of substantial recreational value;*
5. *Areas important for navigation, transportation, military, and other human uses; and*
6. *Areas of high fishing activity.*

The Proponent is conducting detailed surveys and resource assessments of the Massachusetts OECC and the Connecticut OECC to avoid and minimize impacts to APCs to the maximum extent practicable, including areas with associated risk and natural or assigned value. Detailed resource assessments are included in Volume II and of the COP and described herein. The Proponent has also proposed mitigation where avoidance is not possible. The Massachusetts OECC evaluated in this consistency certification is located within the 2011 and 2018 GLD; however, the Massachusetts OECC is only located within federal and Massachusetts state waters and is not located within Rhode Island state waters. The Connecticut OECC evaluated in this consistency certification is located within the 2011 GLD; however, the Connecticut OECC is only located within federal, New York, and Connecticut state waters and is not located within Rhode Island state waters. As described in § 11.10.1(B) and § 11.10.1(H), impacts to glacial moraines from the Massachusetts OECC are expected to be temporary and minimal. The Connecticut OECC is not expected to impact glacial moraines identified by RI CRMC's Ocean SAMP.

### *§ 11.10.2(B)*

*The Council has designated the areas listed below in § 11.10.2(C) of this Part in state waters as Areas of Particular Concern. All large-scale, small-scale, or other offshore development, or any portion of a proposed project, shall be presumptively excluded from APCs. This exclusion is rebuttable if the applicant can demonstrate by clear and convincing evidence that there are no practicable alternatives that are less damaging in areas outside of the APC, or that the proposed project will not result in a significant alteration to the values and resources of the APC. When evaluating a project proposal, the Council shall not consider cost as a factor when determining whether practicable alternatives exist. Applicants which successfully demonstrate that the presumptive exclusion does not apply to a proposed project because there are no practicable alternatives that are less damaging in areas outside of the APC must also demonstrate that all feasible efforts have been made to avoid damage to APC resources and values and that there will be no significant alteration of the APC resources or values. Applicants successfully demonstrating that the presumptive exclusion does not apply because the proposed project will not result in a significant alteration to the values and resources of the APC must also demonstrate that all feasible efforts have been made to avoid damage to the APC resources and values. The Council may require a successful applicant to provide a mitigation plan that protects the ecosystem. The Council will permit underwater cables, only in certain categories of Areas of Particular Concern, as determined by the Council in coordination with the Joint Agency Working Group. The maps listed below in § 11.10.2(C) of this Part depicting Areas of Particular Concern may be superseded by more detailed, site-specific maps created with finer resolution data.*

The Proponent is conducting detailed surveys and resource assessments of both the Massachusetts OECC and the Connecticut OECC to avoid and minimize impacts to APCs to the maximum extent practicable, including areas with associated risk and natural or assigned value. Detailed resource assessments are included in Volume II of the COP and described herein. The Proponent has also proposed mitigation where avoidance is not possible.

The Massachusetts OECC is located within federal and Massachusetts state waters and is not within Rhode Island state waters. The Connecticut OECC is located within federal, New York, and Connecticut state waters, and is not within Rhode Island state waters. Figure 3.2-1 depicts the portions of the Massachusetts OECC and Connecticut OECC which fall within the RI CRMC 2011 and/or 2018 GLDs. As described in § 11.10.1(B) and § 11.10.1(H), impacts to glacial moraines from the Massachusetts OECC are expected to be temporary and minimal. The Connecticut OECC is not expected to impact any glacial moraines identified by RI CRMC's Ocean SAMP. Section 2.8 of Volume I provides a description of siting procedures for both OECCs, including the numerous technical constraints and resources that were considered.

### *§ 11.10.2(C)*

*Areas of particular concern that have been identified in the Ocean SAMP area in state waters are described as follows:*

1. *Historic shipwrecks, archeological or historical sites and their buffers as described in Ocean SAMP Chapter 4, Cultural and Historic Resources, Sections 440.1.1 through 440.1.4, are Areas of Particular Concern. For the latest list of these sites and their locations please refer to the Rhode Island State Historic Preservation and Heritage Commission.*

See the response to § 11.10.1(K). The Proponent is conducting a MARA for both OECCs, expected to be completed in 2023. The MARA will determine the exact location of any offshore shipwreck sites within the Ocean SAMP area associated with either the Massachusetts OECC or the Connecticut OECC Additionally, there are no offshore dive sites (most of which are shipwrecks) identified in Figure 11.2 in the Ocean SAMP designated as APCs within the Massachusetts OECC and the Connecticut OECC.

2. *Offshore dive sites within the Ocean SAMP area, as shown in Figure 2 in § 11.10.2 of this Part, are designated Areas of Particular Concern. The Council recognizes that offshore dive sites, most of which are shipwrecks, are valuable recreational and cultural ocean assets and are important to sustaining Rhode Island's recreation and tourism economy.*

There are no offshore dive sites in the Ocean SAMP designated as APCs within the vicinity of either the Massachusetts OECC or the Connecticut OECC.

3. *Glacial moraines are important habitat areas for a diversity of fish and other marine plants and animals because of their relative structural permanence and structural complexity. Glacial moraines create a unique bottom topography that allows for habitat diversity and complexity, which allows for species diversity in these areas and creates environments that exhibit some of the highest biodiversity within the entire Ocean SAMP area. The Council also recognizes that because glacial moraines contain valuable habitats for fish and other marine life, they are also important to commercial and recreational fishermen. Accordingly, the Council shall designate glacial moraines as identified in Figures 3 and 4 in § 11.10.2 of this Part as Areas of Particular Concern.*

See the responses to § 11.10.1(B) and § 11.10.1(H).

4. *Navigation, military, and infrastructure areas including: designated shipping lanes, precautionary areas, recommended vessel routes, ferry routes, dredge disposal sites, military testing areas, unexploded ordnance, pilot boarding areas, anchorages, and a coastal buffer of 1 km as depicted in Figure 5 in § 11.10.2 of this Part are designated as Areas of Particular Concern. The Council recognizes the importance of these areas to marine transportation, navigation and other activities in the Ocean SAMP area.*

As discussed in Section 2.8 of COP Volume I, Vineyard Northeast avoids navigation, military, and infrastructure areas to the maximum extent practicable. The Montauk Pilot Boarding Station near the Connecticut OECC. However, according to § 720.5 Pilot Boarding Areas, this boarding station is only used by special arrangement due to the less favorable sea conditions at this location and any cable installation activity would be temporary (e.g., a few hours).

Existing vessel traffic along both the Massachusetts OECC and the Connecticut OECC are described in the Navigation Safety Risk Assessment (NSRA) in Appendix II-G. See Section 5.6 of COP Volume II for a description of Vineyard Northeast activities that may affect navigation and vessel traffic within the broader region, including within the Massachusetts OECC and the Connecticut OECC.

5. *Areas of high fishing activity as identified during the pre-application process by the Fishermen's Advisory Board, as defined in § 11.3(E) of this Part, may be designated by the Council as Areas of Particular Concern.*

During construction, it is expected that fishermen would give a wide birth of up to 1 km (0.54 NM) around pre-installation and installation activities in the OECCs. For additional information on fisheries studies and proposed avoidance, minimization, and mitigation efforts, see § 11.10.1(C) and § 11.10.1(F).

6. *Several heavily-used recreational boating and sailboat racing areas, as shown in Figure 6 in § 11.10.2 of this Part, are designated as Areas of Particular Concern. The Council recognizes that organized recreational boating and sailboat racing activities are concentrated in these particular areas, which are therefore important to sustaining Rhode Island's recreation and tourism economy.*

There are no recreational boating areas designated as APCs within either the Massachusetts OECC and Connecticut OECC.

7. *Naval fleet submarine transit lanes, as described in Ocean SAMP Chapter 7, Marine Transportation, Navigation, and Infrastructure Section 720.7, are designated as Areas of Particular Concern.*

Existing vessel traffic along the Massachusetts OECC and Connecticut OECC are described in the NSRA in Appendix II-G. See Section 5.6 of COP Volume II for a description of Vineyard Northeast activities that may affect navigation and vessel traffic within the Offshore Development Area, including the Massachusetts OECC and Connecticut OECC. Additionally, the Proponent is consulting with the Department of Defense (DoD) through the Military Aviation and Installation Assurance Siting Clearinghouse (DoD Clearinghouse) process.

8. *Other Areas of Particular Concern may be identified during the pre-application review by state and federal agencies as areas of importance.*

### *§ 11.10.2(D)*

*Developers proposing projects for within the renewable energy zone as described in § 11.10.1(B) of this Part shall adhere to the requirements outlined in § 11.10.2 of this Part regarding Areas of Particular Concern in state waters, including any Areas of Particular Concern that overlap the renewable energy zone (see Figure 7 in § 11.10.2 of this Part).*

Neither the Massachusetts OECC nor the Connecticut OECC are located within Rhode Island state waters.

## 3.4 Prohibitions and Areas Designated for Preservation (§ 11.10.3)

### *§ 11.10.3(A)*

*Areas Designated for Preservation are designated in the Ocean SAMP area in state waters for the purpose of preserving them for their ecological value. Areas Designated for Preservation were identified by reviewing habitat and other ecological data and findings that have resulted from the Ocean SAMP process. Areas Designated for Preservation are afforded additional protection than Areas of Particular Concern (see § 11.10.2 of this Part) because of scientific evidence indicating that large-scale offshore development in these areas may result in significant habitat loss. The areas described in § 11.10.3 of this Part are designated as Areas Designated for Preservation. The Council shall prohibit any large-scale offshore development, mining and extraction of minerals, or other development that has been found to be in conflict with the intent and purpose of an Area Designated for Preservation. Underwater cables are exempt from this prohibition…*

Neither the Massachusetts OECC nor the Connecticut OECC are located within Rhode Island state waters and will not affect any Areas Designated for Protection. Additionally, both OECCs are underwater cables and are therefore exempt.

## 3.5 Other Areas (§ 11.10.4)

### *§ 11.10.4(A)*

*Large-scale projects or other development which is found to be a hazard to commercial navigation shall avoid areas of high intensity commercial marine traffic in state waters. Avoidance shall be the primary goal of these areas. Areas of high intensity commercial marine traffic are defined as having 50 or more vessel counts within a 1 km by 1 km grid, as shown in Figure 9 in § 11.10.4(B) of this Part.*

No components of Vineyard Northeast are located within Rhode Island state waters.

Existing vessel traffic along the Massachusetts OECC and Connecticut OECC is described in the NSRA (see Appendix II-G). See Section 5.6 of COP Volume II for a description of Vineyard Northeast activities that may affect navigation and vessel traffic within the Offshore Development Area, including the Massachusetts OECC and Connecticut OECC.

Overall, vessel traffic density along the Massachusetts OECC and Connecticut OECC is relatively low, with the highest concentration of traffic as one approaches the continental mainland. The Proponent will continue to work with ferry operators, harbor pilots, and other vessel operators to ensure any impacts to commercial vessel traffic are minimized to the

greatest extent practicable. Section 2.8 of COP Volume I provides a description of the siting procedures for both the Massachusetts OECC and the Connecticut OECC which specifically pertain to the avoidance of heavy vessel traffic and navigational concerns.

Navigational conflicts are not anticipated to be a common occurrence (see the response to § 11.10.1(C), Section 5.6 of COP Volume II, and Appendix II-G). Increased vessel traffic is not anticipated to result in significant disruption of vessel traffic in and around the Rhode Island ports. Mitigation measures are described in the response to § 11.10.1(C) and in Section 8 of the NSRA (see Appendix II-G).

O&M vessels will operate in the Massachusetts OECC and Connecticut OECC infrequently, primarily to conduct inspections of the offshore export cables on a scheduled maintenance timetable (see Section 4.4.2 of COP Volume I). Few impacts to existing vessel traffic, including passenger vessel traffic, are anticipated from O&M activities along the Massachusetts OECC and Connecticut OECC (see Appendix II-G).

## 3.6 Application Requirements (§ 11.10.5)

### *§ 11.10.5(A)*

*For the purposes of this document, the phrase "'necessary data and information'" shall refer to the necessary data and information required for federal consistency reviews for purposes of starting the Coastal Zone Management Act (CZMA) six-month review period for federal license or permit activities under 15 C.F.R. Part 930, Subpart D, and OCS Plans under 15 C.F.R. Part 930, Subpart E, pursuant to 15 C.F.R. § 930.58(a)(2). Any necessary data and information shall be provided before the six-month CZMA review period begins for a proposed project or at the time the applicant provides the consistency certification. It should be noted that other federal and state agencies may require other types of data or information as part of their review processes.*

The Proponent is submitting the Vineyard Northeast COP in accordance with BOEM's regulations governing COP submissions. Section 7.3 of COP Volume I lists BOEM's COP regulations and where the corresponding information can be found throughout the Vineyard Northeast COP. The Proponent will provide any necessary data and information required for the CZMA review.

## 3.7 Monitoring Requirements (§ 11.10.6)

### *§ 11.10.6(A)*

*The Council in coordination with the Joint Agency Working Group, as described in § 11.9.7(I) of this Part, shall determine requirements for monitoring as specified in § 11.9.9 of this Part. For CZMA federal consistency purposes the Council must identify any baseline assessments and construction monitoring activities during its CZMA six-month review of the COP.*

The Proponent has conducted numerous resource assessments and surveys to characterize the Massachusetts OECC and Connecticut OECC including, but not limited to, marine archaeological resources assessments, essential fish habitat assessments, and benthic habitat surveys. The Proponent's surveys and monitoring will generate a substantial body of environmental, fisheries, and other data, further augmenting scientific understanding of the Offshore Development Area. The Proponent has collaborated and will continue to collaborate with federal and state agencies to design surveys that align with established survey methods so that the data generated can be compared to previous data and ongoing regional studies to support a regional, longer-term study program to monitor the regional impacts of offshore wind development.

Resource-specific baseline assessments and construction monitoring plans are discussed throughout Volume II of the Vineyard Northeast COP and appendices. A fisheries monitoring plan will be developed to monitor key indicators before and after construction; such monitoring may be part of regional monitoring efforts. A benthic habitat monitoring plan framework has been developed (Appendix II-R) to monitor recovery after construction in areas with sensitive habitats where similar post-construction monitoring has not already been conducted for other projects (such as along the OECCs).

# 4 Conclusion

The Proponent has demonstrated that the proposed action described herein and in the Vineyard Northeast COP complies with the applicable enforceable policies of Rhode Island's approved Coastal Resource Management Program and will be conducted in a manner consistent with such Program.

# 5 References and Incorporation by Reference

[CT DEEP] Connecticut Department of Energy and Environmental Protection. 2021. Long Island Sound Blue Plan map viewer. https://cteco.uconn.edu/viewer/index.html?viewer=blueplan.

[MA CZM] Massachusetts Coastal Zone Management. 2021. Massachusetts Ocean Management Plan viewer. https://mass-eoeea.maps.arcgis.com/apps/webappviewer/index.html?id=c424acf25d5c4841971d690886126c80

[MARCO] Mid-Atlantic Regional Council on the Ocean. 2021. Mid-Atlantic ocean data portal. https://portal.midatlanticocean.org/

[NEODP] Northeast Ocean Data Portal. 2021. Northeast ocean data: maps and data for ocean planning in the northeastern United States. http://www.northeastoceandata.org/data-explorer/

# Vineyard Northeast COP

# Appendix II-M3 Vineyard Northeast Connecticut Coastal Zone Management Act Consistency Certification

Prepared by:
Epsilon Associates

Prepared for:
Vineyard Northeast LLC

## March 2024

| Revision | Date | Description |
|---|---|---|
| 0 | July 2022 | Initial submission. |
| 1 | March 2023 | Updated to address Bureau of Ocean Energy Management (BOEM) Round 1 Comments (dated January 13, 2023) and make minor corrections. |
| 2 | April 2023 | Made updates consistent with revisions to other parts of the COP and made other minor corrections. |
| 3 | November 2023 | Updated to address United States Coast Guard (USCG) Round 3 Comments (dated August 8, 2023) and to be consistent with revisions to other parts of the COP. |
| 3 | March 2024 | Resubmitted without revisions. |

# Vineyard Northeast

# Connecticut Coastal Zone Management Act

# Consistency Certification

Submitted to:

**BUREAU OF OCEAN ENERGY MANAGEMENT**
45600 Woodland Rd
Sterling, VA 20166

**CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION**
Land and Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

Prepared for:

**Vineyard Northeast LLC**

Prepared by:

**Epsilon Associates, Inc.**

**November 2023**

# Table of Contents



# List of Figures



# List of Tables

# 1 Introduction

Vineyard Northeast LLC (the "Proponent") proposes to develop, construct, and operate offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0522 (the "Lease Area") along with associated offshore and onshore transmission systems. This proposed development is referred to as "Vineyard Northeast." Vineyard Northeast includes 160 total wind turbine generator (WTG) and electrical service platform (ESP) positions within the Lease Area. Up to three of those positions will be occupied by ESPs, and the remaining positions will be occupied by WTGs. Two offshore export cable corridors (OECCs)—the Massachusetts OECC and the Connecticut OECC—will connect the renewable wind energy facilities to onshore electric transmission systems in Massachusetts and Connecticut. Figure 1.0-1 provides an overview of Vineyard Northeast.

Portions of Vineyard Northeast are located within Long Island Sound (LIS) as well as Connecticut state waters (CSW). CSW share a boundary with the federal Coastal Zone Management Act (CZMA) boundary. Specifically, while the Lease Area itself is outside of LIS and CSW, portions of the Connecticut OECC are located within both CSW and LIS waters (see Figure 2). No portions of the Massachusetts OECC are located within CSW or LIS waters.

The Proponent has submitted a Construction and Operations Plan (COP) to BOEM, which will serve as necessary data and information per 15 Code of Federal Regulations (CFR) Part 930.58. The Proponent has prepared this Consistency Certification to demonstrate that Vineyard Northeast is consistent with the enforceable policies of the Long Island Sound Blue Plan (Blue Plan) (2019). Based upon the analyses presented herein and, in the COP, the Proponent certifies to the Connecticut Department of Energy and Environmental Protection (CT DEEP) that:

> *The proposed activities described in detail in the Vineyard Northeast COP shall comply with Connecticut's approved Long Island Sound Blue Plan and will be conducted in a manner consistent with such Program*.

This certification is made in accordance with the requirements of the Coastal Zone Management Act (16 U.S.C. 1451 et seq.) and implementing regulations at 15 CFR Part 930, Subparts D and E.

A summary of Vineyard Northeast is provided in Section 2. Section 3 demonstrates how Vineyard Northeast activities in the Connecticut OECC (as described in Section 2 and more completely in the Vineyard Northeast COP) comply with each of the Long Island Sound Blue Plan's applicable enforceable policies.

G:\Projects2\MA\MA\5410\2023\MXD\Vol_II_REV_April_2023\CZM\Fig1.0-1_CT_CZM_Overview_20231026.mxd

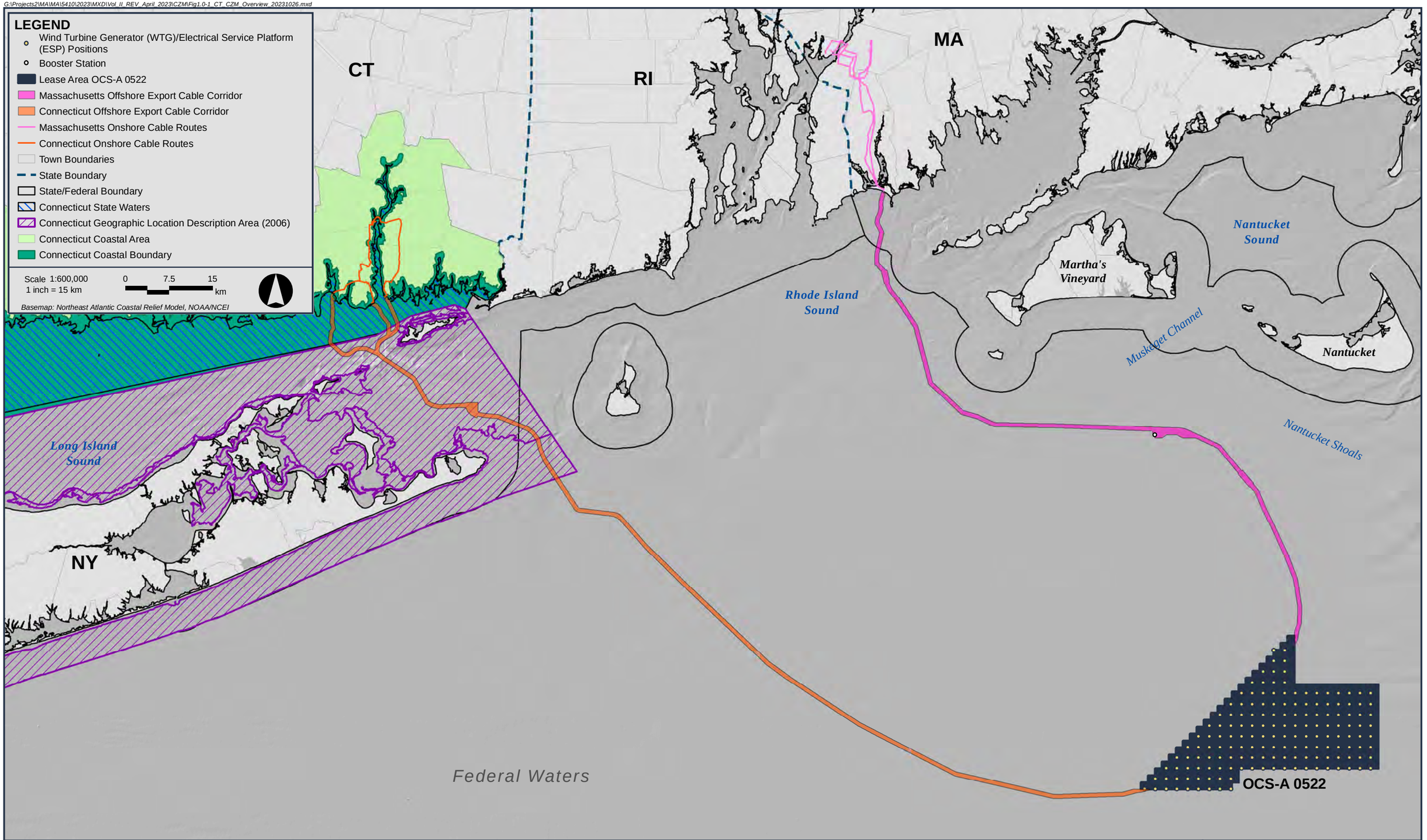


**Figure 1.0-1**
Vineyard Northeast Overview

VINEYARD NORTHEAST
VINEYARD OFFSHORE

# 2 Summary of Vineyard Northeast Facilities and Activities

## 2.1 Overview

Vineyard Northeast LLC (the "Proponent") proposes to develop, construct, and operate offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0522 (the "Lease Area") along with associated offshore and onshore transmission systems. This proposed development is referred to as "Vineyard Northeast."

