New England Wind 1 Connector

Notice of Intent
Massachusetts Wetland Protection Act (M.G.L. c. 131 §40)
Edgartown Wetland Protection Bylaw

March 23, 2022

Submitted by
Park City Wind LLC

Submitted to
Edgartown Conservation Commission
P.O. Box 5130
Edgartown, MA 02539

Prepared by
Epsilon Associates, Inc.
March 23, 2022

Mr. Edward Vincent, Jr., Chairman
Edgartown Conservation Commission
Town Hall, 2nd Floor
P.O. Box 5130
Edgartown, MA 02539

Subject: Submittal of Notice of Intent Application
New England Wind 1 Connector – Edgartown, MA

Dear Mr. Vincent:

On behalf of Park City Wind LLC (the Proponent), I am pleased to submit this Notice of Intent
(NOI) application and accompanying information for the installation of two offshore export
cables beneath the ocean floor within Edgartown’s offshore waters.

By this submittal, we hereby request that the Edgartown Conservation Commission
immediately refer the Project to the Martha’s Vineyard Commission in order to initiate their
review. We understand that the conservation commission will not commence its public
hearings on this Project until the Martha’s Vineyard Commission has completed its review.

We are committed to continued work with Massachusetts, BOEM, tribal, local, and regional
officials, fishermen, and other stakeholders to maximize the benefits of this unique, timely,
and important project. Your timely referral to the Martha’s Vineyard Commission will help to
accomplish this goal.

Sincerely,

[Signature]

Hans P. van Lingen, State Permitting Manager
Park City Wind LLC

Enclosure
New England Wind 1 Connector

Notice of Intent
Massachusetts Wetlands Protection Act (M.G.L. c. 131 §40)
Edgartown Wetland Protection Bylaw

Submitted to:
EDGARTOWN CONSERVATION COMMISSION
P.O. BOX 5130
EDGARTOWN, MA 02539

Submitted by:
PARK CITY WIND LLC
125 High Street, 6th Floor
Boston, MA 02110

Prepared by:
EPSILON ASSOCIATES, INC.
3 Mill & Main Place, Suite 250
Maynard, MA 01754

In association with:
FOLEY HOAG LLP
STANTEC, INC.
GEO SUBSEA LLC

March 23, 2022
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**FIGURES**

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- Figure 2: Offshore Export Cable Corridor in Edgartown, NOAA Chart
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**ATTACHMENT C**

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**FILING FEE INFORMATION**

- Wetland Fee Transmittal Form
- Copy of Checks
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<th>Page</th>
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<td>21</td>
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</table>
A. General Information

1. Project Location (Note: electronic filers will click on button to locate project site):

N/A (Offshore Linear Project) Edgartown 02539
a. Street Address b. City/Town c. Zip Code

Latitude and Longitude:
N/A N/A

d. Latitude e. Longitude

f. Assessors Map/Plat Number N/A

g. Parcel /Lot Number

2. Applicant:

Hans van Lingen
a. First Name b. Last Name

Park City Wind LLC

c. Organization

d. Street Address 125 High Street, 6th Floor

Boston e. City/Town f. State g. Zip Code

(401) 714-2584 h. Phone Number

hans.vanlingen@avangrid.com i. Fax Number

j. Email Address

3. Property owner (required if different from applicant): □ Check if more than one owner

a. First Name b. Last Name

Commonwealth of Massachusetts c. Organization

d. Street Address

e. City/Town f. State g. Zip Code

h. Phone Number i. Fax Number

j. Email address

4. Representative (if any):

Holly Johnston
a. First Name b. Last Name

Epsilon Associates Inc. c. Company

d. Street Address 3 Mill and Main Place, Suite 250

Maynard e. City/Town f. State g. Zip Code

(802) 989-0061 h. Phone Number

hjohnston@epsilonassociates.com i. Fax Number

j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

$1,950.00 $962.50 $987.50

a. Total Fee Paid b. State Fee Paid c. City/Town Fee Paid
A. General Information (continued)

6. General Project Description:
   Installation of two 275-kV offshore electric transmission cables within Edgartown waters.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

1. ☐ Single Family Home
2. ☐ Residential Subdivision
3. ☐ Commercial/Industrial
4. ☐ Dock/Pier
5. ☒ Utilities
6. ☐ Coastal engineering Structure
7. ☐ Agriculture (e.g., cranberries, forestry)
8. ☐ Transportation
9. ☐ Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☒ Yes  ☐ No

   If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

Water-dependent use (310 CMR 1053(3)(l))

2. ☒ Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

   Edgartown
   a. County N/A
   b. Certificate # (if registered land) N/A
   c. Book N/A
   d. Page Number N/A

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.

2. ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

   Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.
Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont’d)

<table>
<thead>
<tr>
<th>Resource Area</th>
<th>Size of Proposed Alteration</th>
<th>Proposed Replacement (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. □ Bank</td>
<td>1. linear feet</td>
<td>2. linear feet</td>
</tr>
<tr>
<td>b. □ Bordering Vegetated Wetland</td>
<td>1. square feet</td>
<td>2. square feet</td>
</tr>
<tr>
<td>c. □ Land Under Waterbodies and Waterways</td>
<td>1. square feet</td>
<td>2. square feet</td>
</tr>
<tr>
<td></td>
<td>3. cubic yards dredged</td>
<td></td>
</tr>
<tr>
<td>d. □ Bordering Land Subject to Flooding</td>
<td>Size of Proposed Alteration</td>
<td>Proposed Replacement (if any)</td>
</tr>
<tr>
<td></td>
<td>1. square feet</td>
<td>2. square feet</td>
</tr>
<tr>
<td></td>
<td>3. cubic feet of flood storage lost</td>
<td>4. cubic feet replaced</td>
</tr>
<tr>
<td>e. □ Isolated Land Subject to Flooding</td>
<td>1. square feet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. cubic feet of flood storage lost</td>
<td>3. cubic feet replaced</td>
</tr>
<tr>
<td>f. □ Riverfront Area</td>
<td>T. Name of Waterway (if available) - specify coastal or inland</td>
<td></td>
</tr>
<tr>
<td>2. Width of Riverfront Area (check one):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 25 ft. - Designated Densely Developed Areas only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 100 ft. - New agricultural projects only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 200 ft. - All other projects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Total area of Riverfront Area on the site of the proposed project:</td>
<td>square feet</td>
<td></td>
</tr>
<tr>
<td>4. Proposed alteration of the Riverfront Area:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. total square feet</td>
<td>b. square feet within 100 ft.</td>
<td>c. square feet between 100 ft. and 200 ft.</td>
</tr>
<tr>
<td>5. Has an alternatives analysis been done and is it attached to this NOI?</td>
<td>Yes □ No □</td>
<td>6. Was the lot where the activity is proposed created prior to August 1, 1996? Yes □ No □</td>
</tr>
</tbody>
</table>

3. ☑ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

**Note:** for coastal riverfront areas, please complete Section B.2.f. above.
B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont’d)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

<table>
<thead>
<tr>
<th>Resource Area</th>
<th>Size of Proposed Alteration</th>
<th>Proposed Replacement (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ☐ Designated Port Areas</td>
<td>Indicate size under Land Under the Ocean, below</td>
<td></td>
</tr>
<tr>
<td>b. ☒ Land Under the Ocean</td>
<td>~65.8-73.9 acres (trench, skids, dredging, protection, anchoring)</td>
<td>1. square feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. cubic yards dredged</td>
</tr>
<tr>
<td>c. ☐ Barrier Beach</td>
<td>Indicate size under Coastal Beaches and/or Coastal Dunes below</td>
<td></td>
</tr>
<tr>
<td>d. ☐ Coastal Beaches</td>
<td>1. square feet</td>
<td>2. cubic yards beach nourishment</td>
</tr>
<tr>
<td>e. ☐ Coastal Dunes</td>
<td>1. square feet</td>
<td>2. cubic yards dune nourishment</td>
</tr>
<tr>
<td>f. ☐ Coastal Banks</td>
<td>1. linear feet</td>
<td></td>
</tr>
<tr>
<td>g. ☐ Rocky Intertidal Shores</td>
<td>1. square feet</td>
<td></td>
</tr>
<tr>
<td>h. ☐ Salt Marshes</td>
<td>1. square feet</td>
<td>2. sq ft restoration, rehab., creation</td>
</tr>
<tr>
<td>i. ☐ Land Under Salt Ponds</td>
<td>1. square feet</td>
<td></td>
</tr>
<tr>
<td>j. ☒ Land Containing Shellfish</td>
<td>~4.7 acres (direct trenching impact)</td>
<td>1. square feet</td>
</tr>
<tr>
<td>k. ☐ Fish Runs</td>
<td>Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above</td>
<td></td>
</tr>
<tr>
<td>l. ☐ Land