Vineyard Northeast includes 160 total wind turbine generator (WTG) and electrical service platform (ESP) positions within the Lease Area. Up to three of those positions will be occupied by ESPs[1] and the remaining positions will be occupied by WTGs. As proposed, the WTGs and ESP(s) will be oriented in fixed east-to-west rows and north-to-south columns with 1 nautical mile (NM) (1.9 km) spacing between positions. The WTGs and ESP(s) will be supported by monopiles or piled jacket foundations. The base of the foundations may be surrounded by scour protection. Submarine inter-array cables will transmit power from groups of WTGs to the ESP(s). If two or three ESPs are used, they may be connected with inter-link cables. Offshore export cables will then transmit the electricity collected at the ESP(s) to shore.

The WTGs, ESP(s), and their foundations as well as the inter-array cables, inter-link cables (if used), and a portion of the offshore export cables will be located in Lease Area OCS-A 0522. The Lease Area is within the Massachusetts Wind Energy Area (MA WEA) identified by BOEM, following a public process and environmental review, as suitable for offshore wind energy development. At its closest point, the 536 square kilometer ($km^2$) (132,370 acre) Lease Area is approximately 46 km (29 mi) from Nantucket. Between the Lease Area and shore, the offshore export cables will be installed within two offshore export cable corridors (OECCs)—the Massachusetts OECC and the Connecticut OECC—that connect to onshore transmission systems in Massachusetts and Connecticut.

The Massachusetts OECC travels from the northernmost tip of the Lease Area along the northeastern edge of the MA WEA and Rhode Island/Massachusetts (RI/MA) WEA and then heads across Buzzards Bay towards the Horseneck Beach Landfall Site in Westport, Massachusetts. Up to two high voltage direct current (HVDC) cable bundles or up to three high voltage alternating current (HVAC) cables may be installed within the Massachusetts OECC. If HVAC offshore export cables are used, the cables would connect to a booster station in the northwestern aliquot[2] of Lease Area OCS-A 0534 to boost the electricity's voltage level, reduce transmission losses, and enhance grid capacity. From the Horseneck Beach Landfall Site, onshore export cables will connect to a new onshore substation in Westport, Fall River, or

[1] If two or three ESPs are used, they may be located at separate positions or two of the ESPs may be co-located at the same grid position. Co-located ESPs would be smaller structures installed on monopile foundations.

[2] An aliquot is $1/64^{th}$ of a BOEM Outer Continental Shelf (OCS) Lease Block.

Somerset, Massachusetts. Grid interconnection cables will connect the onshore substation to one of three potential points of interconnection (POIs): the existing Pottersville Substation, a planned substation near Brayton Point, or the existing Bell Rock Substation.

Up to two HVDC offshore export cable bundles may be installed within the Connecticut OECC. The Connecticut OECC travels from the southwestern tip of the Lease Area along the southwestern edge of the MA WEA and then heads between Block Island and the tip of Long Island towards potential landfall sites near New London, Connecticut. As the Connecticut OECC approaches shore, it splits into three variations to connect to three potential landfall sites: the Ocean Beach Landfall Site, the Eastern Point Beach Landfall Site, and the Niantic Beach Landfall Site. Onshore export cables will connect one of the landfall sites to a new onshore substation in Montville, Connecticut, which will be connected to the POI at the existing Montville Substation by grid interconnection cables.

Vineyard Northeast is being developed and permitted using a Project Design Envelope (PDE) based on expected commercial and technological advancements. The PDE outlines a reasonable range of project design parameters (e.g., multiple foundation types) and installation techniques (e.g., use of various cable installation tools). The Proponent has developed the PDE and sited Vineyard Northeast's facilities based on feedback from multiple agencies and stakeholders. For example, the Proponent modified and refined the OECCs through numerous consultations with federal and state agencies as well as fishermen and, based on their feedback, consolidated the offshore export cables with other developers' proposed cables to the extent feasible. Key elements of Vineyard Northeast's PDE are summarized in Table 2.1-1. For a complete description of Vineyard Northeast's offshore and onshore facilities, see COP Volume I.

**Table 2.1-1 Summary of the Project Design Envelope**

| Parameter | Project Design Envelope |
|---|---|
| Maximum number of WTG/ESP positions | 160 |
| **Wind Turbine Generators** | |
| Maximum number of WTGs | 160 |
| Maximum rotor diameter | 320 m (1,050 ft) |
| Maximum tip height | 400 m (1,312 ft) |
| Minimum tip clearance | 27 m (89 ft) |
| **Electrical Service Platforms and Booster Station** | |
| Number of ESPs | 0–3<br>(ESP equipment may be integrated onto WTG foundation[s])[1] |
| Maximum number of booster stations | 1 (only for HVAC transmission) |
| Maximum topside height above mean lower low Water[2] (MLLW) | 70 m (230 ft) |

## Table 2.1-1 Vineyard Northeast Project Design Envelope (Continued)

| Parameter | Project Design Envelope |
|---|---|
| **Foundations and Scour Protection** | |
| Maximum pile diameter | Monopiles: 14 m (46 ft)<br>Piled jackets: 4.25 m (14 ft) |
| Maximum area of scour protection | Monopiles: 7,238 $m^2$ (1.8 acres)<br>WTG piled jackets: 11,660 $m^2$ (2.9 acres)<br>ESP piled jackets: 32,577 $m^2$ (8.1 acres)<br>Booster station piled jackets: 18,427 $m^2$ (4.6 acres) |
| **Offshore Cables** | |
| Maximum total inter-array cable length | 356 km (192 NM) |
| Maximum total inter-link cable length | 120 km (65 NM) |
| Maximum number of offshore export cables | Massachusetts OECC: 3 HVAC cables or 2 HVDC cable bundles<br>Connecticut OECC: 2 HVDC cable bundles |
| Maximum total offshore export cable length[3] | Massachusetts OECC: 436 km (235 NM)<br>Connecticut OECC: 421 km (227 NM) |
| Target burial depth beneath stable seafloor[4] | 1.5–2.5 m (5–8 ft) |
| **Onshore Facilities** | |
| Massachusetts landfall site | Horseneck Beach Landfall Site |
| Connecticut landfall site | Ocean Beach Landfall Site, Eastern Point Beach Landfall Site, or Niantic Beach Landfall Site |
| Massachusetts onshore cable route | Horseneck Beach Eastern Onshore Cable Route or Horseneck Beach Western Onshore Cable Route (including variants) |
| Connecticut onshore cable route | Ocean Beach Onshore Cable Route, Eastern Point Beach Onshore Cable Route, or Niantic Beach Onshore Cable Route |
| Onshore substation site envelopes[5] | Massachusetts: [redacted]<br>Connecticut: [redacted] |
| POIs | Massachusetts: Pottersville POI, Brayton Point POI, or Bell Rock POI<br>Connecticut: Montville POI |

Notes:
1. As described in Section 3.4 of COP Volume I, this concept entails placing ESP equipment on one or more expanded WTG foundation platforms rather than having a separate ESP situated on its own foundation.
2. Height includes helipad (if present), but may not include antennae and other appurtenances.
3. Includes the length of the offshore export cables within the Lease Area.
4. Unless the final Cable Burial Risk Assessment (CBRA) indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.
5. Since the Proponent has not yet secured site control for the onshore substation sites, the Proponent has identified one or more "onshore substation site envelopes" for each POI.

## 2.2 Construction

Construction of Vineyard Northeast will likely start with the onshore cables and onshore substations. The onshore cables are expected to be installed primarily underground within public roadway layouts or within existing utility rights-of-way (ROWs) via open trenching. The onshore cables may be installed in a duct bank (i.e., an array of plastic conduits encased in concrete) or within directly buried conduit(s). In most instances, underground trenchless crossing methods are expected to be used where the onshore cables traverse unique features (e.g., busy roadways, railroads, wetlands, and waterbodies). However, the crossing of the Taunton River [redacted] may require a segment of overhead transmission lines.[3] Construction of the onshore substations is expected to involve site preparation (e.g., land clearing and grading), installation of the substation equipment and cables, commissioning, and site clean-up and restoration.

Offshore construction will likely begin with offshore export cable installation and/or foundation installation (including scour protection installation). Once the foundations are in place, the WTGs, ESP topside(s), and booster station topside can be installed. Inter-array cables may be installed before or after the WTGs are installed on their foundations. WTG commissioning is expected to take place after the inter-array cables are installed.

Prior to offshore cable installation, the cable alignments may require sand bedform dredging and boulder clearance. Following those activities, pre-lay grapnel runs and pre-lay surveys will be performed to confirm that the cable alignments are suitable for installation. The offshore cables will then be buried beneath the stable seafloor at a target depth of 1.5 to 2.5 meters (m) (5 to 8 feet [ft])[4] likely using jetting techniques or a mechanical plow. While every effort will be made to achieve sufficient burial, a limited portion of the offshore cables may require cable protection if a sufficient burial depth cannot be achieved. At the landfall sites, the offshore export cables are expected to transition onshore using horizontal directional drilling (HDD) to avoid or minimize impacts to the beach, intertidal zone, and nearshore areas. The offshore export cables will connect to the onshore export cables in underground transition vaults at the landfall sites.

The foundations, WTGs, ESP topside(s), and booster station topside (if used) may be staged at a United States (US) or Canadian port or delivered directly to the Lease Area. The Proponent has identified several potential staging ports in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Canada that may be used for frequent crew transfer and for

[3] As described in Section 3.8.3.3 of COP Volume I, the need for overhead transmission lines at this Taunton River crossing depends on the final location of the onshore substation site and the transmission technology employed (HVAC or HVDC) and will be confirmed through further field data collection and detailed engineering.

[4] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

offloading/loading, storing, and pre-assembling components, among other activities (see Section 3.10.1 of COP Volume I). The foundations, WTGs, and topside(s) will be installed by jack-up vessels or heavy lift vessels (HLVs) using dynamic positioning (DP) or anchors along with necessary support vessels (e.g., tugboats). Seabed preparation may be required prior to foundation installation. Scour protection, which would likely consist of loose rock material placed around the foundation, will likely be needed for monopiles, but may or may not be needed for the smaller diameter jacket pin piles. Once set onto the seabed by the crane of the main installation vessel(s), monopiles or jacket pin piles will be installed using impact pile driving,[5] which will begin with a soft-start (i.e., the impact hammer energy level will be gradually increased). Noise mitigation systems are expected to be applied during pile driving. If monopile foundations are used, a transition piece will be installed on top of the monopile using a vessel's crane (unless an extended monopile concept is employed). Once the foundations are installed, the WTGs, ESP topside(s), and booster station topside will be lifted and secured onto their foundations. Then, the WTGs, ESP(s), and booster station will be commissioned to confirm that they are functioning correctly and ready for energy production. To aid safe navigation, the WTGs, ESP(s), booster station, and their foundations will be equipped with marine navigation and aviation lighting, marking, and signaling in accordance with BOEM, US Coast Guard (USCG), and Federal Aviation Administration (FAA) guidance.

## 2.3 Operations and Maintenance

Vineyard Northeast's facilities are expected to operate for approximately 30 years. During operations, the offshore and onshore facilities will be continuously remotely monitored from one or more control center(s) located at the Proponent's operations and maintenance (O&M) facilities and/or a third party's facilities.

The WTGs, ESP(s), and booster station will be designed to operate autonomously and will not be manned. The offshore facilities will be equipped with a supervisory control and data acquisition (SCADA) system. The SCADA system will notify operators of alarms or warnings and enable the operators to remotely interact with and control devices (e.g., sensors, valves, motors), override automatic functions, reset systems, and shut down equipment for maintenance or at the request of grid operators or agencies. The Proponent anticipates that the offshore cables will include a monitoring system, such as distributed temperature sensing (DTS), online partial discharge (OLPD) monitoring, and/or distributed acoustic sensing (DAS), to continuously monitor the cables' status.

The Proponent will regularly conduct inspections and preventative maintenance, including foundation and scour protection inspections, offshore cable surveys, safety inspections and tests, electrical component service, and replacement of consumables, among other activities.

---

[5] Prior to impact pile driving, a vibratory hammer or other tool could be used to slowly lower the pile through the top layers of the seabed in a controlled fashion to avoid the potential for a "pile run" (see Section 3.3 of COP Volume I)

Offshore, most scheduled maintenance activities will be performed using service operation vessels (SOVs), service accommodation and transfer vessels (SATVs), crew transfer vessels (CTVs), and/or helicopters. Unscheduled repairs or component replacement may also be necessary, which may require jack-up vessels or other larger vessels similar to those used during construction. The Proponent expects to use one or more onshore O&M facilities to support offshore operations. The O&M facilities, which could be located at or near any of the ports identified in Section 4.4.1 of COP Volume I, would likely be used for dispatching technicians and crew exchange, bunkering, and loading supplies and spare parts onto vessels. The Proponent may also lease space at an airport hangar for aircraft (e.g., helicopters) used to support operations. Onshore maintenance and repair activities are expected to require minimal use of worker vehicles and construction equipment.

## 2.4 Decommissioning

Decommissioning of the offshore and onshore facilities at the end of their operational life is essentially the reverse of the construction process. The WTGs, ESP(s), and booster station (if used) will be disconnected from the offshore cables, disassembled, and removed from their foundations. The foundations will be cut and removed to a depth of 4.5 m (15 ft) below the mudline, unless otherwise authorized by the Bureau of Safety and Environmental Enforcement (BSEE). The removed WTG, ESP, booster station, and foundation components will be shipped to shore and properly disposed of or recycled. The offshore cables may be removed or retired in place (if authorized by BOEM and other appropriate agencies). Any scour protection or cable protection may be removed or left in place, depending on input from federal and state agencies and relevant stakeholders. The onshore facilities could be retired in place or retained for future use, subject to discussions with local agencies.

## 2.5 Organization of the COP

The COP is being submitted to BOEM, in accordance with 30 CFR Part 585, the stipulations in Lease OCS-A 0522, and applicable guidance, for the development of the entire Lease Area. The Vineyard Northeast COP is comprised of two volumes:

- Volume I describes Vineyard Northeast's offshore and onshore facilities and how the Proponent plans to construct, operate, and decommission those facilities. Volume I also discusses the Proponent's outreach efforts and commitment to health, safety, and environmental (HSE) protection. Volume I is accompanied by several related appendices.

- Volume II assesses the benefits and potential impacts of Vineyard Northeast to physical, biological, socioeconomic, visual, and cultural resources based on the "maximum design scenario" for each resource. Volume II also describes the Proponent's measures to avoid, minimize, and mitigate those potential impacts. Volume II is accompanied by numerous appendices containing detailed resource and site conditions assessments.

## 2.6 Agency, Tribal, and Stakeholder Outreach

Vineyard Northeast LLC is committed to being a good neighbor both onshore and offshore. The Proponent began agency, tribal, and stakeholder outreach specific to Vineyard Northeast in fall 2021 well before the submission of this COP. The Proponent's frequent and early engagement with agencies, Native American tribes,[6] fishermen, local communities, and other stakeholders during the COP planning process enabled the Proponent to incorporate their feedback into the siting and design of the facilities, the methodologies for resources assessments, survey strategies, workforce initiatives and educational opportunities, and/or proposed avoidance, minimization, and mitigation measures. Throughout the development, construction, operational, and decommissioning periods, the Proponent will continue to actively engage with agencies, Native American tribes, fishermen, local communities, and other stakeholders to identify and discuss their interests and concerns regarding Vineyard Northeast.

## 2.7 Benefits of Vineyard Northeast

Vineyard Northeast will generate clean, renewable electricity by as early as 2030 to assist Northeastern states and/or other offtake users in achieving their renewable energy and carbon emission reduction goals. The electricity generated by the WTGs will displace electricity from fossil fuel power plants, resulting in a significant net reduction in air emissions from the regional electric grid. Vineyard Northeast is expected to reduce carbon dioxide equivalent ($CO_2e$) emissions from the electric grid by approximately 4.9 million tons per year (tpy), or the equivalent of taking approximately 970,000 cars off the road.[7] This reduction in greenhouse gas emissions will help mitigate additional effects of ongoing climate change (e.g., sea level rise and increased flooding, changes in agricultural productivity, shifts in species' distributions, and increases in energy system costs) that are impacting the environment and public health. Vineyard Northeast will also reduce regional emissions of air contaminants such as nitrogen oxides (NOx) and sulfur dioxide ($SO_2$), which contribute to acid rain, ocean acidification, and ground level ozone/smog and are linked to increased rates of early death, heart attacks, stroke, and respiratory disorders. Vineyard Northeast will also help diversify the states' electricity supply and increase the reliability of the electric grid.

---

[6] Throughout the COP, "Native American tribes" generally refers to both federally recognized Tribes/Tribal Nations and other Native American communities. Where appropriate, consultations or communications with federally recognized Tribes/Tribal Nations will be identified.

[7] Assuming the minimum nameplate capacity of Vineyard Northeast.

Beyond these important environmental, public health, and energy reliability benefits, Vineyard Northeast is expected to result in significant long-term economic benefits, including considerable new employment opportunities. Vineyard Northeast is expected to support a minimum of 15,894 direct, indirect, and induced full-time equivalent (FTE) job-years[8] during pre-construction and construction. Construction of Vineyard Northeast is also estimated to generate at least ~$1.63 billion in total labor income and ~$4.65 billion in output.[9] The operation of Vineyard Northeast is projected to generate approximately 17,046 FTE job-years assuming a 30-year operational life (equivalent to 568 direct, indirect, and induced FTEs annually), as well as at least ~$1.19 billion in total annual labor income and ~$4.62 billion in output.

[8] One FTE job-year is the equivalent of one person working full time for one year (2,080 hours).

[9] Output is the estimated value of all goods and services sold (i.e., expenditures other than payroll).

# 3 Vineyard Northeast Consistency with Long Island Sound Blue Plan Policies and Standards

## 3.1 Jurisdiction for Federal Consistency Certification

Section 307(c)(3)(B) of the federal CZMA, as amended, requires any applicant who submits an Outer Continental Shelf (OCS) plan[10] to the Department of the Interior to also provide a certification that each activity described in the OCS plan affecting any land or water use or natural resource of a state's coastal zone complies with the enforceable policies of that state's approved coastal management program and will be carried out in a manner consistent with such program (see 16 U.S.C. § 1456(c)(3)(B)). The Proponent submitted an OCS plan– the Vineyard Northeast COP– to BOEM for approval in July 2022.

For federal consistency purposes, within the Blue Plan policy area, Connecticut's enforceable policies with which proposed federal actions must be consistent are essentially those of the Connecticut Coastal Management Act (CMA) at Connecticut General Statutes (CGS) § 22a-92. For federally regulated activities that also require a DEEP permit, the federal consistency review is not a separate process but is integrated into the DEEP review process.

In reference to the Connecticut OECC's three different Landfall Site branches (Eastern Point Landfall Site, Ocean Beach Landfall Site, and Niantic Beach Landfall Site), approximately 5.2, 5.5, and 9.5 km (3.2, 3.4, and 5.9 miles [mi]) respectively of the total 171-179 km (106-111 mi) long Connecticut OECC are located within Connecticut's Coastal Boundary; approximately 47.5, 45.9, and 49.5 km (29.5, 28.5, and 30.7 mi) of each respective branch of the Connecticut OECC are located within Connecticut's 2006 Geographic Location Description (GLD) area. Therefore, these segments of the Connecticut OECC are subject to federal consistency review by CMA (see Figure 1.0-2). Lease Area OCS-A 0522 and the Massachusetts OECC are located outside the 2006 GLD and the federal CZMA boundary; therefore, this area is not subject to federal consistency review by CMA.

The Proponent has prepared a consistency certification that reviews Vineyard Northeast for consistency with the relevant enforceable policies in the Blue Plan. With respect to requirements under 15 CFR § 930.57(b) and 930.76(c) the proposed activities described in detail in this plan comply with the enforceable policies of the Blue Plan and will be conducted in a manner consistent with such program.

---

[10] *OCS plan* means "any plan for the exploration or development of, or production from, any area which has been leased under the Outer Continental Shelf Lands Act (43 U.S.C. 1331 et seq.), and the regulations under that Act, which is submitted to the Secretary of the Interior or designee following management program approval and which describes in detail federal license or permit activities." The Vineyard Northeast Construction and Operations Plan submitted to BOEM is an OCS plan.

The sections below rely on detailed information provided in the Vineyard Northeast COP. The draft Vineyard Northeast COP will be provided to CT DEEP following BOEM's completeness and sufficiency review and is incorporated by reference.

## 3.2 Consistency with Blue Plan Enforceable Policies

For those portions of Vineyard Northeast subject to CT DEEP federal consistency review, the following sections demonstrate compliance with the enforceable policies of the Long Island Sound Blue Plan.

### Long Island Sound-Wide Policies

#### *Goal 1: Healthy Long Island Sound Ecosystem*

*Policy: Any activity proposed within the Blue Plan policy area shall avoid, minimize, and mitigate adverse impacts to natural resources in general, including ecosystem services and water quality, and Ecologically Significant Areas in particular, pursuant to CGS §25-157t(h).*

The Proponent has routed the proposed OECC to avoid and minimize impacts to sensitive habitats where feasible. The preliminary routing of the cables has avoided sensitive habitats including eelgrass, hard bottom/complex bottom (i.e., sand waves) where feasible, but avoidance of all sensitive habitats is not always possible.

The location of the Connecticut OECC was developed based upon careful consideration of multiple technical, environmental, and commercial factors. The Proponent initially identified several offshore cable route concepts to connect the Lease Area to potential landfall sites in Massachusetts and Connecticut. Based on an extensive desktop assessment of publicly available data for the region surrounding the Lease Area and the coastline, the Proponent developed potential routes for further investigation via reconnaissance surveys. This desktop assessment considered mapped resources from the Massachusetts Ocean Management Plan (MA CZM 2021), the Long Island Sound Blue Plan (CT DEEP 2021), the Northeast Ocean Data Portal (NEODP 2021), and the Mid-Atlantic Ocean Data Portal (MARCO 2021), among many other data sources. Data collected during the Proponent's reconnaissance surveys were then used to refine potential routes and delineate the Connecticut OECC. This information was utilized to develop the proposed route and was surveyed to guide routing further. The Connecticut Landfall Sites have been surveyed to identify any sensitive nearshore habitats and continued survey efforts are underway for the Connecticut OECC. Further information about routing can be found in Sections 2.7 and 2.8 of COP Volume I.

Furthermore, the Proponent has conducted an analysis of natural resources that may be impacted by Vineyard Northeast. HDD is expected to be used at the Landfall Sites to avoid or minimize impacts to dunes, beaches, and barrier beaches. No impacts to salt marshes, or shellfish beds are anticipated.

- Section 3.2 of COP Volume II details any impacts to water quality.

- Section 4.4 of COP Volume II describes the habitats that are located around the Vineyard Northeast landfall sites and within the portion of the OECC in state waters.

- Section 4.5 of COP Volume II and Appendix II-D Essential Fish Habitat Assessment provide a thorough analysis of Vineyard Northeast's potential impacts to benthic habitat as well as measures to mitigate those impacts.

- Section 4.6 of COP Volume II contains an extensive discussion of fish and invertebrate species within the Offshore Development Area.

- Popular and other important areas to commercial and recreational fisheries are discussed in Sections 5.3 and 5.4 of COP Volume II.

- Appendix II-B and Appendix II-D of COP Volume II describes how benthic habitats have been classified according to the Coastal and Marine Ecological Classification Standard (CMECS) modified by National Marine Fisheries Service (NMFS) (2021).

To assess impacts to marine and coastal benthic habitat, the Proponent has developed a benthic habitat monitoring plan framework (Appendix II-R) for Vineyard Northeast to monitor recovery after construction in areas with sensitive habitats where similar post-construction monitoring has not already been conducted for other projects (such as along the OECCs).

*Policy: Any activity proposed within the Blue Plan policy area shall consider the future effects of climate change, including but not limited to water quality impacts, changes in species composition, and sea level rise, in accordance with scenarios established pursuant to CGS §25-68o as amended by PA 18-82; and pursuant to CGS §25-157t(h).*

Vineyard Northeast will generate clean, renewable electricity by 2030 to assist Northeastern states and/or other offtake users in achieving their renewable energy and carbon emission reduction goals. The electricity generated by the WTGs will displace electricity from fossil fuel power plants, resulting in a significant net reduction in air emissions from the regional electric grid. Vineyard Northeast is expected to reduce $CO_2e$ emissions from the electric grid by approximately 4.9 million tpy, or the equivalent of taking approximately 970,000 cars off the road.[11] This reduction in GHG emissions will help mitigate additional effects of ongoing climate change (e.g., sea level rise and increased flooding, changes in agricultural productivity, shifts in species' distributions, and increases in energy system costs) that are impacting the environment and public health. Vineyard Northeast will also reduce regional emissions of air contaminants such as NOx and $SO_2$, which contribute to acid rain, ocean acidification, and

[11] Assuming the minimum nameplate capacity of Vineyard Northeast.

ground level ozone/smog and are linked to increased rates of early death, heart attacks, stroke, and respiratory disorders. Vineyard Northeast will also help diversify the states' electricity supply and increase the reliability of the electric grid.

The Proponent has developed Vineyard Northeast in such a way that minimizes and mitigates any effects to the maximum extent practicable. Specific to water quality, impacts can be found in Section 3.2 of COP Volume II.

***Goal 2: Effective Decision-Making***

*Policy: Any proposed regulated activities shall provide site-specific information necessary to evaluate consistency of the activities with existing regulatory criteria, as may be further informed by Blue Plan policies. Blue Plan policies do not approve or prohibit any specific regulated activity, nor do they pre-determine the outcome of any individual regulatory process.*

The COP provides site-specific information on physical, biological, socioeconomic, and cultural resources.

***Goal 3: Compatibility among Past, Current and Future Ocean Uses***

*Policy: Any activity proposed within the Blue Plan policy area shall avoid, minimize, and mitigate conflicts with traditional public trust uses, including Significant Human Use Areas, pursuant to CGS § 25-157t(h).*

The Proponent is conducting detailed surveys and resource assessments of the Connecticut OECC to avoid and minimize impacts to areas of concern to the maximum extent practicable, including areas with associated risk and natural or assigned value. Detailed resource assessments are included in Volume II of the COP and summarized herein.

As described further in Sections 2.7 and 2.8 of COP Volume I, the Proponent considered numerous options for the Connecticut OECC and focused on consolidating its offshore export cables with the cables proposed by other offshore wind developers based on feedback from numerous agencies and stakeholders. Thus, the Proponent considered several initial route concepts that paralleled Beacon Wind's proposed cable routes between the Lease Area and the tip of Long Island. Between the tip of Long Island and shore, the Proponent considered numerous alternative routes into Long Island Sound and Fishers Island Sound as well as multiple options to candidate landfall sites (see Figure 2.8-2 of COP Volume I). These routing options were analyzed and refined through numerous consultations with federal and state agencies, including three consultations with NMFS and meetings with Department of Homeland Security (DHS), US Army Corps of Engineers (USACE), CT DEEP, University of Connecticut Avery Point staff, the Connecticut Siting Council, and the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP). Throughout the OECC routing process, the Proponent also consulted with stakeholders (including fishermen). Agency and stakeholder outreach is further described in Section 8 and Appendix I-G of COP Volume I.

Based on consultations with NMFS and their recommendations in spring 2022, the Proponent performed additional reconnaissance surveys to broaden the area of investigation to further assess routing alternatives at the entrance to Long Island Sound. After a lengthy and rigorous routing process (which began in summer 2019 and lasted into spring 2022), and after reaching consensus with NMFS, the Proponent identified the Connecticut OECC with three variations to connect to three potential landfall sites. The selected Connecticut OECC was sited specifically to avoid or minimize overlap with areas of hard bottom substrate, deep channel slopes which make cable installation difficult, cable crossings, USCG navigational channels, commercial and recreational fisheries hotspots, military dredging and disposal locations, and sediment contamination sites.

Section 2.8 of Volume I provides a description of siting procedures for the Connecticut OECC, including the numerous technical constraints and resources that were considered.

*Policy: Structures regulated pursuant to the programs listed in CGS Section 23-157t(h) shall be minimized to the extent practicable in physical scope and visual profile.*

Structures will be minimized to the extent practicable in physical scope and visual profile. All offshore cables will be submerged and will not be visible. The onshore export cables and grid interconnection cables will be installed entirely underground and will not be visible, except for except for at-grade manhole covers. A new onshore substation will be constructed in the Town of Montville, Connecticut. The need for vegetative or other screening will be determined once the site is selected.

Visual analyses were conducted for both offshore and onshore components of Vineyard Northeast, and more detail is included in Section 6.0 and Appendices II-K and II-J of COP Volume II.

*Policy: New non-water-dependent uses, including industrial, commercial, or residential uses, shall not be placed within the Blue Plan policy area unless:*

*a. There are no significant adverse impacts to natural resources, including ecosystem services and water quality, and to existing human uses; and*

*b. There is a substantial public benefit that outweighs occupation of public trust lands and waters and any unmitigated adverse impacts; and*

*c. There is no feasible and less environmentally damaging land-based alternative to the proposed use.*

Vineyard Northeast is a water-dependent use and is designed to avoid impacts to marine, coastal, and wetland habitats to the maximum extent practicable and to minimize and mitigate unavoidable impacts in accordance with applicable federal, state, and local regulations.

Vineyard Northeast will generate clean, renewable electricity by 2030 to assist Northeastern states and/or other offtake users in achieving their renewable energy and carbon emission reduction goals. The electricity generated by the WTGs will displace electricity from fossil fuel power plants, resulting in a significant net reduction in air emissions from the regional electric grid. Vineyard Northeast is expected to reduce $CO_2e$ emissions from the electric grid by approximately 4.9 million tpy, or the equivalent of taking approximately 970,000 cars off the road.[12] This reduction in GHG emissions will help mitigate additional effects of ongoing climate change (e.g., sea level rise and increased flooding, changes in agricultural productivity, shifts in species' distributions, and increases in energy system costs) that are impacting the environment and public health. Vineyard Northeast will also reduce regional emissions of air contaminants such as NOx and $SO_2$, which contribute to acid rain, ocean acidification, and ground level ozone/smog and are linked to increased rates of early death, heart attacks, stroke, and respiratory disorders. Vineyard Northeast will also help diversify the states' electricity supply and increase the reliability of the electric grid.

Beyond these important environmental, public health, and energy reliability benefits, Vineyard Northeast is expected to support a minimum of 15,894 direct, indirect, and induced full-time equivalent (FTE) job-years[13] during pre-construction and construction. Construction of Vineyard Northeast is also estimated to generate at least ~$1.63 billion in total labor income and ~$4.65 billion in output.[14] The operation of Vineyard Northeast is projected to generate approximately 17,046 FTE job-years assuming a 30-year operational life (equivalent to 568 direct, indirect, and induced FTEs annually), as well as at least ~$1.19 billion in total annual labor income and ~$4.62 billion in output.

*Policy: Artificially created or enhanced habitats, such as artificial reefs, islands constructed of dredged material, or barges used for seabird nesting shall not be authorized unless:*

*a. significant adverse impacts to existing resources are avoided, minimized, and mitigated, and*

*b. resource and use benefits outweigh remaining adverse impacts, and*

*c. the primary purpose provides a public benefit.*

Artificially created or enhanced habitats, such as artificial reefs, islands constructed of dredged material, or barges used for seabird nesting are not a part of Vineyard Northeast. Cable protection may be installed in limited locations where needed. Within the Connecticut OECC,

---

[12] Assuming the minimum nameplate capacity of Vineyard Northeast.

[13] One FTE job-year is the equivalent of one person working full time for one year (2,080 hours).

[14] Output is the estimated value of all goods and services sold (i.e., expenditures other than payroll).

the offshore export cables will be installed to a target burial depth of 1.5 to 2.5 m (5 to 8 ft)[15] below the stable seafloor. which the Proponent's offshore cable engineers have determined is more than twice the burial depth required to prevent cables from interfering with fishing activity or fishing vessel transits. While every effort will be made to achieve sufficient burial, a limited portion of the offshore export cables (up to approximately 6% for the cables to Connecticut) may require cable protection (rocks, rock bags, concrete mattresses, half-shell pipes, or similar) if a sufficient burial depth cannot be achieved. Cable protection will be designed and installed to minimize interfering with bottom fishing gear to the maximum extent practicable and fishermen will be informed of exactly where cable protection exists. In fact, the addition of foundations and scour protection, as well as cable protection (if used) may act as an artificial reef and provide rocky habitat previously absent from the area. Increases in biodiversity and abundance of fish have been observed around WTG foundations due to attraction of fish species to new structured habitat (Riefolo et al. 2016; Raoux et al. 2017).

The Proponent will comply with all applicable local, state, and federal ordinances and regulations.

*Policy: New permanent cross-Sound transportation infrastructure (e.g., bridges and tunnels) shall be avoided except in cases of significant public benefit where adverse impacts, including visual, have been minimized and mitigated to the maximum extent practicable.*

No new permanent cross-Sound transportation infrastructure is a part of Vineyard Northeast.

*Policy: Structures intended for flood and storm protection (e.g., tidal barriers and flood walls) shall be avoided except in cases of significant public benefit and where adverse impacts, including but not limited to changes to the Sound's tidal processes and water quality, have been minimized and mitigated to the maximum extent practicable.*

Vineyard Northeast does not involve the installation of structures intended for flood and storm protection. Furthermore, the installation of exports cables within the Connecticut OECC, and Vineyard Northeast more broadly, will not adversely interfere with water circulation or sediment transport within Long Island Sound because it will not significantly alter the morphology or composition of the seafloor or coastal wetland resource areas. As noted above, the offshore-to-onshore transition is expected to be made using HDD. The export cables have a target burial depth of 1.5–2.5 m (5–8 ft)[16] below the stable seafloor.

---

[15] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

[16] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

*Policy: Artificial illumination shall be kept to the minimum necessary for the functioning of a water-dependent use, except for temporary exhibitions such as fireworks displays and as legally required for public health and safety.*

The need for lighting during construction of Vineyard Northeast is expected to be minimal and best practices will be considered, when necessary, to limit lighting where practicable.

In summary, the lighting during construction will be temporary and lighting during O&M is expected to be minimal and adhere to federal guidance.

*Policy: Applicants for visible in-water or on-water activities are required to provide a visual impact analysis, including day and night digital simulations of different development scenarios, in cases where the regulatory agency administering the programs listed in CGS § 25-157t(h) determines such analyses are necessary to review the potential visual impact of a regulated activity.*

Vineyard Northeast is located outside of the GLD in the MA WEA, which was identified by BOEM as suitable for offshore wind energy development and sited far from shore to minimize visual impacts. Views of Vineyard Northeast WTGs from the GLD are not expected. A Seascape, Landscape and Visual Impacts Assessment for Vineyard Northeast has been prepared and is included as Appendix II-J.

All offshore cables will be submerged and will not be visible. The onshore export cables and grid interconnection cables will be installed entirely underground and will not be visible, except for except for at-grade manhole covers. A new onshore substation will be constructed in the Town of Montville, Connecticut. The need for vegetative or other screening will be determined once the site is selected.

## Ecologically Sensitive Area (ESA) and Significant Human Use Area (SHUA) Policies

### *General Policies Applicable to All ESAs and SHUAs*

*Policy: New activities within the Blue Plan policy area shall, to the extent practicable, maintain the capability of the Sound's natural resources to support current and new multiple uses and the natural environment of the Sound.*

See response to the first policy listed under Goal 3: Any activity proposed within the Blue Plan policy area shall avoid, minimize, and mitigate conflicts with traditional public trust uses, including Significant Human Use Areas, pursuant to CGS § 25-157t(h).

*Policy: In general, new activities in the Blue Plan policy area of Long Island Sound shall, to the extent practicable, maintain, preserve, or enhance the values of an ESA and/or SHUA. A proposed activity may be located within or affect an ESA and/or SHUA provided that it has been demonstrated, through site-specific data and analysis submitted pursuant to the applicable regulatory program under CGS § 25- 157t(h) that:*

a. *The project will cause no significant adverse impacts to the ESA and/or SHUA pursuant to the Ecologically Significant Areas siting and performance standards in Part IIa and the Significant Human Use Areas siting and performance standards in Part IIb, or*

b. *There is no feasible, less damaging alternative and all reasonable mitigation measures and techniques have been provided to minimize adverse impact, and the public benefits of the project outweigh the harm to the ESA and/or SHUA resource, use, or value.*

See the response to the policy above. See Section 2.8 of COP Volume I for more detail.

***Siting and Performance Standards for ESAs and SHUAs***

The Blue Plan describes the siting and performance standards applicable to each ESA and SHUA criteria, based on the location of potential impact either on or in the Air and Surface (AS), Water Column (WC), and Benthos & Substrate (BS) in the Blue Plan policy area. The following tables identify the specific siting and performance standards as well as the manner in which the Proponent will demonstrate consistency with each standard.

**Table 3.2-1 ESA Siting and Performance Standards**

| Significant Ecological Resource Criteria | Air and Surface (AS) | Water Column (WC) | Benthos and Substrate (BS) | Response |
|---|---|---|---|---|
| **1. Areas with rare, sensitive, or vulnerable species, communities, or habitats** | | | | |
| 1.1. Hard bottom/complex sea floor | No specific standards applicable. General policies apply. | No alteration, including changes in sedimentation or turbidity that would significantly adversely impact ecological characteristics and function. | No alteration that would significantly adversely impact ecological characteristics and function. | The Proponent mapped hard bottom/complex sea floor and has routed the proposed OECC to avoid and minimize impacts to sensitive habitats where feasible. The preliminary routing of the cables has avoided sensitive habitats including eelgrass and hard bottom/complex bottom (i.e., sand waves) where feasible, but avoidance of all sensitive habitats is not always possible. The Proponent modified and refined the Connecticut OECC through numerous consultations with federal and state agencies as well as fishermen.<br>The Marine Site Investigation Report (MSIR) provided as Appendix II-B includes additional detail. |
| 1.2. Areas of submerged aquatic vegetation | No structures or activities that would substantially shade or otherwise adversely impact growth. | No alteration, including physical impacts or changes in sedimentation or turbidity that would significantly adversely impact vegetation. | No bottom disturbance to existing vegetation. Protection and enhancement activities are encouraged pursuant to CGS § 22a -92(c)(2)(A). | The Long Island Sound Blue Plan includes mapped submerged aquatic vegetation (i.e., eelgrass) near the Connecticut Landfall Sites. Eelgrass was observed on grab camera and video transect footage at all three Connecticut landfall sites and coincides with mapped areas (see Section 5 of Appendix II-B). The Proponent will avoid identified areas of eelgrass near the Connecticut landfall sites to the extent feasible. |
| 1.3. Endangered, threatened, species of concern, and candidate species listed under state and federal Endangered Species Act and their habitats | No specific standards applicable. General policies apply. Comply with applicable state and federal policies to avoid adverse impacts to designated species and habitats. | | | COP Volume II has detailed resource evaluations and Sections 4.1, 4.2, 4.3, 4.6, 4.7, and 4.8 in particular address listed species and their habitats. |
| 1.4. Areas of cold-water corals | No specific standards applicable. General policies apply. | No alteration, including changes in sedimentation, turbidity, or acidity that would significantly adversely impact corals. | No bottom disturbance to existing corals. | No observations of cold-water coral have occurred along the Connecticut OECC; however, observations of cold-water corals approximately 6 km (3.7 mi) to the east of the Connecticut OECC have been recorded. Measures to avoid, minimize, and mitigate impacts to cold water coral are further described in Section 4.5. Measures to avoid, minimize, and mitigate impacts to benthic species including cold-water coral are found in Section 4.5 of COP Volume II and the MSIR provided as Appendix II-B. |
| 1.5. Coastal Wetlands | Blue Plan policies will not directly apply to coastal wetlands since these resources by definition are found in the intertidal zone outside the policy area. Therefore please refer to the Connecticut Tidal Wetlands Act [CGS § 22a-28 as referenced by CGS §§ 22a-92(a)(2), 22a-92(b)(2)(E), 22a-92(c)(1)(B), and 22a-92(b)(1)(B)] and the Connecticut Coastal Management Act [CGS §§ 22a-93(15)(H) and 22a-93(15) (G)] for appropriate policies and standards. | | | See Sections 4.1 and 4.4 of COP Volume II. The offshore export cables are expected to transition onshore using HDD into existing paved parking lots to avoid or minimize impacts to the beach, intertidal zone, and nearshore areas. While not anticipated, should HDD not be feasible, open trenching will be utilized. However, all three onshore cable routes are 100% co-located within public roadway layouts or existing utility ROWs and trenchless crossing methods will be utilized in sensitive areas. |

**Table 3.2-1 ESA Siting and Performance Standards (Continued)**

| Significant Ecological Resource Criteria | Air and Surface (AS) | Water Column (WC) | Benthos and Substrate (BS) | Response |
|---|---|---|---|---|
| **2. Areas of high natural productivity (HNP), biological persistence, diversity, and abundance, including areas important for supporting or exhibiting such features, relative to these characteristics or species:** | | | | |
| 2.1. Cetaceans | No specific standards applicable. General policies apply. Comply with Marine Mammal Protection Act and other applicable federal law. | | | As described further in Section 4.7 of COP Volume II, the Proponent has assessed potential impacts to marine mammals and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 2.2. Pinnipeds | No activities that would significantly or permanently impair use of an area by these species. Comply with Marine Mammal Protection Act and other applicable federal law. | | | See Section 4.7 of COP Volume II. |
| 2.3. Sea Turtles and other Reptiles | No specific standards applicable. General policies apply. Comply with Endangered Species Act and other applicable federal law. | | | As described further in Section 4.8 of COP Volume II, the Proponent has assessed potential impacts to sea turtles and other reptiles and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 2.4. Birds | No activities that would significantly adversely impact diversity or abundance of species, including but not limited to interference with migratory patterns or foraging, in these areas. Comply with Migratory Bird Treaty Act and other applicable federal law | | | As described further in Sections 4.1 and 4.2 of COP Volume II, the Proponent has assessed potential impacts to birds and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 2.5. Fish | No activities that would significantly adversely impact diversity, persistence, or abundance of species in these areas. Comply with Endangered Species Act and other applicable federal law. | | | As described further in Section 4.6 of COP Volume II, the Proponent has assessed potential impacts to fish and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 2.6. Mobile Invertebrates | No specific standards applicable. General policies apply. | | | As described further in Sections 4.5 and 4.6 of COP Volume II, the Proponent has assessed potential impacts to mobile invertebrates and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 2.7. Sessile-mollusk dominated communities | No specific standards applicable. General policies apply. | No activities that would significantly adversely impact diversity, persistence, or abundance of species in these areas. | | As described further in Sections 4.5 and 4.6 of COP Volume II, the Proponent has assessed potential impacts to sessile mollusk-dominated communities and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 2.8. Managed Shellfish Beds | No specific standards applicable. General policies apply. | No activities that would significantly adversely impact ecosystem services of managed shellfish beds, except for those activities related to such shellfish management. | | Portions of the Connecticut OECC may cross through a small portion of managed shellfish beds near two of the potential landfall sites. Although a wider corridor is shown for the potential offshore export cable(s), maximum seafloor disturbance from cable installation will be a 10 m (33 ft) wide temporary disturbance zone in this area (see Section 3.5.7 of COP Volume I). The temporary impacts associated with the scenario of up to two cable bundles installed within the Connecticut OECC are discussed further in Sections 4.5 and 4.6 of COP Volume II. |
| 2.9. Soft-bottom benthic communities | No specific standards applicable. General policies apply. | | | As described further in Section 4.5 of COP Volume II, the Proponent has assessed potential impacts to soft-bottom benthic communities and has developed measures to avoid, minimize, and mitigate potential impacts. |

**Table 3.2-2 SHUA Siting and Performance Standards**

| Significant Human Use Criteria | Air and Surface (AS) | Water Column (WC) | Benthos and Substrate (BS) | Response |
|---|---|---|---|---|
| **3. Areas with features of historical, cultural, or educational significance** | | | | |
| 3.1. Areas associated with lighthouses and other historic buildings | No activity that would significantly restrict physical or visual access to the site. | No specific standards applicable. General policies apply. | | As described further in Section 6.0 and Appendices II-J and II-K of COP Volume II, the Proponent has assessed potential impacts to areas associated with lighthouses and other historic buildings. |
| 3.2. Shipwrecks | No permanent fixed or floating structures that significantly affect the shipwreck site or access to it. Site marker buoys may be allowed. | No permanent fixed or floating structures that significantly affect the shipwreck site or access to it. | No significant bottom disturbance, including deposition or shifting of sediments. | As will be described further in the Marine Archaeological Resources Assessment (MARA) Appendix II-Q, the Proponent is assessing the potential presence of shipwrecks and will prioritize avoidance where feasible. |
| 3.3. Areas of historical or cultural significance, submerged archaeological sites, and submerged areas of archeological sensitivity | No permanent fixed or floating structures that adversely affect submerged historical or cultural resources.<br>Site marker buoys may be allowed. | No permanent fixed or floating structures that adversely affect submerged historical or cultural resources. | No bottom disturbance that would adversely affect submerged historical or coastal resources. | The Proponent has assessed potential impacts to areas of historical or cultural significance, submerged archaeological sites, and submerged areas of archeological sensitivity. Section 6.0 and Appendices II-J and II-K have more detail; the Proponent is developing a MARA to be included as Appendix II-Q with further detail. |
| 3.4. Discrete areas important for research, education, and monitoring | No activity that would significantly adversely affect the use of the area for such purposes. | | | As described further in Section 5.8 of COP Volume II, the Proponent has assessed potential impacts to discrete areas important for research, education, and monitoring. |
| **4. Areas of substantial recreational and/or "quality of life" value** | | | | |
| 4.1. Sailing and Rowing Races | No fixed or floating structures that would unreasonably interfere with racing activity during the season. | No activity that would unreasonably interfere with racing activity during the season. | | As described further in Sections 5.3, 5.6, and Appendix II-G, the Proponent has assessed potential impacts to sailing and rowing races and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 4.2. Marine Events | General policies apply. Consult with event organizers to avoid or minimize conflict. | | | As described further in Sections 5.3, 5.6, and Appendix II-G, the Proponent has assessed potential impacts to marine events and has developed measures to avoid, minimize, and mitigate potential impacts. |

**Table 3.2-2 SHUA Siting and Performance Standards (Continued)**

| Significant Human Use Criteria | Air and Surface (AS) | Water Column (WC) | Benthos and Substrate (BS) | Response |
|---|---|---|---|---|
| 4.3. High Activity Recreational Boating Areas | No fixed or floating structures that would significantly interfere with vessel traffic or impair safety. | No activity that would significantly interfere with vessel traffic or impair safety. | | As described further in Section 5.6, and Appendix II-G, the Proponent has assessed potential impacts to high activity recreational boating areas and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 4.4. Mooring and Anchorage Areas | No fixed or floating structures that would significantly interfere with vessels or vessel traffic. | No activity that would significantly interfere with vessels or vessel traffic. | No activity that would significantly interfere with vessels or the placement of mooring tackle. | As described further in Appendix II-G, the Proponent has assessed potential impacts to mooring and anchorage areas. |
| 4.5. Marinas, Boat Launches, and Yacht Clubs | No fixed or floating structures that would unreasonably interfere with authorized facilities and associated boating activities, including access to and maintenance of navigational channels and marina infrastructure. | No activity that would unreasonably interfere with authorized facilities and associated boating activities, including access to and maintenance of navigational channels and marina infrastructure. | | No fixed or floating structures are proposed as part of Vineyard Northeast. For further information regarding recreation and tourism impacts see Section 5.3 of COP Volume II. |
| 4.6. Waterfowl Hunting | No fixed or floating structures that would unreasonably interfere with seasonal hunting activity or waterfowl habitat. | No specific standards applicable. General policies apply. | | No fixed or floating structures are proposed as part of Vineyard Northeast. |
| 4.7. Dive Sites | No permanent fixed or floating structures that adversely affect submerged historical or cultural resources, or unreasonably restrict divers. Site marker buoys may be allowed. | No in-water activities or structures that unreasonably interfere with diver access. | No bottom disturbance that would unreasonably adversely affect submerged historical or cultural resources, including deposition or shifting of sediments. | No permanent fixed or floating structures are proposed as part of Vineyard Northeast. The Proponent is conducting a MARA and further detail will be included in Appendix II-Q of COP Volume II. |

**Table 3.2-2 SHUA Siting and Performance Standards (Continued)**

| Significant Human Use Criteria | Air and Surface (AS) | Water Column (WC) | Benthos and Substrate (BS) | Response |
|---|---|---|---|---|
| 4.8. Coastal Public Use Areas | No structures or activities that would significantly interfere with coastal public use activities. | | | As described further in Section 5.3 of COP Volume II, the Proponent has assessed potential impacts to coastal public use activities. The Proponent will work with municipalities to develop the construction schedule and hours in accordance with local ordinances. The timing of onshore construction activities will be coordinated with state and local agencies to avoid seasons or times of peak usage and planned public works projects, where feasible, to minimize disruption. Onshore construction at the landfall site(s) is planned to occur outside of the period from Memorial Day to Labor Day. Areas and/or infrastructure disturbed by installation activities will be restored to existing conditions following completion. |
| **5. Areas important for navigation, transportation, military, infrastructure, and economic activities** | | | | |
| 5.1. Working Waterfronts | No activities, or permanent fixed or floating structures that would significantly interfere with maritime and water-dependent activities, including access to navigational channels and infrastructure. | No activities, or permanent fixed structures that would significantly interfere with maritime and water-dependent activities, including navigational channels and infrastructure. | No on-bottom structures or disturbance that would significantly interfere with operations, including access to and maintenance of navigational channels and infrastructure. | As described further in Section 5.5 of COP Volume II, the Proponent has assessed potential impacts to other maritime and water-dependent activities and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 5.2. Designated Navigation Channels | No permanent fixed or floating structures that significantly interfere with navigation or channel maintenance. | No permanent structures that would significantly interfere with navigation or channel maintenance. | No permanent bottom or sub-bottom structures that significantly interfere with navigation or channel maintenance. Potentially appropriate to co-locate cables, pipelines, and other uses that may require bottom disturbance during installation, given the need for periodic dredging. | As described further in Appendix II-G, the Proponent has assessed potential impacts to designated navigation channels and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 5.3. Commercial anchorage areas, security zones, and other designated areas | Activities shall be consistent with the existing Federal regulations for that designated area. | | | As described further in Appendix II-G, the Proponent has assessed potential impacts to commercial anchorage areas, security zones, and other designated areas and has developed measures to avoid, minimize, and mitigate potential impacts. |

**Table 3.2-2 SHUA Siting and Performance Standards (Continued)**

| Significant Human Use Criteria | Air and Surface (AS) | Water Column (WC) | Benthos and Substrate (BS) | Response |
|---|---|---|---|---|
| 5.4. Areas of Lightering Activity | Activity shall comply with applicable Coast Guard and other regulations. No potentially conflicting activity during lightering operations. | No specific standards applicable. General policies apply. | | Lightering is not anticipated as part of Vineyard Northeast, however all Vineyard Northeast activities will comply with US Coast Guard regulations. |
| 5.5. Vessel Traffic Areas | No activity or permanent fixed or floating structures that significantly interfere with vessel traffic and navigation, including maneuvering. | No activity or permanent structure that would significantly interfere with navigation. | No specific standards applicable. General policies apply. | As described further in Section 5.6 and Appendix II-G, the Proponent has assessed potential impacts to vessel traffic areas and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 5.6. Dredged Material Disposal Areas: Active | No activity or permanent structures that interfere with disposal operations. | | No excavation. No bottom disturbance, except as incidental to disposal operations, scientific activities, or remediation activities. | As described further in Section 5.8 of COP Volume II, the Proponent has assessed potential impacts to active dredged material disposal areas and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 5.7. Dredged Material Disposal Areas: Historic/Closed | No specific standards applicable. General policies apply. | | No excavation. No bottom disturbance, except for scientific or remediation activities. | As described further in Section 5.8 of COP Volume II, the Proponent has assessed potential impacts to historic/closed dredged material disposal areas and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 5.8. Cables, pipelines, and cable/pipeline areas | No specific standards applicable. General policies apply. | | No activities that would significantly disturb existing cables and pipelines, except that new facilities may be co-located within corridors, as appropriate to avoid impact to adjacent areas. | As described further in Section 5.8 of COP Volume II, the Proponent has assessed potential impacts to cables, pipelines, and cable/pipeline areas and has developed measures to avoid, minimize, and mitigate potential impacts. |

**Table 3.2-2 SHUA Siting and Performance Standards (Continued)**

| Significant Human Use Criteria | Air and Surface (AS) | Water Column (WC) | Benthos and Substrate (BS) | Response |
|---|---|---|---|---|
| 5.9. Coastal Energy Generating and Transmission Facilities | No activities that would interfere with facility operation or access. | | No on-bottom structures or disturbance that would interfere with operations, including access to the facility by cables or pipelines. | As described further in Section 5.8 of COP Volume II, the Proponent has assessed potential impacts to coastal energy generating and transmission facilities and has developed measures to avoid, minimize, and mitigate potential impacts. |
| **6. Areas important to fishing and aquaculture** | | | | |
| 6.1. Recreational Fishing | Significant displacement of recreational fishing and related activity by other activity, or permanent structures shall be avoided to the maximum extent practicable. | | | As described further in Section 5.3 of COP Volume II, the Proponent has assessed potential impacts to recreational fishing and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 6.2. Commercial Fishing | Significant displacement of commercial fishing and related activity by other activity or permanent structures shall be avoided to the maximum extent practicable. Consultation with sector is required commensurate with intensity of commercial fishing activity potentially being impacted. | | | As described further in Section 5.4 and Appendix II-F of COP Volume II, the Proponent has assessed potential impacts to commercial fishing and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 6.3. Charter & Party Boat Fishing | Significant displacement of charter and party boat fishing and related activity by other activity, or permanent structures shall be avoided to the maximum extent practicable. | | | As described further in Section 5.4 of COP Volume II, the Proponent has assessed potential impacts to charter and party boat fishing and has developed measures to avoid, minimize, and mitigate potential impacts. |
| 6.4. Recreational Shellfish | No permanent structures or activity that unreasonably restricts access to designated shellfish beds or recreational shellfishing activity. | | | No permanent structures are proposed as part of Vineyard Northeast; limited areas of cable protection may be installed if required. Construction activities are not expected to restrict access to shellfish beds or recreational shell fishing. Vessels associated with other marine uses could experience localized disruption due to vessel traffic associated with Vineyard Northeast activities. Vessel traffic associated with Vineyard Northeast is not anticipated to represent a significant increase over the current levels of vessel traffic within the Offshore Development Area and would only temporarily impact others in discrete locations. |
| 6.5. Commercial Aquaculture | No permanent structures or activity that interferes with commercial aquaculture activity. | | | No permanent structures are proposed as part of Vineyard Northeast; limited areas of cable protection may be installed if required. Construction activities are not expected to restrict access to commercial aquaculture. Vessels associated with other marine uses could experience localized disruption due to vessel traffic associated with Vineyard Northeast activities. Vessel traffic associated with Vineyard Northeast is not anticipated to represent a significant increase over the current levels of vessel traffic within the Offshore Development Area and would only temporarily impact others in discrete locations. |

# 4 Conclusion

The Proponent has demonstrated that the proposed action described herein and in the Vineyard Northeast COP complies with the applicable enforceable policies of the approved Office of Long Island Sound Blue Plan and will be conducted in a manner consistent with such Program.

# 5 References and Incorporation by Reference


[BOEM] Bureau of Ocean Energy Management. 2013. Guidelines for providing information on fisheries for renewable energy development on the Atlantic Outer Continental Shelf pursuant to 30 CFR Part 585.

[BOEM] Bureau of Ocean Energy Management. 2014. Commercial wind lease issuance and site assessment activities on the Atlantic Outer Continental Shelf offshore Massachusetts: revised environmental assessment. OCS EIS/EA BOEM 2014-603. US Department of the Interior, Bureau of Ocean Energy Management, Herndon, VA. 674 pp. http://www.boem.gov/Revised-MA-EA-2014/

Baird. 2019. Vessel navigation through the proposed Rhode Island/Massachusetts and Massachusetts wind energy areas. 13057.301.R1.RevD. Letter to USCG Proposed layout from RI-MA Leaseholders. (USCG-2019-0131-0046). https://www.regulations.gov/document?D=USCG-2019-0131-0046

[CT DEEP] Connecticut Department of Energy and Environmental Protection. 2021. Long Island Sound Blue Plan map viewer. https://cteco.uconn.edu/viewer/index.html?viewer=blueplan

Davis JP, Sisson RT. 1988. Aspects of the biology relating to the fisheries management of New England population of the whelks, *Busycotypus canaliculatus* and *Busycon carica*. J. Shellfish Res. 7:453-460.

Goyert HF, Gardner B, Sollmann R, Veit RR, Gilbert AT, Connelly EE, Williams KA. 2015. Predicting the offshore distribution and abundance of marine birds from shipboard surveys, using a hierarchical community distance sampling model. Final Report to the Department of Energy Wind and Water Power Technologies Office, 2015.

Kirkpatrick AJ, Benjamin S, DePiper G, Murphy T, Steinbeck S, Demarest C. 2017. Socio-Economic impact of outer continental shelf wind energy development on fisheries in the U.S. Atlantic. OCS Study BOEM 2017-012. Prepared under BOEM Interagency Agreement No: M12PG00028 by National Oceanic and Atmospheric Administration National Marine Fisheries Service Northeast https://espis.boem.gov/final%20reports/5580.pdf

Kneebone J, Cappizzano C. 2020. A multifaceted assessment of baseline recreational fishing effort for highly migratory species in southern New England and the associated wind energy areas.

[MA CZM] Massachusetts Coastal Zone Management. 2021. Massachusetts Ocean Management Plan viewer. https://mass-eoeea.maps.arcgis.com/apps/webappviewer/index.html?id=c424acf25d5c4841971d690886126c80

[MARCO] Mid-Atlantic Regional Council on the Ocean. 2021. Mid-Atlantic ocean data portal. https://portal.midatlanticocean.org/

[NEODP] Northeast Ocean Data Portal [Internet]. 2021. Northeast ocean data: maps and data for ocean planning in the Northeastern United States. http://www.northeastoceandata.org/data-explorer/

[NMFS] National Marine Fisheries Service. 2021. Recommendations for Mapping Fish Habitat. NMFS Greater Atlantic Fisheries Office Habitat Conservation and Ecosystem Services Division. March 2021. 22 p.

[NOAA] National Oceanic and Atmospheric Administration. 2021. Socioeconomic impacts of Atlantic offshore wind development. [updated 2021 March 11; accessed 2021 May 10]. https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development

Raoux A, Tecchio S, Pezy JP, Lassalle G, Degraer S, Wilhelmsson D, Cachera M, Ernande B, Le Guen C, Haraldsson M, Grangeré K. 2017. Benthic and fish aggregation inside an offshore wind farm: Which effects on the trophic web functioning? Ecological Indicators, 72, pp.33-46.

Riefolo L, Lanfredi C, Azzellino A, Tomasicchio GR, Felice DA, Penchev V, Vicinanza D. Offshore wind turbines: An overview of the effects on the marine environment. Presented at: 26th International Ocean and Polar Engineering Conference 2016. International Society of Offshore and Polar Engineers. 2016 June; Rhodes, Greece.

Staudinger MD, Goyert H, Suca JJ, Coleman K, Welch L, Llopiz JK, Wiley D, Altman I, Applegate A, Auster P, et al. 2020. The role of sand lances (Ammodytes sp.) in the northwest Atlantic Ecosystem: A synthesis of current knowledge with implications for conservation and management. Fish Fish.:1–34. doi:10.1111/faf.12445.

[USCG] United States Coast Guard. 2020. The areas offshore of Massachusetts and Rhode Island port access route study (MARIPARS). USCG-2019-0131. [accessed 2020 May 27]. https://www.regulations.gov/document?D=USCG-2019-0131-0101

[USDOE MMS] United States Department of Energy, Minerals Management Service. 2009. Final environmental impact statement for the proposed Cape Wind Energy Project, Nantucket Sound, Massachusetts (Adopted). DOE. DOE/EIS-0470. https://www.boem.gov/Cape-Wind-FEIS/

Veit RR, Perkins SA. 2014. Aerial surveys for roseate and common terns south of Tuckernuck and Muskeget Islands July-September 2013. OCS Study BOEM 2014-665.

Veit RR, White TP, Perkins SA, Curley S. 2016. Abundance and distribution of seabirds off southeastern Massachusetts, 2011-2015: Final Report. OCS Study. Sterling, Virginia: U.S. Department of the Interior, Bureau of Ocean Energy Management.

# Vineyard Northeast COP

# Appendix II-M4 Vineyard Northeast New York Coastal Zone Management Act Consistency Certification

Prepared by:
Epsilon Associates

Prepared for:
Vineyard Northeast LLC

## March 2024

| Revision | Date | Description |
|---|---|---|
| 0 | July 2022 | Initial submission. |
| 1 | March 2023 | Updated to address Bureau of Ocean Energy Management (BOEM) Round 1 Comments (dated January 13, 2023) and make minor corrections. |
| 2 | April 2023 | Made updates consistent with revisions to other parts of the COP and made other minor corrections. |
| 3 | November 2023 | Updated to address United States Coast Guard (USCG) Round 3 Comments (dated August 8, 2023) and to be consistent with revisions to other parts of the COP. |
| 3 | March 2024 | Resubmitted without revisions. |

# Vineyard Northeast

# New York Coastal Zone Management Act

# Consistency Certification

Submitted to:

**BUREAU OF OCEAN ENERGY MANAGEMENT**

**NEW YORK DEPARTMENT OF STATE: COASTAL MANAGEMENT PROGRAM**

Prepared for:

**Vineyard Northeast LLC**

Prepared by:

**Epsilon Associates, Inc.**

**November 2023**

# Table of Contents

# Table of Contents (Continued)

# Table of Contents (Continued)

# List of Figures



# List of Tables

# 1 Introduction

Vineyard Northeast LLC (the "Proponent") proposes to develop, construct, and operate offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0522 (the "Lease Area") along with associated offshore and onshore transmission systems. This proposed development is referred to as "Vineyard Northeast." Vineyard Northeast includes 160 total wind turbine generator (WTG) and electrical service platform (ESP) positions within the Lease Area. Up to three of those positions will be occupied by ESPs and the remaining positions will be occupied by WTGs. Two offshore export cable corridors (OECCs)–the Massachusetts OECC and the Connecticut OECC–will connect the renewable wind energy facilities to onshore transmission systems in Massachusetts and Connecticut. Figure 1.0-1 provides an overview of Vineyard Northeast.

Portions of Vineyard Northeast are located within New York State (NYS) waters, New York's Long Island Sound Geographic Location Description (GLD), and New York's Renewable Energy GLD (see Figure 1.0-2). The Lease Area itself is outside of NYS waters, the Long Island Sound GLD, and the Renewable Energy GLD. Portions of the Massachusetts OECC are located within the Renewable Energy GLD. Portions of the Connecticut OECC are located within all three zones: NYS waters, the Long Island Sound GLD, and the Renewable Energy GLD. A further description of the two GLDs is provided in Section 3.1.

The Proponent has submitted a Construction and Operations Plan (COP) to BOEM, which will serve as necessary data and information per 15 Code of Federal Regulations (CFR) Part 930.58. The Proponent has prepared this Consistency Certification to demonstrate that Vineyard Northeast is consistent with New York's enforceable policies under the CZMA contained within the NYS Coastal Management Program (CMP) (NOAA CZM and NYSDOS 2023), Long Island Sound CMP (NYSDOS 1999), and approved Local Waterfront Revitalization Plans (LWRPs) (Town of East Hampton 2008; Town of Southold 2014). The NYS Department of State (NYSDOS) is responsible for reviewing the activities for consistency with the applicable enforceable policies under each of these programs. Based upon the analyses presented herein and, in the COP, the Proponent certifies that:

> *The proposed activities described in detail in the Vineyard Northeast COP shall comply with NY's approved Coastal Resource Management Programs and will be conducted in a manner consistent with such Programs*.

This certification is made in accordance with the requirements of the Coastal Zone Management Act (16 U.S.C. 1451 et seq.) and implementing regulations at 15 CFR Part 930, Subparts D and E.

A summary of Vineyard Northeast is provided in Section 2. Section 3 demonstrates how Vineyard Northeast activities in the Massachusetts OECC and Connecticut OECC (as described in Section 2 and more completely in the Vineyard Northeast COP) comply with each of the CMP's and LWRPs' applicable enforceable policies.

G:\Projects2\MA\MA\5410\2023\MXD\Vol_II_REV_Sept_2023\Fig1.0-1_NY_CZM_Overview_20231027.mxd

**LEGEND**

- Wind Turbine Generator (WTG)/Electrical Service Platform (ESP) Positions
- Booster Station
- Lease Area OCS-A 0522
- Massachusetts Offshore Export Cable Corridor
- Connecticut Offshore Export Cable Corridor
- Town Boundaries
- State Boundary
- State/Federal Boundary
- New York State Waters
- Renewable Energy Geographic Location Description (GLD)
- Long Island Sound GLD

Scale 1:600,000
1 inch = 15 km

0 7.5 15 km

*Basemap: Northeast Atlantic Coastal Relief Model, NOAA/NCEI*

CT

RI

MA

NY

*Long Island Sound*

*Rhode Island Sound*

*Nantucket Sound*

*Martha's Vineyard*

*Muskeget Channel*

*Nantucket*

*Nantucket Shoals*

*Federal Waters*

OCS-A 0522

**Figure 1.0-1**
Vineyard Northeast Overview

VINEYARD NORTHEAST
VINEYARD OFFSHORE

G:\Projects2\MA\MA\5410\2023\MXD\Vol_II_REV_Sept_2023\Fig1.0-2_NY_CZM_Boundary_20230926.mxd

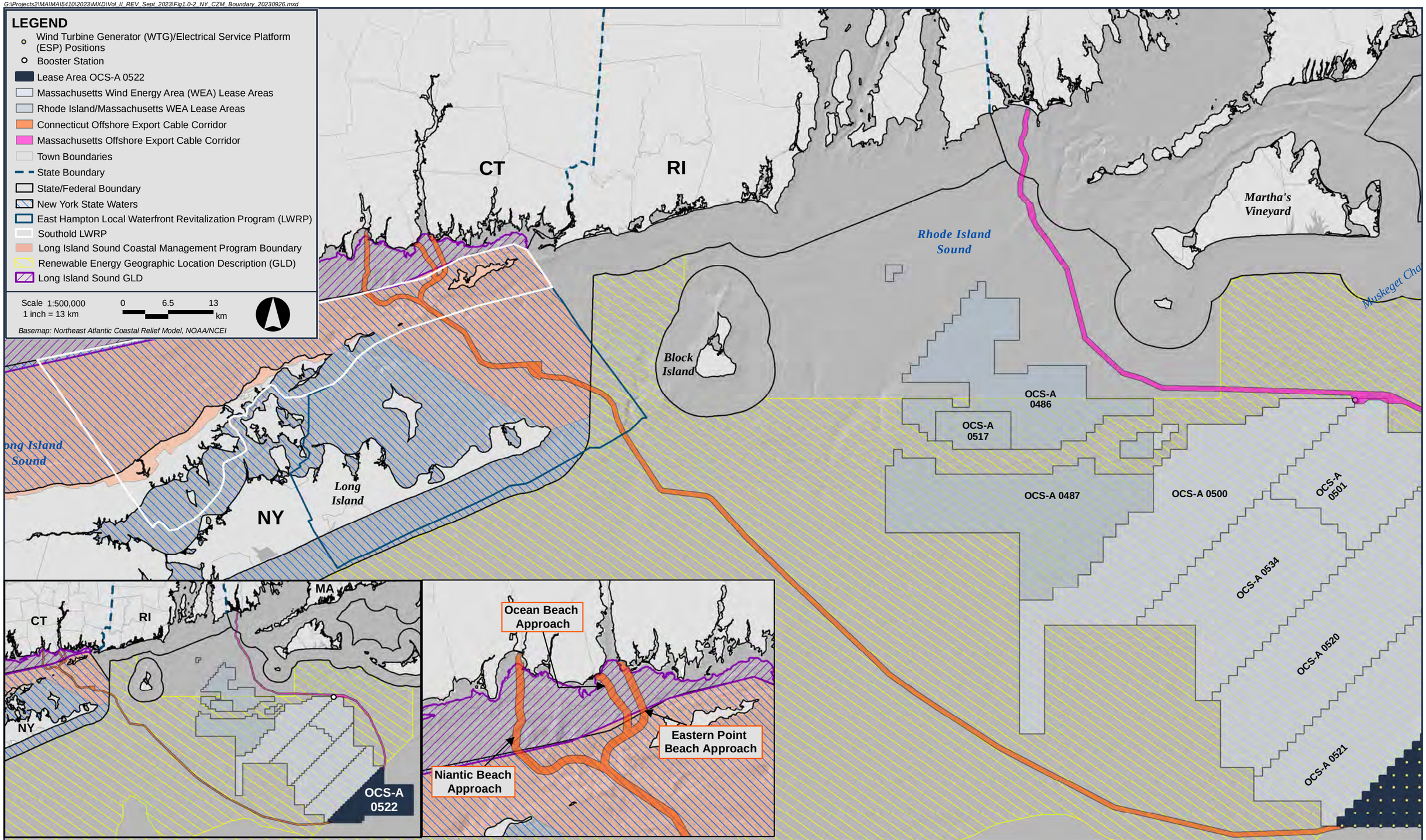


**Figure 1.0-2**
New York Coastal Zone

VINEYARD NORTHEAST
VINEYARD OFFSHORE

# 2 Summary of Vineyard Northeast Facilities and Activities

## 2.1 Overview

Vineyard Northeast LLC (the "Proponent") proposes to develop, construct, and operate offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0522 (the "Lease Area") along with associated offshore and onshore transmission systems. This proposed development is referred to as "Vineyard Northeast."

Vineyard Northeast includes 160 total wind turbine generator (WTG) and electrical service platform (ESP) positions within the Lease Area. Up to three of those positions will be occupied by ESPs[1] and the remaining positions will be occupied by WTGs. As proposed, the WTGs and ESP(s) will be oriented in fixed east-to-west rows and north-to-south columns with 1 nautical mile (NM) (1.9 km) spacing between positions. The WTGs and ESP(s) will be supported by monopiles or piled jacket foundations. The base of the foundations may be surrounded by scour protection. Submarine inter-array cables will transmit power from groups of WTGs to the ESP(s). If two or three ESPs are used, they may be connected with inter-link cables. Offshore export cables will then transmit the electricity collected at the ESP(s) to shore.

The WTGs, ESP(s), and their foundations as well as the inter-array cables, inter-link cables (if used), and a portion of the offshore export cables will be located in Lease Area OCS-A 0522. The Lease Area is within the Massachusetts Wind Energy Area (MA WEA) identified by BOEM, following a public process and environmental review, as suitable for offshore wind energy development. At its closest point, the 536 square kilometer ($km^2$) (132,370 acre) Lease Area is approximately 46 km (29 mi) from Nantucket. Between the Lease Area and shore, the offshore export cables will be installed within two offshore export cable corridors (OECCs)—the Massachusetts OECC and the Connecticut OECC—that connect to onshore transmission systems in Massachusetts and Connecticut.

The Massachusetts OECC travels from the northernmost tip of the Lease Area along the northeastern edge of the MA WEA and Rhode Island/Massachusetts (RI/MA) WEA and then heads across Buzzards Bay towards the Horseneck Beach Landfall Site in Westport, Massachusetts. Up to two high voltage direct current (HVDC) cable bundles or up to three high voltage alternating current (HVAC) cables may be installed within the Massachusetts OECC. If HVAC offshore export cables are used, the cables would connect to a booster station in the northwestern aliquot[2] of Lease Area OCS-A 0534 to boost the electricity's voltage level, reduce transmission losses, and enhance grid capacity. From the Horseneck Beach Landfall Site, onshore export cables will connect to a new onshore substation in Westport, Fall River, or

[1] If two or three ESPs are used, they may be located at separate positions or two of the ESPs may be co-located at the same grid position. Co-located ESPs would be smaller structures installed on monopile foundations.

[2] An aliquot is $1/64^{th}$ of a BOEM Outer Continental Shelf (OCS) Lease Block.

Somerset, Massachusetts. Grid interconnection cables will connect the onshore substation to one of three potential points of interconnection (POIs): the existing Pottersville Substation, a planned substation near Brayton Point, or the existing Bell Rock Substation.

Up to two HVDC offshore export cable bundles may be installed within the Connecticut OECC. The Connecticut OECC travels from the southwestern tip of the Lease Area along the southwestern edge of the MA WEA and then heads between Block Island and the tip of Long Island towards potential landfall sites near New London, Connecticut. As the Connecticut OECC approaches shore, it splits into three variations to connect to three potential landfall sites: the Ocean Beach Landfall Site, the Eastern Point Beach Landfall Site, and the Niantic Beach Landfall Site. Onshore export cables will connect one of the landfall sites to a new onshore substation in Montville, Connecticut, which will be connected to the POI at the existing Montville Substation by grid interconnection cables.

Vineyard Northeast is being developed and permitted using a Project Design Envelope (PDE) based on expected commercial and technological advancements. The PDE outlines a reasonable range of project design parameters (e.g., multiple foundation types) and installation techniques (e.g., use of various cable installation tools). The Proponent has developed the PDE and sited Vineyard Northeast's facilities based on feedback from multiple agencies and stakeholders. For example, the Proponent modified and refined the OECCs through numerous consultations with federal and state agencies as well as fishermen and, based on their feedback, consolidated the offshore export cables with other developers' proposed cables to the extent feasible. Key elements of Vineyard Northeast's PDE are summarized in Table 2.1-1. For a complete description of Vineyard Northeast's offshore and onshore facilities, see COP Volume I.

**Table 2.1-1 Summary of the Project Design Envelope**

| Parameter | Project Design Envelope |
|---|---|
| Maximum number of WTG/ESP positions | 160 |
| **Wind Turbine Generators** | |
| Maximum number of WTGs | 160 |
| Maximum rotor diameter | 320 m (1,050 ft) |
| Maximum tip height | 400 m (1,312 ft) |
| Minimum tip clearance | 27 m (89 ft) |
| **Electrical Service Platforms and Booster Station** | |
| Number of ESPs | 0–3<br>(ESP equipment may be integrated onto WTG foundation[s])[1] |
| Maximum number of booster stations | 1 (only for HVAC transmission) |
| Maximum topside height above Mean Lower Low Water[2] (MLLW) | 70 m (230 ft) |

## Table 2.1-1 Vineyard Northeast Project Design Envelope (Continued)

| Parameter | Project Design Envelope |
|---|---|
| **Foundations and Scour Protection** | |
| Maximum pile diameter | Monopiles: 14 m (46 ft)<br>Piled jackets: 4.25 m (14 ft) |
| Maximum area of scour protection | Monopiles: 7,238 $m^2$ (1.8 acres)<br>WTG piled jackets: 11,660 $m^2$ (2.9 acres)<br>ESP piled jackets: 32,577 $m^2$ (8.1 acres)<br>Booster station piled jackets: 18,427 $m^2$ (4.6 acres) |
| **Offshore Cables** | |
| Maximum total inter-array cable length | 356 km (192 NM) |
| Maximum total inter-link cable length | 120 km (65 NM) |
| Maximum number of offshore export cables | Massachusetts OECC: 3 HVAC cables or 2 HVDC cable bundles<br>Connecticut OECC: 2 HVDC cable bundles |
| Maximum total offshore export cable length[3] | Massachusetts OECC: 436 km (235 NM)<br>Connecticut OECC: 421 km (227 NM) |
| Target burial depth beneath stable seafloor[4] | 1.5–2.5 m (5–8 ft) |
| **Onshore Facilities** | |
| Massachusetts landfall site | Horseneck Beach Landfall Site |
| Connecticut landfall site | Ocean Beach Landfall Site, Eastern Point Beach Landfall Site, or Niantic Beach Landfall Site |
| Massachusetts onshore cable route | Horseneck Beach Eastern Onshore Cable Route or Horseneck Beach Western Onshore Cable Route (including variants) |
| Connecticut onshore cable route | Ocean Beach Onshore Cable Route, Eastern Point Beach Onshore Cable Route, or Niantic Beach Onshore Cable Route |
| Onshore substation site envelopes[5] | Massachusetts: [redacted]<br>Connecticut: [redacted] |
| POIs | Massachusetts: Pottersville POI, Brayton Point POI, or Bell Rock POI<br>Connecticut: Montville POI |

Notes:
1. As described in Section 3.4 of COP Volume I, this concept entails placing ESP equipment on one or more expanded WTG foundation platforms rather than having a separate ESP situated on its own foundation.
2. Height includes helipad (if present) but may not include antennae and other appurtenances.
3. Includes the length of the offshore export cables within the Lease Area.
4. Unless the final Cable Burial Risk Assessment (CBRA) indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.
5. Since the Proponent has not yet secured site control for the onshore substation sites, the Proponent has identified one or more "onshore substation site envelopes" for each POI.

## 2.2 Construction

Construction of Vineyard Northeast will likely start with the onshore cables and onshore substations. The onshore cables are expected to be installed primarily underground within public roadway layouts or within existing utility rights-of-way (ROWs) via open trenching. The onshore cables may be installed in a duct bank (i.e., an array of plastic conduits encased in concrete) or within directly buried conduit(s). In most instances, underground trenchless crossing methods are expected to be used where the onshore cables traverse unique features (e.g., busy roadways, railroads, wetlands, and waterbodies). However, the crossing of the Taunton River [redacted] may require a segment of overhead transmission lines.[3] Construction of the onshore substations is expected to involve site preparation (e.g., land clearing and grading), installation of the substation equipment and cables, commissioning, and site clean-up and restoration.

Offshore construction will likely begin with offshore export cable installation and/or foundation installation (including scour protection installation). Once the foundations are in place, the WTGs, ESP topside(s), and booster station topside can be installed. Inter-array cables may be installed before or after the WTGs are installed on their foundations. WTG commissioning is expected to take place after the inter-array cables are installed.

Prior to offshore cable installation, the cable alignments may require sand bedform dredging and boulder clearance. Following those activities, pre-lay grapnel runs and pre-lay surveys will be performed to confirm that the cable alignments are suitable for installation. The offshore cables will then be buried beneath the stable seafloor at a target depth of 1.5 to 2.5 meters (m) (5 to 8 feet [ft])[4] likely using jetting techniques or a mechanical plow. While every effort will be made to achieve sufficient burial, a limited portion of the offshore cables may require cable protection if a sufficient burial depth cannot be achieved. At the landfall sites, the offshore export cables are expected to transition onshore using horizontal directional drilling (HDD) to avoid or minimize impacts to the beach, intertidal zone, and nearshore areas. The offshore export cables will connect to the onshore export cables in underground transition vaults at the landfall sites.

The foundations, WTGs, ESP topside(s), and booster station topside (if used) may be staged at a United States (US) or Canadian port or delivered directly to the Lease Area. The Proponent has identified several potential staging ports in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Canada that may be used for frequent crew transfer and for

[3] As described in Section 3.8.3.3 of COP Volume I, the need for overhead transmission lines at this Taunton River crossing depends on the final location of the onshore substation site and the transmission technology employed (HVAC or HVDC) and will be confirmed through further field data collection and detailed engineering.

[4] Unless the final CBRA indicates that a greater burial depth is necessary and taking into consideration technical feasibility factors, including thermal conductivity.

offloading/loading, storing, and pre-assembling components, among other activities (see Section 3.10.1 of COP Volume I). The foundations, WTGs, and topside(s) will be installed by jack-up vessels or heavy lift vessels (HLVs) using dynamic positioning (DP) or anchors along with necessary support vessels (e.g., tugboats). Seabed preparation may be required prior to foundation installation. Scour protection, which would likely consist of loose rock material placed around the foundation, will likely be needed for monopiles, but may or may not be needed for the smaller diameter jacket pin piles. Once set onto the seabed by the crane of the main installation vessel(s), monopiles or jacket pin piles will be installed using impact pile driving,[5] which will begin with a soft-start (i.e., the impact hammer energy level will be gradually increased). Noise mitigation systems are expected to be applied during pile driving. If monopile foundations are used, a transition piece will be installed on top of the monopile using a vessel's crane (unless an extended monopile concept is employed). Once the foundations are installed, the WTGs, ESP topside(s), and booster station topside will be lifted and secured onto their foundations. Then, the WTGs, ESP(s), and booster station will be commissioned to confirm that they are functioning correctly and ready for energy production. To aid safe navigation, the WTGs, ESP(s), booster station, and their foundations will be equipped with marine navigation and aviation lighting, marking, and signaling in accordance with BOEM, US Coast Guard (USCG), and Federal Aviation Administration (FAA) guidance.

## 2.3 Operations and Maintenance

Vineyard Northeast's facilities are expected to operate for approximately 30 years. During operations, the offshore and onshore facilities will be continuously remotely monitored from one or more control center(s) located at the Proponent's operations and maintenance (O&M) facilities and/or a third party's facilities.

The WTGs, ESP(s), and booster station will be designed to operate autonomously and will not be manned. The offshore facilities will be equipped with a supervisory control and data acquisition (SCADA) system. The SCADA system will notify operators of alarms or warnings and enable the operators to remotely interact with and control devices (e.g., sensors, valves, motors), override automatic functions, reset systems, and shut down equipment for maintenance or at the request of grid operators or agencies. The Proponent anticipates that the offshore cables will include a monitoring system, such as distributed temperature sensing (DTS), online partial discharge (OLPD) monitoring, and/or distributed acoustic sensing (DAS), to continuously monitor the cables' status.

The Proponent will regularly conduct inspections and preventative maintenance, including foundation and scour protection inspections, offshore cable surveys, safety inspections and tests, electrical component service, and replacement of consumables, among other activities.

---

[5] Prior to impact pile driving, a vibratory hammer or other tool could be used to slowly lower the pile through the top layers of the seabed in a controlled fashion to avoid the potential for a "pile run" (see Section 3.3 of COP Volume I)

Offshore, most scheduled maintenance activities will be performed using service operation vessels (SOVs), service accommodation and transfer vessels (SATVs), crew transfer vessels (CTVs), and/or helicopters. Unscheduled repairs or component replacement may also be necessary, which may require jack-up vessels or other larger vessels similar to those used during construction. The Proponent expects to use one or more onshore O&M facilities to support offshore operations. The O&M facilities, which could be located at or near any of the ports identified in Section 4.4.1 of COP Volume I, would likely be used for dispatching technicians and crew exchange, bunkering, and loading supplies and spare parts onto vessels. The Proponent may also lease space at an airport hangar for aircraft (e.g., helicopters) used to support operations. Onshore maintenance and repair activities are expected to require minimal use of worker vehicles and construction equipment.

## 2.4 Decommissioning

Decommissioning of the offshore and onshore facilities at the end of their operational life is essentially the reverse of the construction process. The WTGs, ESP(s), and booster station (if used) will be disconnected from the offshore cables, disassembled, and removed from their foundations. The foundations will be cut and removed to a depth of 4.5 m (15 ft) below the mudline, unless otherwise authorized by the Bureau of Safety and Environmental Enforcement (BSEE). The removed WTG, ESP, booster station, and foundation components will be shipped to shore and properly disposed of or recycled. The offshore cables may be removed or retired in place (if authorized by BOEM and other appropriate agencies). Any scour protection or cable protection may be removed or left in place, depending on input from federal and state agencies and relevant stakeholders. The onshore facilities could be retired in place or retained for future use, subject to discussions with local agencies.

## 2.5 Organization of the COP

The COP is being submitted to BOEM, in accordance with 30 CFR Part 585, the stipulations in Lease OCS-A 0522, and applicable guidance, for the development of the entire Lease Area. The Vineyard Northeast COP is comprised of two volumes:

- Volume I describes Vineyard Northeast's offshore and onshore facilities and how the Proponent plans to construct, operate, and decommission those facilities. Volume I also discusses the Proponent's outreach efforts and commitment to health, safety, and environmental (HSE) protection. Volume I is accompanied by several related appendices.

- Volume II assesses the benefits and potential impacts of Vineyard Northeast to physical, biological, socioeconomic, visual, and cultural resources based on the "maximum design scenario" for each resource. Volume II also describes the Proponent's measures to avoid, minimize, and mitigate those potential impacts. Volume II is accompanied by numerous appendices containing detailed resource and site conditions assessments.

## 2.6 Agency, Tribal, and Stakeholder Outreach

Vineyard Northeast LLC is committed to being a good neighbor both onshore and offshore. The Proponent began agency, tribal, and stakeholder outreach specific to Vineyard Northeast in fall 2021 well before the submission of this COP. The Proponent's frequent and early engagement with agencies, Native American tribes,[6] fishermen, local communities, and other stakeholders during the COP planning process enabled the Proponent to incorporate their feedback into the siting and design of the facilities, the methodologies for resources assessments, survey strategies, workforce initiatives and educational opportunities, and/or proposed avoidance, minimization, and mitigation measures. Throughout the development, construction, operational, and decommissioning periods, the Proponent will continue to actively engage with agencies, Native American tribes, fishermen, local communities, and other stakeholders to identify and discuss their interests and concerns regarding Vineyard Northeast.

## 2.7 Benefits of Vineyard Northeast

Vineyard Northeast will generate clean, renewable electricity by as early as 2030 to assist Northeastern states and/or other offtake users in achieving their renewable energy and carbon emission reduction goals. The electricity generated by the WTGs will displace electricity from fossil fuel power plants, resulting in a significant net reduction in air emissions from the regional electric grid. Vineyard Northeast is expected to reduce carbon dioxide equivalent ($CO_2e$) emissions from the electric grid by approximately 4.9 million tons per year (tpy), or the equivalent of taking approximately 970,000 cars off the road.[7] This reduction in greenhouse gas emissions will help mitigate additional effects of ongoing climate change (e.g., sea level rise and increased flooding, changes in agricultural productivity, shifts in species' distributions, and increases in energy system costs) that are impacting the environment and public health. Vineyard Northeast will also reduce regional emissions of air contaminants such as nitrogen oxides (NOx) and sulfur dioxide ($SO_2$), which contribute to acid rain, ocean acidification, and ground level ozone/smog and are linked to increased rates of early death, heart attacks, stroke, and respiratory disorders. Vineyard Northeast will also help diversify the states' electricity supply and increase the reliability of the electric grid.

Beyond these important environmental, public health, and energy reliability benefits, Vineyard Northeast is expected to result in significant long-term economic benefits, including considerable new employment opportunities. Vineyard Northeast is expected to support a

---

[6] Throughout the COP, "Native American tribes" generally refers to both federally recognized Tribes/Tribal Nations and other Native American communities. Where appropriate, consultations or communications with federally recognized Tribes/Tribal Nations will be identified.

[7] Assuming the minimum nameplate capacity of Vineyard Northeast.

minimum of 15,894 direct, indirect, and induced full-time equivalent (FTE) job-years[8] during pre-construction and construction. Construction of Vineyard Northeast is also estimated to generate at least ~$1.63 billion in total labor income and ~$4.65 billion in output.[9] The operation of Vineyard Northeast is projected to generate approximately 17,046 FTE job-years assuming a 30-year operational life (equivalent to 568 direct, indirect, and induced FTEs annually), as well as at least ~$1.19 billion in total annual labor income and ~$4.62 billion in output.

[8] One FTE job-year is the equivalent of one person working full time for one year (2,080 hours).

[9] Output is the estimated value of all goods and services sold (i.e., expenditures other than payroll).

# 3 Vineyard Northeast Consistency with NYS Enforceable Policies

## 3.1 Jurisdiction for Federal Consistency Certification

Section 307(c)(3)(B) of the federal Coastal Zone Management Act (CZMA), as amended, requires any applicant who submits an Outer Continental Shelf (OCS) plan[10] to the Department of the Interior to also provide a certification that each activity described in the OCS plan affecting any land or water use or natural resource of a state's coastal zone complies with the enforceable policies of that state's approved coastal management program and will be carried out in a manner consistent with such program (see 16 U.S.C. § 1456(c)(3)(B)). The Proponent submitted an OCS plan—the Vineyard Northeast COP—to BOEM for approval in July 2022.

As shown in Figure 1.0-1 and further described in Table 3.1-1, the Lease Area is located outside of NYS waters, the Long Island Sound GLD, and the Renewable Energy GLD (NYSDOS GIG 2023; NOAA CZM and NYSDOS 2023). Approximately 66 km (41 miles [mi]) of the Massachusetts OECC passes through the Renewable Energy GLD. The Connecticut OECC passes through NYS waters, the Long Island Sound GLD, and the Renewable Energy GLD. Depending on which of the three landfall site approaches (the Eastern Point Beach Approach, the Ocean Beach Approach, or the Niantic Beach Approach) is used, approximately 34-38 km (19-21 NM) of the Connecticut OECC is located within NYS waters, approximately 4-9 km (9 NM) is located within the Long Island Sound GLD, and approximately 130 km (70 NM) is located in the Renewable Energy GLD.

**Table 3.1-1 Overlap between Offshore Development Area and NYS Coastal Boundaries**

| Project Component | NYS Waters | Long Island Sound GLD | Renewable Energy GLD |
|---|---|---|---|
| **Lease Area** | N/A | N/A | Shares outer border |
| **Massachusetts OECC** | N/A | N/A | 66 km (36 NM) |
| **Connecticut OECC** | | | |
| Connecticut OECC (before approaches) | 29 km (16 NM) | N/A | 130 km (70 NM) |
| Eastern Point Beach Approach | 7 km (4 NM) | 4 km (2 NM) | N/A |
| Ocean Beach Approach | 5 km (3 NM) | 5 km (3 NM) | N/A |
| Niantic Beach Approach | 9 km (5 NM) | 9 km (5 NM) | N/A |

[10] *OCS plan* means "any plan for the exploration or development of, or production from, any area which has been leased under the Outer Continental Shelf Lands Act (43 U.S.C. 1331 et seq.), and the regulations under that Act, which is submitted to the Secretary of the Interior or designee following management program approval and which describes in detail federal license or permit activities." The Vineyard Northeast Construction and Operations Plan submitted to BOEM is an OCS plan.

Segments of the Massachusetts OECC and Connecticut OECC that cross through the GLDs and/or NYS waters (see Figure 1.0-2) are subject to federal consistency review by NYSDOS. Since the Lease Area is located outside the Long Island Sound GLD, the Renewable Energy GLD, and the federal CZMA boundary, it is not subject to federal consistency review by NYSDOS and is not described further.

New York's enforceable policies under the CZMA are contained within the NYS CMP, the Long Island Sound CMP, and approved Local Waterfront Revitalization Programs. The NYS CMP (NOAA CZM and NYSDOS 2023) applies to activities in NYS waters, the Long Island Sound GLD, and the Renewable Energy GLD, except where the Long Island Sound CMP (NYSDOS 1999) applies. The Long Island Sound CMP replaces the NYS CMP for state waters within Long Island Sound. The Long Island Sound CMP's standards are used for consistency decisions made by the NYSDOS and other state agencies except where there is an approved LWRP (NYSDOS 1999). Specifically, the Long Island Sound CMP states:

> "Its [the Long Island Sound CMP] specially tailored standards are used for consistency decisions made by the Department of State and other state agencies except where there is an approved Local Waterfront Revitalization Program."

Therefore, where approved LWRPs are present within state waters within Long Island Sound, their policies replace the policies of both the Long Island Sound CMP and the NYS CMP.

Specific to Vineyard Northeast, the NYS CMP applies to the portion of the Massachusetts OECC within the Renewable Energy GLD and the portion of the Connecticut OECC within the Renewable Energy GLD and the Long Island Sound GLD. The entirety of the portion of the Connecticut OECC that passes through state waters within Long Island Sound (i.e., where the Long Island Sound CMP applies) is overlaid by federally approved LWRP areas, specifically the Town of East Hampton LWRP and the Town of Southold LWRP. Accordingly, the Town of East Hampton and the Town of Southold LWRPs apply to that portion of the Connecticut OECC that passes through state waters within Long Island Sound.

The Proponent has prepared a consistency certification that reviews Vineyard Northeast for consistency with the relevant enforceable policies in the NYS CMP, Long Island CMP, and LWRPs. With respect to requirements under 15 CFR § 930.57(b) and 930.76(c), the proposed activities described in detail in this plan comply with the enforceable policies of the NYS CMP, Long Island CMP, and LWRPs and will be conducted in a manner consistent with such programs.

The sections below rely on detailed information provided in the Vineyard Northeast COP. The draft Vineyard Northeast COP will be provided to NYSDOS following BOEM's completeness and sufficiency review and is incorporated by reference.

## 3.2 Consistency with NYS CMP Enforceable Policies

For those portions of Vineyard Northeast subject to NYSDOS federal consistency review, the following sections demonstrate compliance with the enforceable policies of the NYS CMP as set forth in the 2017 NYS CMP Coastal Zone Management (CZM) Policy Guide.

### Development

#### *Policy #1*

*Restore, revitalize, and redevelop deteriorated and underutilized waterfront area for commercial, industrial, cultural, recreational, and other compatible uses.*

Vineyard Northeast does not include restoration, revitalization, or redevelopment of waterfront and therefore this policy is not applicable.

#### *Policy #2*

*Facilitate the siting of water dependent uses and facilities on or adjacent to coastal waters.*

The Massachusetts OECC and the Connecticut OECC will be installed beneath the seafloor and will not negatively impact future water-dependent projects or uses within the NYS coastal zone; therefore, this policy is not applicable.

#### *Policy #3*

*Further develop the State's major ports of Albany, Buffalo, New York City, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of State public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.*

Vineyard Northeast does not include upgrades to existing port facilities; however, one or more existing or planned ports in NYS may be utilized during construction and/or operation and such port usage would support the intent of this policy. All port activities will be conducted in a manner that is consistent with applicable ordinances and regulations and will minimize impact to other marine uses.

#### *Policy #4*

*Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity.*

Vineyard Northeast will be consistent with this policy should smaller harbor areas be utilized. Currently, Vineyard Northeast is not located in, or associated with, a smaller harbor area.

### *Policy #5*

*Encourage the location of development in areas where public services and facilities essential to such development are adequate.*

Vineyard Northeast is located offshore from NYS and the proposed offshore export cables within the Massachusetts OECC and Connecticut OECC will be buried beneath the seafloor to the extent feasible. Thus, Vineyard Northeast does not require public services and facilities, and this policy is not applicable.

### *Policy #6*

*Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.*

Vineyard Northeast is located offshore from NYS and the proposed offshore export cables within the Massachusetts OECC and Connecticut OECC will be buried beneath the seafloor to the extent feasible. Thus, Vineyard Northeast does not include development activities onshore in NYS, and this policy is not applicable.

## Fish and Wildlife

### *Policy #7*

*Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.*

The Proponent has conducted an analysis of coastal habitats that may be impacted by Vineyard Northeast. The Connecticut OECC intersects a small portion of mapped NYS Significant Coastal Fish and Wildlife Habitats (see Figure 3.2-1) (NYSDOS GIG 2023). However, cables within the Connecticut OECC will be installed below the stable surface of the seafloor (with limited exceptions where seafloor conditions preclude burial to the target depth). The Proponent modified and refined the Connecticut OECC through numerous consultations with federal and state agencies as well as fishermen and, based on their feedback, consolidated the offshore export cables with other developers' proposed cables to the extent feasible. While the Massachusetts OECC is outside of the mapped NYS Significant Coastal Fish and Wildlife Habitats (Figure 3.2-1), the Proponent has routed the proposed OECC to avoid and minimize impacts to sensitive habitats where possible. The preliminary routing of the cables has avoided sensitive habitats including eelgrass and hard bottom/complex bottom (i.e., sand waves) where feasible, but avoidance of all sensitive habitats is not always possible. Vineyard Northeast will be consistent with this policy to the extent practicable through the use of avoidance, minimization and monitoring measures as detailed in the COP. See Sections 4.1, 4.4, 4.5, 4.6 of COP Volume II, and Appendix II-D Essential Fish Habitat Assessment for further detail.

G:\Projects2\MA\MA\5410\2023\MXD\Vol_II_REV_Sept_2023\Resources_NY_CZM_Boundary_20230926.mxd

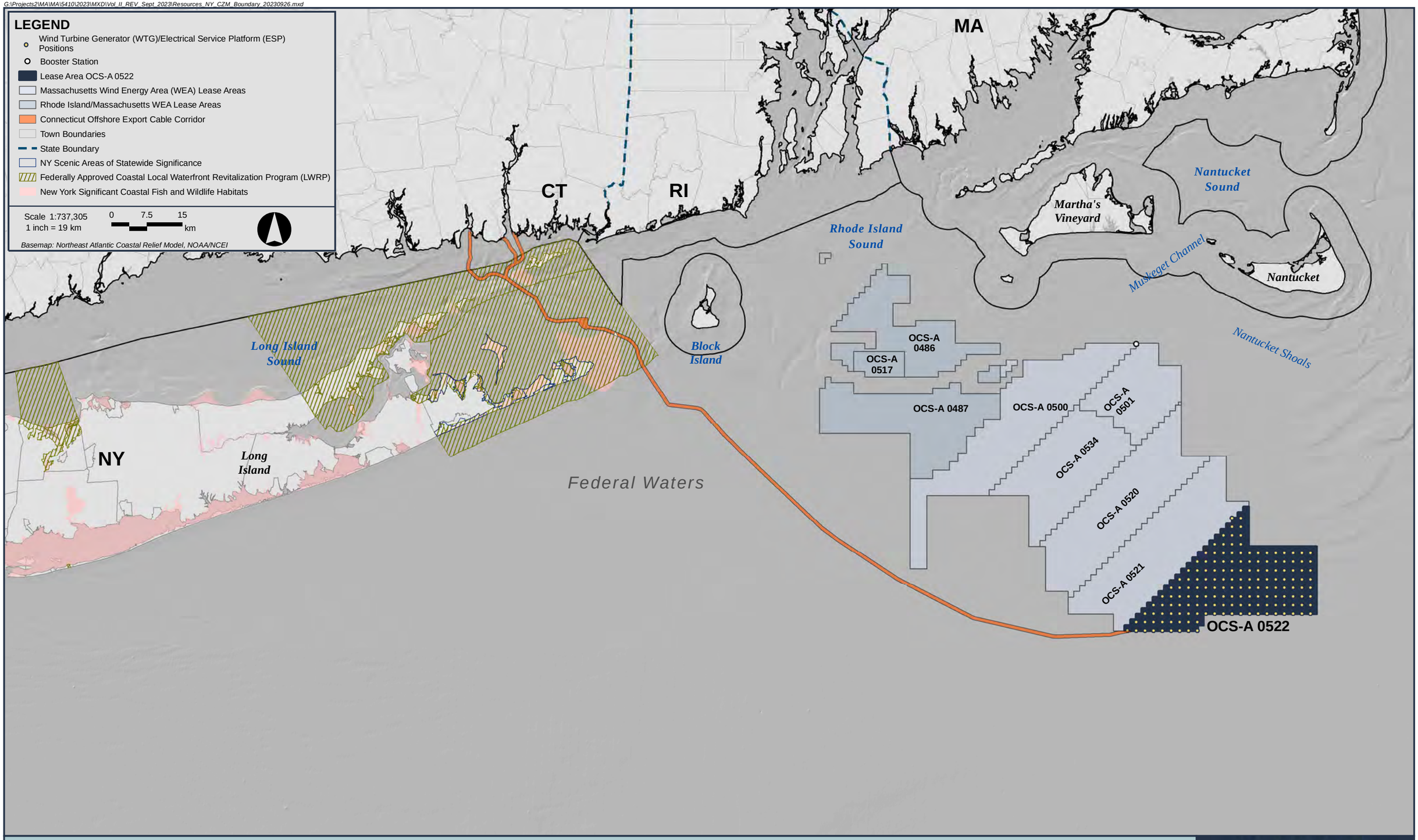


**Figure 3.2-1**
New York State Resources of Significance

VINEYARD NORTHEAST
VINEYARD OFFSHORE

***Policy #8***

*Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources.*

Vineyard Northeast will not generate hazardous wastes and other pollutants that could bioaccumulate in the food chain or which cause sublethal or lethal effect on fish and/or wildlife resources. The Proponent will require all Vineyard Northeast vessels to comply with regulatory requirements related to the prevention and control of discharges and the prevention and control of accidental spills. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

***Policy #9***

*Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources.*

Vineyard Northeast does not involve increasing access to existing resources, supplementing existing stocks, or developing new resources. Vineyard Northeast will also not further develop commercial finfish, shellfish, and crustacean resources in the coastal area. Therefore, this policy is not applicable.

It is important to note, however, that Vineyard Northeast is designed to avoid impacts to marine, coastal, and wetland habitats to the maximum extent practicable and to minimize and mitigate unavoidable impacts in accordance with applicable federal, state, and local regulations. The Proponent has routed the proposed OECC to avoid and minimize impacts to sensitive habitats where feasible. Further information about routing can be found in Sections 2.7 and 2.8 of COP Volume I.

A fisheries monitoring plan will be developed to monitor key indicators before and after construction; such monitoring may be part of regional monitoring efforts. A benthic habitat monitoring plan framework has been developed (see Appendix II-R) to monitor recovery after construction in areas with sensitive habitats where similar post-construction monitoring has not already been conducted for other projects (such as along the OECCs). Section 5.3 Recreation and Tourism (Including Recreational Fishing) and Section 5.4 Commercial Fisheries and For-Hire Recreational Fishing of COP Volume II provide a thorough analysis of Vineyard Northeast's potential impact to recreational fisheries, including for-hire reactional fishing, and measures to mitigate those impacts.

***Policy #10***

*Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing onshore commercial fishing facilities, increasing marketing of the State's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.*

See Policy #9.

## Flooding and Erosion Hazard

***Policy #11***

*Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.*

This policy is not applicable. Vineyard Northeast does not include structures or buildings to be sited within the NYS Coastal Zones.

***Policy #12***

*Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.*

No Vineyard Northeast activities or development will occur onshore in NYS. Offshore export cables within the Massachusetts OECC and the Connecticut OECC will be buried beneath the seafloor to the extent feasible and will neither make landfall in NYS nor affect beaches, dunes, barrier islands, or bluffs. Thus, this policy is not applicable because Vineyard Northeast will have no effect on natural resources, property, beaches, dunes, barrier islands, or bluffs within NYS.

***Policy #13***

*The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.*

Vineyard Northeast does not include construction or reconstruction of erosion protection structures in the NYS Coastal Zone. The installation of offshore export cables within the Massachusetts OECC and the Connecticut OECC will not include construction or reconstruction of erosion protection structures in NYS. Therefore, this policy is not applicable.

***Policy #14***

*Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.*

Vineyard Northeast does not include construction or reconstruction of erosion protection structures in the NYS Coastal Zone; therefore, this policy is not applicable.

***Policy #15***

*Mining, excavation, or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land.*

Vineyard Northeast does not include mining or excavation in coastal waters (see Section 5.8 Other Marine Uses of COP Volume II for more detail). Limited dredging may occur where sand bedforms are present so that the cable installation equipment can achieve sufficient burial depth into the stable sea bottom. Sand bedform dredging will be limited to the extent required to achieve sufficient cable burial depth. Limited dredging (if required) is not expected to cause an increase in erosion. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

***Policy #16***

*Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long-term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features.*

Vineyard Northeast does not involve public funds to be used for erosion protective structures; therefore, this policy is not applicable.

***Policy #17***

*Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.*

Vineyard Northeast is an offshore wind development and does not include measures to minimize damage to natural resources and property from flooding and erosion. The offshore export cables within the Massachusetts OECC and Connecticut OECC will be installed with a target burial depth of 1.5–2.5 m (5–8 ft) below the stable seafloor and the offshore-to-onshore transition is anticipated to be made using HDD. Therefore, no increased risk of flooding or erosion due to structures is expected. Therefore, this policy is not applicable.

## General

### *Policy #18*

*To safeguard the vital economic, social and environmental interests of the state and its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the state has established to protect valuable coastal areas.*

Vineyard Northeast will be consistent with this policy to the extent applicable as the jurisdictional activities include the installation of buried offshore export cables within the Massachusetts OECC and the Connecticut OECC in Long Island Sound. Installation will be of limited duration and geographic footprint and will not negatively impact the vital economic, social, and environmental interests of the state. As described above, Vineyard Northeast is a sustainable development of renewable energy and is consistent with NYS's clean energy goals.

## Public Access

### *Policy #19*

*Protect, maintain, and increase the level and types of access to public water-related recreation resources and facilities.*

While the Massachusetts OECC and Connecticut OECC cross through the Renewable Energy GLD, Vineyard Northeast does not include an onshore cable landfall site in NYS; thus, there will be no potential effect on access to NYS public water-related recreation resources and facilities.

### *Policy #20*

*Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided and it shall be provided in a manner compatible with adjoining uses.*

Vineyard Northeast is not located on or near and will not impact publicly-owned foreshore or lands immediately adjacent to the foreshore or the water's edge in NYS; therefore, this policy is not applicable.

## Recreation Policies

### *Policy #21*

*Water-dependent and water-enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related uses along the coast.*

Vineyard Northeast is not a recreational use but is consistent with this policy to the extent practicable. Construction, maintenance, and decommissioning activities within the Massachusetts OECC and the Connecticut OECC and associated vessel traffic may disrupt water-dependent recreation but will be temporary and localized in nature. The Proponent will work to inform recreational boaters and recreational fishermen of planned vessel activities during construction, maintenance, and decommissioning. More information is available regarding vessel traffic in Section 5.6 of COP Volume II and recreation and tourism in Section 5.3 of COP Volume II.

***Policy #22***

*Development, when located adjacent to the shore, will provide for water-related recreation, whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development.*

All Vineyard Northeast components are located offshore and are not directly adjacent to the NYS shore; therefore, Vineyard Northeast will not impede upon, or inhibit, development for water-related recreation within the NYS Coastal Zone. For more information, see Section 5.3 Recreation and Tourism of COP Volume II.

## Historic and Scenic Resources

***Policy #23***

*Protect, enhance, and restore structures, districts, areas, or sites that are of significance in the history, architecture, archaeology or culture of the State, its communities, or the Nation.*

Vineyard Northeast will not impact onshore structures, districts, areas, or sites of historical, architectural, archaeologic, or cultural significance to the state, its communities, or the nation. Terrestrial and marine cultural resources management (CRM) archaeological studies, field investigations, and assessments of the visual impact assessments of Vineyard Northeast on historic resources have been conducted by qualified independent CRM professionals on behalf of the Proponent. The studies are designed to identify cultural and historic resources that may be affected by Vineyard Northeast activities and are approved in advance by applicable regulatory agencies.

The Proponent conducted a detailed review of the Massachusetts OECC and Connecticut OECC for the presence of submerged cultural resources. Based on a review of available literature and site-specific geotechnical and geophysical survey data, a limited number of shipwrecks may be present within the Connecticut OECC. At this time, the Proponent anticipates that it will avoid the shipwreck sites. Further, no ancient submerged landforms with the potential to contain cultural resources were identified within the Massachusetts OECC and Connecticut OECC. Therefore, no impacts to submerged cultural resources are anticipated. Details of relevant studies for NYS can be found in Appendix II-Q Marine Archaeological Resources Assessment.

Avoidance, minimization, and mitigation measures for historical and archaeological resources will be determined in consultation with BOEM, state agencies, Native American tribes, and other relevant consulting parties through the National Historic Preservation Act's (NHPA) Section 106 and National Environmental Policy Act (NEPA) processes. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

***Policy #24***

*Prevent impairment of scenic resources of statewide significance.*

Vineyard Northeast will not impact scenic resources of statewide significance as the Lease Area is located outside of the NYS Coastal Zone and offshore export cables within the Massachusetts OECC and the Connecticut OECC will be buried beneath the seafloor to the extent feasible (see Figure 3.2-1). See Historic and Scenic Resources Policy #1 for further information.

***Policy #25***

*Protect, restore, or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.*

Vineyard Northeast will not impact the scenic quality of the coastal area; therefore, this policy is not applicable. See Historic and Scenic Resources Policies #1 and #2 for further information.

## Agricultural Lands

***Policy #26***

*Conserve and protect agricultural lands in the State's coastal area.*

Vineyard Northeast is not located within and will not impact agricultural lands onshore in the state's coastal area; therefore, this policy is not applicable.

## Energy and Ice Management

***Policy #27***

*Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.*

The purpose of Vineyard Northeast is to generate competitively priced clean, renewable electricity from Lease Area OCS-A 0522 by as early as 2030 to meet the demand expressed by Northeastern states and/or other offtake users to achieve their renewable energy and carbon emission reduction goals. Vineyard Northeast will help diversify the states' electricity supply, increase energy reliability, and reduce regional greenhouse gas emissions.

Vineyard Northeast does not require shorefront within the NY State Coastal Zone. However, the locations of the Massachusetts OECC and the Connecticut OECC were developed based upon careful consideration of multiple technical, environmental, and commercial factors. The Proponent initially identified several offshore cable route concepts to connect the Lease Area to potential landfall sites in Massachusetts and Connecticut. Based on an extensive desktop assessment of publicly available data for the region surrounding the Lease Area and the coastline, the Proponent developed potential routes for further investigation via reconnaissance surveys. This desktop assessment considered mapped resources from the Massachusetts Ocean Management Plan (MA CZM 2021), the Long Island Sound Blue Plan (CT DEEP 2021), the Northeast Ocean Data Portal (NEODP 2021), and the Mid-Atlantic Ocean Data Portal (MARCO 2021), among many other data sources. Data collected during the Proponent's reconnaissance surveys were then used to refine potential routes and delineate the Massachusetts OECC and Connecticut OECC. Therefore, Vineyard Northeast complies with this policy. Further information about routing can be found in Sections 2.7 and 2.8 of COP Volume I.

***Policy #28***

*Ice management practices shall not interfere with the production of hydroelectric power, damage significant fish and wildlife and their habitats, or increase shoreline erosion or flooding.*

Activities within the Massachusetts OECC and the Connecticut OECC will not include ice management practices; therefore, this policy is not applicable.

***Policy #29***

*The development of offshore uses and resources, including renewable energy resources, shall accommodate New York's long-standing ocean and Great Lakes industries, such as commercial and recreational fishing and maritime commerce, and the ecological functions of habitats important to New York.*

Vineyard Northeast has been designed to avoid or minimize impacts to resources important to NYS. Therefore, Vineyard Northeast complies with this policy.

Section 5.4 Commercial Fisheries and For-Hire Recreational Fishing of COP Volume II provides a thorough analysis of Vineyard Northeast's potential impacts to commercial fisheries and measures to mitigate those impacts. Additionally, Appendix II-F Economic Exposure of Commercial Fisheries estimates commercial fisheries economic exposure to Vineyard Northeast. Other sections of the Vineyard Northeast COP most relevant to these issues are in Volume II and include Section 4.5 Benthic Resources, Section 4.6 Finfish and Invertebrates, Section 5.3 Recreation and Tourism (Including Recreational Fishing), Section 5.6 Navigation and Vessel Traffic, Section 5.8 Other Marine Uses, Appendix II-D Essential Fish Habitat Assessment, Appendix II-G Navigation Safety Risk Assessment, and Appendix I-I Fisheries Communication Plan.

As described further in the COP, during the construction and O&M of Vineyard Northeast, fishing vessels will not be restricted from operating in or transiting through the OECCs. However, depending on the construction or O&M activity, the Proponent may request that mariners give a wide berth to active work sites or maintenance vessel(s) through the issuance of Offshore Wind Mariner Updates.

Within the Massachusetts OECC and the Connecticut OECC, the offshore export cables will be installed to a target burial depth of 1.5 to 2.5 m (5 to 8 ft) below the stable seafloor which the Proponent's offshore cable engineers have determined is more than twice the burial depth required to prevent cables from interfering with fishing activity or fishing vessel transits. While every effort will be made to achieve sufficient burial, a limited portion of the offshore export cables may require cable protection (rocks, rock bags, concrete mattresses, half-shell pipes, or similar) if a sufficient burial depth cannot be achieved. Cable protection will be designed and installed to minimize interfering with bottom fishing gear to the maximum extent practicable and fishermen will be informed of exactly where cable protection exists.

The Proponent's proposed measures to avoid, minimize, and mitigate potential effects to commercial and for-hire recreational fishing during Vineyard Northeast are described in Section 5.4 of COP Volume II and Appendix II-F and are also summarized below:

- The Proponent will work to inform commercial and for-hire recreational fishermen of planned vessel activities during construction, maintenance, and decommissioning. During construction, a Marine Coordinator will manage construction vessel logistics and implement communication protocols with external vessels at ports and offshore. Additionally, the Proponent will provide Offshore Wind Mariner Updates and coordinate with the USCG to issue Notices to Mariners (NTMs) advising other vessel operators of planned offshore activities. The Vineyard Northeast website will be regularly updated to provide information about activities occurring in the Offshore Development Area.

- The Proponent has developed a Fisheries Communication Plan (see Appendix I-I) that defines outreach and engagement with commercial and for-hire recreational fishermen during construction, operations, and decommissioning.

- The Proponent has developed a fishing gear loss and compensation protocol that provides a standard approach to fishing gear loss and compensation.

- The offshore export cables will be buried at a target depth beneath the stable seafloor of 1.5 to 2.5 m (5 to 8 ft) to avoid interaction with fishing gear.

- The amount of cable protection will be limited. Cable protection will be designed and installed to minimize interfering with bottom fishing gear to the maximum extent practicable and fishermen will be informed of areas where cable protection exists.

## Water and Air Resources

### *Policy #30*

*Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to state and national water quality standards.*

Vineyard Northeast is not anticipated to involve discharge of pollutants into coastal waters. The Proponent will require all Vineyard Northeast vessels to comply with regulatory requirements related to the prevention and control of discharges and the prevention and control of accidental spills. All vessel waste or accidental spills will be treated in accordance with the applicable local, state, and federal regulations. An Oil Spill Response Plan (OSRP) has been developed for Vineyard Northeast (see Appendix I-F) and Section 7 Low Probability Events of COP Volume II includes further detail regarding accidental releases. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

### *Policy #31*

*State coastal area policies and management objectives of approved local waterfront revitalization programs will be considered while reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.*

A portion of the Connecticut OECC is located in a NYS LWRP area (see Figure 3.2-1)); however, this policy is not applicable because Vineyard Northeast does not include a review of coastal water classifications or request to modify water quality standards. Consistency with applicable LWRPs is included in Sections 3.3 and 3.4.

### *Policy #32*

*Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.*

Vineyard Northeast does not include a sanitary waste system; therefore, this policy is not applicable.

### *Policy #33*

*Best management practices will be used to ensure the control of storm water runoff and combined sewer overflows draining into coastal waters.*

Vineyard Northeast will not be located onshore in NYS or involve stormwater discharge of pollutants or combined sewer overflows into NYS Coastal Waters; therefore, this policy is not applicable.

***Policy #34***

*Discharge of waste materials into coastal waters from vessels subject to state jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas, and water supply areas.*

All vessel waste will be offloaded, stored, and disposed of in accordance with all applicable local, state, and federal regulations such as the Environmental Protection Agency (EPA) and USCG requirements for discharges and releases to surface waters. The Proponent will require all Vineyard Northeast vessels to comply with regulatory requirements related to the prevention and control of discharges and the prevention and control of accidental spills. Additionally, the Proponent will require vessel operators, employees, and contractors who engage in offshore activities to participate in a marine trash and debris prevention training program (see Appendix I-F OSRP). Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

***Policy #35***

*Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing state permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.*

Limited dredging may occur where sand bedforms are present so that the cable installation equipment can achieve sufficient burial depth into the stable sea bottom. Sand bedform dredging will be limited to the extent required to achieve sufficient cable burial depth. Dredged material will be deposited within the OECC and only in areas of sand bedforms. All dredging and disposal activities (if required within NYS waters) will be conducted in accordance with state permit requirements. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

***Policy #36***

*Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.*

The purpose of Vineyard Northeast is not the shipment or storage of petroleum and other hazardous substances but will include marine vessel transit. The Proponent will require all Vineyard Northeast vessels to comply with regulatory requirements related to the prevention and control of discharges and the prevention and control of accidental spills (see Appendix I-F OSRP) . Measures to minimize the already-remote potential for seafloor disturbance through HDD drilling fluid seepage (i.e., frac-out) are described in Section 6.2 of COP Volume I and

further detail regarding chemical use, waste generation, and disposal are described in Section 6.3 of COP Volume I. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

***Policy #37***

*Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics, and eroded soils into coastal waters.*

Vineyard Northeast will not generate non-point discharges into NYS coastal waters; therefore, this policy is not applicable.

***Policy #38***

*The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.*

Vineyard Northeast is not located near or adjacent to any primary or sole source aquifers. The installation of offshore export cables within the Massachusetts OECC and Connecticut OECC beneath the seafloor will not impact surface water and/or groundwater supplies. The Proponent has conducted sediment dispersion modeling (see Appendix II-P Sediment Dispersion Modeling) to assess the potential impacts of the cable installation and found that any above ambient suspended sediment concentrations are of short duration and return to ambient conditions within approximately 12 hours after the activity is completed. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

***Policy #39***

*The transport, storage, treatment, and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural lands, and scenic resources.*

No disposal of solid or hazardous wastes in coastal waters is proposed as part of Vineyard Northeast. Additionally, the Proponent will require vessel operators, employees, and contractors who engage in offshore activities to participate in a marine trash and debris prevention training program. Measures to prevent, minimize, and mitigate spills into coastal waters will be undertaken by Vineyard Northeast. See Water and Air Resources Policies # 6 and #7. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

***Policy #40***

*Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.*

Vineyard Northeast is not a major steam electric generating or industrial facility with effluent discharges; therefore, this policy is not applicable.

***Policy #41***

*Land use or development in the coastal area will not cause national or State air quality standards to be violated.*

Vineyard Northeast will not involve onshore land use or development within the NYS coastal area; therefore, this policy is not applicable. Vineyard Northeast will obtain the necessary OCS Air Permit from EPA for construction and O&M. More detail can be found in Section 3.1 Air Quality of COP Volume II.

***Policy #42***

*Coastal management policies will be considered if the State reclassifies land areas pursuant to the prevention of significant deterioration regulations of the Federal Clean Air Act.*

Vineyard Northeast does not involve reclassification of land areas pursuant to the Prevention of Significant Deterioration regulations of the federal Clean Air Act. Vineyard Northeast activities associated with the Connecticut OECC will also not change the air quality classifications in coastal regions or adjacent areas. Therefore, this policy is not applicable.

***Policy #43***

*Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.*

Vineyard Northeast will not involve onshore land use or development within the NYS coastal area. Vineyard Northeast will obtain the necessary OCS Air Permit from EPA. More detail can be found in Section 3.1 Air Quality of COP Volume II.

Further, the electricity generated by the WTGs will displace electricity from fossil fuel power plants, resulting in a significant net reduction in air emissions from the regional electric grid. Vineyard Northeast is expected to reduce $CO_2e$ emissions from the electric grid by approximately 4.9 million tons per year (tpy), or the equivalent of taking approximately 970,000 cars off the road.[11] This reduction in GHG emissions will help mitigate additional effects of ongoing climate change (e.g., sea level rise and increased flooding, changes in agricultural productivity, shifts in species' distributions, and increases in energy system costs) that are impacting the environment and public health. Vineyard Northeast will also reduce regional

[11] Assuming the minimum nameplate capacity of Vineyard Northeast.

emissions of air contaminants such as NOx and $SO_2$, which contribute to acid rain, ocean acidification, and ground level ozone/smog and are linked to increased rates of early death, heart attacks, stroke, and respiratory disorders. Vineyard Northeast will also help diversify the states' electricity supply and increase the reliability of the electric grid.

### Wetlands

#### *Policy #44*

*Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.*

Vineyard Northeast will not impact nearshore tidal and/or freshwater wetlands within NYS as all offshore export cable installation activities will occur offshore; thus, this policy is not applicable.

## 3.3 Consistency with Town of East Hampton Local Waterfront Revitalization Plan

The Connecticut OECC passes through the geographic boundary of the Town of East Hampton's coastal area as defined in its LWRP. The following sections demonstrate compliance with the enforceable policies of the East Hampton LWRP for jurisdictional components of Vineyard Northeast. Information required per 15 CFR 930 Subpart D is included in the Vineyard Northeast COP and the Proponent will conduct activities in compliance with the LWRP program per 15 CFR 930 Subpart E.

Many of the enforceable policies for the Town of East Hampton's LWRP overlap with those from the NYS CMP enforceable policies provided in Section 3.2. Table 3.3-1 provides a crosswalk demonstrating compliance by Vineyard Northeast for those LWRP policies also listed in the NY CMP. The remainder of Section 3.3, following Table 3.3-1, includes policies specific to the East Hampton LWRP that are not already addressed in the NYC CMP.

## Table 3.3-1 Comparison of Similar Enforceable Policies between NY CMP and Town of East Hampton LWRP

| East Hampton LWRP Policy | | NYS CMP Policy Similar to East Hampton LWRP Policy | |
|---|---|---|---|
| **Policy #** | **Policy Description** | **Policy #** | **Document Location for Response** |
| 1 | Revitalization of Deteriorated Waterfront Areas: Restore, revitalize and redevelop deteriorated and underutilized waterfront areas for commercial and industrial, cultural, recreational and other compatible uses. | Policy #1 | Section 3.2, Development |
| 1A | Underutilized Waterfront Sites: Restore, revitalize, and redevelop the following underutilized sites for cultural, recreational, and other compatible uses: Marina Land Dredge Spoil Site – Three Mile Harbor; Old Fish Factory Site – Napeague; Former Montauk Landfill Site; Montauk Harbor Area (Linked Walkway); Former Camp Hero – Montauk; Montauk Business Area. | Policy #1 | Section 3.2, Development |
| 2 | Water-Dependent Uses: Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters. | Policy #2 | Section 3.2, Development |
| 3 | Major Ports: Further develop the state's major ports of Albany, Buffalo, New York, Ogdensburg and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of state public authorities, of land use and development which is essential to or in support of the waterborne transportation of cargo and people. | Policy #3 | Section 3.2, Development |
| 4 | Strengthen the economic base of small harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity. | Policy #4 | Section 3.2, Development |
| *5* | Public Services: Encourage the location of development in areas where public services and facilities essential to such development are adequate, except when such development has special functional requirements or other characteristics which necessitates its location in other coastal areas. | Policy #5 | Section 3.2, Development |
| *6* | Permit Services: Expedite permit procedures in order to facilitate the siting of development activities at suitable locations. | Policy #6 | Section 3.2, Development |
| **Significant Habitats** | | | |
| 7 | Significant Fish and Wildlife Habitats: Significant coastal fish and wildlife habitats, as identified on the coastal area map, shall be protected, preserved, and, where practicable, restored so as to maintain their viability as habitats. | Policy #7 | Section 3.2, Fish and Wildlife |
| 7A | Locally Significant Fish and Wildlife Habitats: Locally significant coastal fish and wildlife habitats, as identified on the coastal area map shall be protected, preserved, and where practicable restored so as to maintain their viability as habitats. | Policy #7 | Section 3.2, Fish and Wildlife |
| **Recreational Fish & Wildlife Resources** | | | |
| 9 | Recreational Use of Fish and Wildlife: Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources. | Policy #9 | Section 3.2, Fish and Wildlife |

## Table 3.3-1 Comparison of Similar Enforceable Policies between NY CMP and Town of East Hampton LWRP (Continued)

| East Hampton LWRP Policy | | NYS CMP Policy Similar to East Hampton LWRP Policy | |
|---|---|---|---|
| **Policy #** | **Policy Description** | **Policy #** | **Document Location for Response** |
| 10 | Commercial Fishing: Further develop commercial finfish, shellfish and crustacean resources in the coastal area by: (i) encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities; (ii) increasing marketing of the state's seafood products; and (iii) maintaining adequate stocks and expanding aquaculture facilities. Such efforts shall be in a manner which ensures the protection of such renewable fish resources and considers other activities dependent on them. | Policy #9 | Section 3.2, Fish and Wildlife |
| 10A | Aquaculture/Mariculture : Encourage aquaculture and mariculture which benefits overall public stocks of living marine resources but discourage aquaculture or mariculture inconsistent with maintaining healthy stocks and habitats. | Policy #9 | Section 3.2, Fish and Wildlife |
| **Flooding and Erosion** | | | |
| 11 | Siting of Structures: Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion | Policy #11 | Section 3.2, Flooding and Erosion Hazard |
| 12 | Natural Erosion Protection Features: Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs. Primary dunes will be protected from all encroachments that could impair their natural protective capacity | Policy #12 | Section 3.2, Flooding and Erosion Hazard |
| 13 | 30-Year Erosion Control Structures: The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs. | Policy #13 | Section 3.2, Flooding and Erosion Hazard |
| 13A | Maintenance/Mitigation for Erosion Control Structures: Erosion protection structures must be maintained both with regard to the structure and to adjoining natural protective features. Required maintenance may include beach nourishment and mitigation of erosion to nearby property and resources caused by construction or reconstruction of erosion protection structures. | Policy #13 | Section 3.2, Flooding and Erosion Hazard |
| 14 | No Flooding or Erosion Increases: Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations. | Policy #14 | Section 3.2, Flooding and Erosion Hazard |
| 14A | Minimize Erosion Protection Structures in Certain Reaches: Minimize the construction of erosion protection structures and new development in hazardous areas in reaches 1, 4, 5, 7, 8, 9, 10, 11, 12, parts of reaches 2, 3 and 6. | Policy #14 | Section 3.2, Flooding and Erosion Hazard |
| 15 | Mining, Excavation, and Dredging: Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land. | Policy #15 | Section 3.2, Flooding and Erosion Hazard |

## Table 3.3-1 Comparison of Similar Enforceable Policies between NY CMP and Town of East Hampton LWRP (Continued)

| East Hampton LWRP Policy | | NYS CMP Policy Similar to East Hampton LWRP Policy | |
|---|---|---|---|
| **Policy #** | **Policy Description** | **Policy #** | **Document Location for Response** |
| 16 | Use of Public Funds: Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features. | Policy #16 | Section 3.2, Flooding and Erosion Hazard |
| 17 | Non-Structural Control Measures: Whenever possible, use non-structural measures to minimize damage to natural resources and property from flooding and erosion. Such measures shall include: (i) the setback of buildings and structures; (ii) the planting of vegetation and the installation of sand fencing and draining; (iii) the reshaping of bluffs; and (iv) the flood-proofing of buildings of their elevation above the base flood level. | Policy #17 | Section 3.2, Flooding and Erosion Hazard |
| 17A | Only Non-Structural Measures Permitting in Certain Reaches: Along the south shore ocean facing reaches of the town, only non-structural measures to minimize flooding and erosion are permitted. | Policy #17 | Section 3.2, Flooding and Erosion Hazard |
| **General Policy** | | | |
| 18 | State Vital Interests: To safeguard the vital economic, social and environmental interests of the state and its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the state has established to protect valuable coastal areas. | Policy #18 | Section 3.2, General Policy |
| **Recreation** | | | |
| 21 | Water-Related Recreation: Water-dependent and water enhanced recreation will be encouraged and facilitated and will be given priority over non-water related uses along the coast, provided it is consistent with the preservation and enhancement of other coastal resources and, takes into account demand for such facilities. In facilitating such activities, priority shall be given to areas where access to the recreation opportunities of the coast can be provided by new or existing public transportation services and to those areas where the use of the shore is severely restricted by existing development. | Policy #21 | Section 3.2, Recreation Policies |
| 21A | Water-Related Recreation Improvement Sites: Water-dependent and water-enhanced recreation will be encouraged and facilitated at sites recommended under "opportunities for improvement" and "recreational uses compatible with new development" in the analysis narrative of this report and in “public access and recreation improvements” in projects, Section XIV. | Policy #21 | Section 3.2, Recreation Policies |
| 22A | Sites Where Water-Related Recreation May Be Incorporated into Development as a Multiple Use: For specific locations which may appropriately provide water-related recreation as a multiple use with development see recommendations under "opportunities for improvement" and "recreational uses compatible with new development" in the analysis narrative of this report and in “public access and recreation improvements” in projects, section xiv. See also public access policies #19-20. | Policy #22 | Section 3.2, Recreation Policies |

## Table 3.3-1 Comparison of Similar Enforceable Policies between NY CMP and Town of East Hampton LWRP (Continued)

| East Hampton LWRP Policy | | NYS CMP Policy Similar to East Hampton LWRP Policy | |
|---|---|---|---|
| **Policy #** | **Policy Description** | **Policy #** | **Document Location for Response** |
| **Historic** | | | |
| 23 | Historic Resources: Protect, enhance, and restore structures, districts, areas or sites that are of significance in the history, architecture, archeology or culture of the state, its communities, or the nation. | Policy #23 | Section 3.2, Historic Policy |
| **Energy and Ice** | | | |
| 27 | Siting of Major Energy Facilities: Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location. | Policy #27 | Section 3.2, Energy and Ice Policy |
| 28 | Ice Management Practices: Ice management practices shall not damage significant fish and wildlife and their habitats, increase shoreline erosion or flooding, or interfere with the production of hydroelectric power. | Policy #28 | Section 3.2, Energy and Ice Policy |
| **Water and Air** | | | |
| 30 | Discharge of Pollutants into Coastal Waters: Municipal, industrial, and commercial discharge of pollutants including but not limited to, toxic and hazardous substances, into coastal waters will conform to state and national water quality standards. | Policy #30 | Section 3.2, Water and Air Policy |
| 31 | State coastal area policies and the purposes of approved local waterfront revitalization programs will be considered while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint. | Policy #31 | Section 3.2, Water and Air Policy |
| 32 | Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities. | Policy #32 | Section 3.2, Water and Air Policy |
| 33 | Storm Water Runoff: Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters. | Policy #33 | Section 3.2, Water and Air Policy |
| 34 | Discharge of Vessel Wastes: Discharge of waste materials into coastal waters from vessels will be limited so as to protect significant fish and wildlife habitats, recreation areas and water supply areas. | Policy #34 | Section 3.2, Water and Air Policy |
| 35 | Dredging and Dredge Spoil Disposal: Dredging and dredge spoil disposal in coastal waters will be undertaken in a manner that meets existing state dredging permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands. | Policy #35 | Section 3.2, Water and Air Policy |
| 36 | Shipment and Storage of Petroleum and Other Hazardous Wastes: Activities related to shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practical efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur. | Policy #36 | Section 3.2, Water and Air Policy |

## Table 3.3-1 Comparison of Similar Enforceable Policies between NY CMP and Town of East Hampton LWRP (Continued)

| East Hampton LWRP Policy | | NYS CMP Policy Similar to East Hampton LWRP Policy | |
|---|---|---|---|
| **Policy #** | **Policy Description** | **Policy #** | **Document Location for Response** |
| 37 | Non-Point Discharge of Water Pollutants: Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters. | Policy #37 | Section 3.2, Water and Air Policy |
| 38 | Surface and Ground Water Protection: The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply | Policy #38 | Section 3.2, Water and Air Policy |
| 39 | Solid Waste Transport, Treatment, and Disposal: The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural lands and scenic resources. | Policy #39 | Section 3.2, Water and Air Policy |
| 40 | Effluent Discharge by Major Energy and Industrial Facilities: Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards. | Policy #40 | Section 3.2, Water and Air Policy |
| 41 | Compliance with Air Quality Standards: Land use or development in the coastal area will not cause national or state air quality standards to be violated. | Policy #41 | Section 3.2, Water and Air Policy |
| 42 | Reclassification of Areas Pursuant to Clean Air Act: Coastal management policies will be considered if the state reclassifies land areas pursuant to the prevention of significant deterioration regulations of the federal Clean Air Act. | Policy #42 | Section 3.2, Water and Air Policy |
| 43 | Acid Raid Precursors: Land use or development in the coastal area must not cause the generation of significant amounts of the acid rain precursors: nitrates and sulfates. | Policy #43 | Section 3.2, Water and Air Policy |
| **Wetlands** | | | |
| 44 | Tidal and Freshwater Wetlands: Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas. | Policy #44 | Section 3.2, Wetlands |

## Development Policies

### *Policy #2A*

*The siting of water-dependent uses and facilities on or adjacent to coastal waters shall be accomplished provided the proposed use is consistent with the preservation and enhancement of other coastal resources, including cultural and natural resources.*

Large-scale offshore wind energy generation, and the transmission of that energy to shore, is by nature a coastally dependent energy facility. Accordingly, Vineyard Northeast is coastally dependent, since it is necessary to bring the energy generated offshore to an interconnection point onshore.

Proposed offshore export cables within the Connecticut OECC will be buried beneath the seafloor within Long Island Sound to the extent feasible. The Proponent conducted a detailed review of the Connecticut OECC for the presence of submerged cultural resources. Based on a review of available literature and site-specific geotechnical and geophysical survey data, a limited number of shipwrecks may be present within the Connecticut OECC. At this time, the Proponent anticipates that it will avoid the shipwreck sites. Further, no Ancient Submerged Landform Features with the potential to contain cultural resources were identified. Therefore, no impacts to submerged cultural resources are anticipated. Details can be found in Appendix II-Q Marine Archaeological Resources Assessment.

The installation of offshore export cable within the Connecticut OECC will not have significant adverse effects on natural resources. The Proponent has routed the proposed OECC to avoid and minimize impacts to sensitive habitats where feasible. The preliminary routing of the cables has avoided sensitive habitats including eelgrass, hard bottom/complex bottom (i.e., sand waves) where feasible, but avoidance of all sensitive habitats is not always possible. Furthermore, the Proponent has conducted an analysis of natural resources that may be impacted by Vineyard Northeast. HDD is expected to be used at the Landfall Sites to avoid or minimize impacts to dunes, beaches, and barrier beaches. Any impacts from cable installation will be temporary and localized.

### *Policy #7B Protection of Diversity*

*Protect to the maximum extent practicable the vulnerable plant and animal species and natural communities that have been identified on the state and federal levels by the New York Heritage Program, the NYSDEC protected native plant list (NYCRR 193.3), the NYSDEC list of endangered, threatened and special concern species and the federal list of endangered and threatened wildlife and plants (50 CFR 17).*

The Proponent will protect vulnerable plant and animal species and natural communities to the extent practicable and will be consistent with this policy to the extent applicable. See Sections 4.1 through 4.6 of COP Volume II for further detail on potential impacts to wildlife and fish habitats, including avoidance, minimization, and mitigation measures.

### *Policy #8 Pollutants*

*Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources.*

Vineyard Northeast will not generate hazardous wastes and other pollutants that could bioaccumulate in the food chain or which cause sublethal or lethal effect on fish and/or wildlife resources. The Proponent will require all Vineyard Northeast vessels to comply with regulatory requirements related to the prevention and control of discharges and the prevention and control of accidental spills. Vineyard Northeast will be consistent with this policy to the extent applicable.

## Recreational Fish and Wildlife Resources

### *Policy #9A Expanding Access to Fish and Wildlife*

*Recreational use of fish and wildlife resources will be expanded by increasing public access and other measures at sites recommended under "opportunities for improvement" and "recreational uses compatible with new development" in the analysis narrative of this report and in "public access and recreation improvements" in projects, Section XIV.*

Vineyard Northeast will not provide opportunities (nor interfere with opportunities) to increase access to existing resources, supplement existing stocks, or develop new resources; thus, this policy is not applicable.

## Public Access and Recreation Resources Policies

### *Policy #19 Access to Public Water-Related Recreation Resources*

*Protect, maintain and increase the level and types of access to public water-related recreation resources and facilities so that these resources and facilities may be fully utilized in accordance with reasonably anticipated public recreation needs and the protection of historic and natural resources. In providing such access, priority shall be given to public beaches, boating facilities, fishing areas and waterfront parks.*

All Vineyard Northeast components are located offshore the Town of East Hampton; thus, Vineyard Northeast will not impact access to public water-related recreation resources and facilities in the Town of East Hampton. Therefore, this policy is not applicable.

### *Policy #20 Access to Publicly-Owned Lands Adjacent to the Water's Edge*

*Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided, and it should be provided in a manner compatible with adjoining uses. Such lands shall be retained in public ownership.*

Vineyard Northeast is not located on or near and will not impact access to publicly-owned foreshore or lands immediately adjacent to the foreshore or the water's edge that are publicly-owned in the Town of East Hampton; therefore, this policy is not applicable.

### *Policy #22 Provision of Water-Related Recreation Within Development Adjacent to the Shore*

*Development, when located adjacent to the shore, will provide for water-related recreation, as a multiple use, whenever such recreational use is appropriate in light of reasonably anticipated demand for such activities and the primary purpose of the development.*

Vineyard Northeast does not involve development adjacent to the shore in the Town of East Hampton; therefore, this policy is not applicable.

## Visual Quality Policies

### *Policy #24 Scenic Resources of State Significance*

*Prevent impairment of scenic resources of statewide significance, as identified on the coastal area map. Impairment shall include: (i) the irreversible modification of geological forms, the destruction or removal of vegetation or structures are significant to the scenic quality of an identified resource; (ii) the addition of structures which because of siting or scale will reduce identified views or which because of scale, form, or materials will diminish the scenic quality of an identified resource.*

Vineyard Northeast will not impact scenic resources of statewide significance as the offshore export cables within the Connecticut OECC will be buried beneath the seafloor to the extent feasible (see Figure 3.2-1). Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

### *Policy #25 Overall Visual Quality*

*Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.*

Vineyard Northeast will not impact the scenic quality of the coastal area; therefore, this policy is not applicable.

## Agricultural Lands Policy

### *Policy #26 Important Agricultural Lands*

*To conserve and protect agricultural lands in the state's coastal area, an action shall not result in a loss, nor impair the productivity, of important agricultural lands if that loss or impairment would adversely affect the viability of agriculture in an agricultural district or if there is no agricultural district, in the area surrounding such lands.*

Installation of offshore export cables within the Connecticut OECC for Vineyard Northeast will not be carried out in/near agricultural lands in the Town of East Hampton; therefore, this policy is not applicable.

### *Policy #26A Locally Important Agricultural Lands*

*To conserve and protect agricultural lands in East Hampton's coastal area, an action shall not result in a loss, nor impair the productivity, of locally important agricultural lands if that loss or impairment would adversely affect the viability of agriculture in an agricultural district or if there is no agricultural district, in the area surrounding such lands.*

With the Connecticut OECC located offshore, Vineyard Northeast will not result in loss or impair the productivity of locally important agricultural lands, nor impair or result in loss of other surrounding areas of similar value. Thus, this policy is not applicable.

## Energy and Ice Management Policies

### *Policy #29 Development of Off-Shore Energy Resources*

*Encourage the development of energy resources on the outer continental shelf, in Lake Erie and in other water bodies, and ensure the environmental safety of such activities.*

Vineyard Northeast is the development of offshore wind energy resources on the outer continental shelf and the Connecticut OECC will provide for the transmission of the energy to land.

The Proponent is firmly committed to safety and full compliance with applicable health, safety, and environmental (HSE) protection laws, regulations, and standards. This commitment extends throughout the pre-construction, construction, operational, and decommissioning periods of Vineyard Northeast. All construction, operations and maintenance (O&M), and decommissioning activities will be performed by properly trained personnel. The Proponent's Health, Safety, and Environmental Management System, also known as the Safety Management System (SMS), is a living document that contains the HSE policies and procedures that will be followed during the construction and operation of Vineyard Northeast as well as the minimum requirements for working at Vineyard Northeast's facilities. The Proponent's HSE Management System draws on the team's prior experience and will be regularly updated to incorporate lessons learned. A draft of the HSE Management System is provided in Appendix I-E. Therefore, Vineyard Northeast demonstrates compliance with this policy.

## Water and Air Resources Policies

### *Policy #34A No-Discharge Zones*

*The following harbors and creeks of the town shall be designated as state and federal EPA no-discharge zones per the town's application of July 1997:*

- *Reach 1 Northwest Creek*
- *Reach 2 Three Mile Harbor, Hog Creek*
- *Reach 3 Accabonac Harbor*
- *Reach 4 Napeague Harbor*
- *Reach 6 Lake Montauk*

Vineyard Northeast activities will not occur in the harbors and creeks listed in this policy; therefore, this policy is not applicable.

***Policy #38A Maintain Water Resources as Near to Their Natural Condition of Purity as Reasonably Possible to Safeguard Public Health***

*Maintain water resources as near to their natural condition of purity as reasonably possible to safeguard public health.*

Vineyard Northeast will require all vessels to comply with regulatory requirements related to the prevention and control of discharges and the prevention and control of accidental spills. All vessel waste or accidental spills will be treated in accordance with the applicable local, state, and federal regulations. The Proponent will require vessel operators, employees, and contractors who engage in offshore activities to participate in a marine trash and debris prevention training program. An OSRP has been developed for Vineyard Northeast and Section 7 Low Probability Events of COP Volume II includes further detail regarding accidental releases.

***Policy #41A Inclusion in Radiological Emergency Response Plans***

*The town shall be included in radiological emergency response planning and notification for the millstone nuclear energy plants operated by northeast utilities in Waterford, CT and the nuclear reactors operated by the US Department of Energy at Brookhaven national laboratory.*

Vineyard Northeast is not related to the nuclear energy plants or nuclear reactors covered by the policy; therefore, this policy is not applicable.

## 3.4 Consistency with Town of Southold Local Waterfront Revitalization Plan

The Connecticut OECC passes through the geographic boundary of the Town of Southold's coastal area as defined in its LWRP. Information required per 15 CFR 930 Subpart D is included in the Vineyard Northeast COP and the Proponent will conduct activities in compliance with the LWRP program per 15 CFR 930 Subpart E.

## Developed Coast Policies

### *Developed Coast Policy #1*

*Foster a pattern of development in the Town of Southold that enhances community character, preserves open space, makes efficient use of infrastructure, makes beneficial use of a coastal location, and minimizes adverse effects of development.*

Vineyard Northeast is not anticipated to impact any valuable coastal areas or negatively impact vital economic, social, or environmental resources or interests of the state and its citizens. As described above, Vineyard Northeast is a sustainable development of renewable energy and is consistent with NYS's clean energy goals.

### *Developed Coast Policy #2*

*Preserve historic resources of the Town of Southold.*

Proposed offshore export cables within the Connecticut OECC will be buried beneath the seafloor within Long Island Sound to the extent feasible. The Proponent conducted a detailed review of the Connecticut OECC for the presence of submerged cultural resources. Based on a review of available literature and site-specific geotechnical and geophysical survey data, a limited number of shipwrecks may be present within the Connecticut OECC. At this time, the Proponent anticipates that it will avoid the shipwreck sites. Further, no ancient submerged landforms with the potential to contain cultural resources were identified. Therefore, no impacts to submerged cultural resources are anticipated. Details can be found in Appendix II-Q Marine Archaeological Resources Assessment.

### *Developed Coast Policy #3*

*Enhance visual quality and protect scenic resources throughout the Town of Southold.*

The offshore export cables within the Connecticut OECC will be buried beneath the seafloor to the extent feasible and will not have a visual impact to the scenic resources of the Town of Southold; therefore, this policy is not applicable.

## Natural Coast Policies

### *Natural Coast Policy #4*

*Minimize loss of life, structures, and natural resources from flooding and erosion.*

Vineyard Northeast will not site buildings or structures in the coastal area that would contribute to, or result in, flooding and erosion; therefore, this policy is not applicable.

***Natural Coast Policy #5***

*Protect and improve water quality and supply in the Town of Southold.*

Vineyard Northeast is not anticipated to involve discharge of pollutants into coastal waters. The Proponent will require all Vineyard Northeast vessels to comply with regulatory requirements related to the prevention and control of discharges and the prevention and control of accidental spills. All vessel waste or accidental spills will be treated in accordance with the applicable local, state, and federal regulations. An OSRP has been developed for Vineyard Northeast and Section 7 Low Probability Events of COP Volume II includes further detail regarding accidental releases.

***Natural Coast Policy #6***

*Protect and restore the quality and function of the Town of Southold's ecosystem.*

Vineyard Northeast will be consistent with this policy to the extent practicable through avoidance, minimization, and monitoring measures as detailed in the COP. See COP Volume II Section 3.2 Water Quality and Physical Oceanography, Section 4 Biological Resources, Section 7 Low Probability Events, Appendix II-C Avian, Appendix II-D Essential Fish Habitat, Appendix II-P Sediment Dispersion Modeling, and Appendix II-R Benthic Habitat Monitoring Framework for more detail.

***Natural Coast Policy #7***

*Protect and improve air quality in the Town of Southold.*

Vineyard Northeast will be consistent with this policy to the extent applicable as activities within the Connecticut OECC will consist of installation of buried offshore export cables. Installation will be of limited duration and geographic footprint and will not negatively impact air quality in the Town of Southold. Vineyard Northeast will obtain the necessary Outer Continental Shelf (OCS) Air Permit from EPA for construction and O&M. More detail can be found in Section 3.1 Air Quality of COP Volume II.

***Natural Coast Policy #8***

*Minimize environmental degradation in the Town of Southold from solid waste and hazardous substances and wastes.*

No disposal of solid or hazardous wastes in coastal waters is proposed as part of Vineyard Northeast. Additionally, the Proponent will require vessel operators, employees, and contractors who engage in offshore activities to participate in a marine trash and debris prevention training program. Measures to prevent, minimize, and mitigate spills into coastal waters will be undertaken by Vineyard Northeast. Therefore, Vineyard Northeast will be consistent with this policy to the extent applicable.

## Public Coast Policies

### *Public Coast Policy #9*

*Provide for public access to, and recreational use of, coastal waters, public lands, and public resources of the Town of Southold.*

While the Connecticut OECC crosses through the geographic boundary of the Town of Southold, Vineyard Northeast does not include an onshore cable landfall site in the Southold's coastal area. Thus, there will be no potential effect on access to Southold's coastal waters, public lands, and public resources.

## Working Coast Policies

### *Working Coast Policy #10*

*Protect the Town of Southold's water-dependent uses and promote siting of new water-dependent uses in suitable locations.*

Vineyard Northeast is an offshore wind energy development located in the waters of the outer continental shelf. Transmission of that energy to land occurs through the geographic boundary of the Town of Southold's coastal area. Therefore, Vineyard Northeast will be consistent with this policy to the extent practicable.

Installation will be of limited duration and geographic footprint. The installation of buried offshore export cables is not anticipated to negatively impact the Town of Southold's water-dependent uses, nor impede the siting of future water-dependent uses in the Town of Southold.

### *Working Coast Policy #11*

*Promote sustainable use of living marine resources in the Town of Southold.*

Vineyard Northeast will be consistent with this policy to the extent practicable through avoidance, minimization, and monitoring measures as detailed in the COP. Installation will be of limited duration and geographic footprint and will have limited negative impact on living marine resources in Long Island Sound. An analysis of ocean industries is included in Section 5.1 of COP Volume II.

### *Working Coast Policy #12*

*Protect agricultural lands in the Town of Southold.*

Vineyard Northeast will consist of buried offshore export cables in Long Island Sound and will not impact agricultural lands in the Town of Southold; therefore, this policy is not applicable.

***Working Coast Policy #13***

*Promote appropriate use and development of energy and mineral resources.*

As a renewable energy project, Vineyard Northeast will be consistent with this policy.

## 3.5 Other Local Waterfront Revitalization Programs

Currently, of the 50 municipalities along the New York State Long Island Sound shore, ten have approved LWRPs. Vineyard Northeast will not traverse through the geographic coastal boundaries of:

- Town of Smithtown LWRP
- Village of Lloyd Harbor LWRP
- Village of Bayville LWRP
- Village of Greenport LWRP
- Village of Ocean Beach LWRP
- Village of Sag Harbor LWRP
- Village of Head of the Harbor and Nissequogue LWRP
- New York City LWRP

No reasonably foreseeable coastal effects are anticipated to these LWRPs due to the offshore export cables' distance to their boundaries; the cables being buried beneath the seafloor to the extent feasible; and cable installation activities being localized and temporary in scope.

# 4 Conclusion

The Proponent has demonstrated that the proposed action described herein and in the Vineyard Northeast COP complies with the applicable enforceable policies of the approved NYS CMP, Long Island Sound CMP, and LWRPs and will be conducted in a manner consistent with such programs.

# 5 References and Incorporation by Reference


[BOEM] Bureau of Ocean Energy Management. 2013. Guidelines for providing information on fisheries for renewable energy development on the Atlantic Outer Continental Shelf pursuant to 30 CFR Part 585.

[BOEM] Bureau of Ocean Energy Management. 2014. Commercial wind lease issuance and site assessment activities on the Atlantic Outer Continental Shelf offshore Massachusetts: Revised Environmental Assessment. OCS EIS/EA BOEM 2014-603. US Department of the Interior, Bureau of Ocean Energy Management, Herndon, VA. 674 pp. http://www.boem.gov/Revised-MA-EA-2014/

Baird. 2019. Vessel navigation through the proposed Rhode Island/Massachusetts and Massachusetts wind energy areas. 13057.301.R1.RevD. Letter to USCG Proposed layout from RI-MA Leaseholders. (USCG-2019-0131-0046). https://www.regulations.gov/document?D=USCG-2019-0131-0046

Davis JP, Sisson RT. 1988. Aspects of the biology relating to the fisheries management of New England population of the whelks, *Busycotypus canaliculatus* and *Busycon carica*. J. Shellfish Res. 7:453-460.

Goyert HF, Gardner B, Sollmann R, Veit RR, Gilbert AT, Connelly EE, Williams KA. 2015. Predicting the offshore distribution and abundance of marine birds from shipboard surveys, using a hierarchical community distance sampling model. Final Report to the Department of Energy Wind and Water Power Technologies Office, 2015.

Kirkpatrick AJ, Benjamin S, DePiper G, Murphy T, Steinbeck S, Demarest C. 2017. Socio-economic impact of outer continental shelf wind energy development on fisheries in the U.S. Atlantic. OCS Study BOEM 2017-012. Prepared under BOEM Interagency Agreement No: M12PG00028 by National Oceanic and Atmospheric Administration National Marine Fisheries Service Northeast https://espis.boem.gov/final%20reports/5580.pdf

Kneebone J, Cappizzano C. 2020. A multifaceted assessment of baseline recreational fishing effort for highly migratory species in southern New England and the associated wind energy areas.

[NEODP] Northeast Ocean Data Portal [Internet]. 2021. Northeast ocean data: maps and data for ocean planning in the northeastern United States. http://www.northeastoceandata.org/data-explorer/

[NOAA] National Oceanic and Atmospheric Administration. 2021. Socioeconomic impacts of Atlantic offshore wind development. [updated 2021 March 11; accessed 2021 May 10]. https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development

[NOAA] National Oceanic and Atmospheric Administration. 2023. Program change request NY-2022-3 – Approval for renewable energy geographic location description. [Accessed 2023 September]. Coastal Zone Management Act - Proposed Change (noaa.gov)

[NOAA CZM and NYSDOS] National Oceanic and Atmospheric Administration Office of Coastal Zone Management and New York State Department of State. 2023. New York State Coastal Management Program and Final Environmental Impact Statement. Available online at https://dos.ny.gov/system/files/documents/2023/04/revised-nys-cmp-2023_0.pdf.

[NYSDOS] New York State Department of State. 1999. Long Island Sound Coastal Management Program. Available online at: https://dos.ny.gov/system/files/documents/2020/02/liscmp.pdf.

[NYSDOS GIG] New York State Department of State Geographic Information Gateway. 2023. Coastal Atlas: use the interactive NY coastal atlas for planning activities: communities with local waterfront revitalization programs; significant coastal fish & wildlife habitat; scenic areas of statewide significance; long island sound coastal management program; New York geographic location descriptions. [Accessed September 2023]. Coastal Atlas | New York OPD Geographic Information Gateway (arcgis.com)

Raoux A, Tecchio S, Pezy JP, Lassalle G, Degraer S, Wilhelmsson D, Cachera M, Ernande B, Le Guen C, Haraldsson M, Grangeré K. 2017. Benthic and fish aggregation inside an offshore wind farm: Which effects on the trophic web functioning? Ecological Indicators, 72, pp.33-46.

Riefolo L, Lanfredi C, Azzellino A, Tomasicchio GR, Felice DA, Penchev V, Vicinanza D. Offshore wind turbines: an overview of the effects on the marine environment. Presented at: 26th International Ocean and Polar Engineering Conference 2016. International Society of Offshore and Polar Engineers. 2016 June; Rhodes, Greece.

Staudinger MD, Goyert H, Suca JJ, Coleman K, Welch L, Llopiz JK, Wiley D, Altman I, Applegate A, Auster P, et al. 2020. The role of sand lances (Ammodytes sp.) in the northwest Atlantic ecosystem: a synthesis of current knowledge with implications for conservation and management. Fish Fish.:1–34. doi:10.1111/faf.12445.

Town of East Hampton. 2008. Local Waterfront Revitalization Program. [accessed 2023 September]. https://docs.dos.ny.gov/opd-lwrp/LWRP/East%20Hampton_T/Index.html

Town of Southold. 2014. Local Waterfront Revitalization Program. [accessed 2023 September]. https://southoldtownny.gov/274/Local-Waterfront-Revitalization-Program

[USCG] United States Coast Guard. 2020. The areas offshore of Massachusetts and Rhode Island port access route study (MARIPARS). USCG-2019-0131. [accessed 2020 May 27]. https://www.regulations.gov/document?D=USCG-2019-0131-0101

[USDOE MMS] United States Department of Energy, Minerals Management Service. 2009. Final environmental impact statement for the proposed Cape Wind Energy Project, Nantucket Sound, Massachusetts (Adopted). DOE. DOE/EIS-0470. https://www.boem.gov/Cape-Wind-FEIS/

Veit RR, Perkins SA. 2014. Aerial surveys for roseate and common terns south of Tuckernuck and Muskeget Islands July-September 2013. OCS Study BOEM 2014-665.

Veit RR, White TP, Perkins SA, Curley S. 2016. Abundance and distribution of seabirds off southeastern Massachusetts, 2011-2015: Final Report. OCS Study. Sterling, Virginia: U.S. Department of the Interior, Bureau of Ocean Energy Management.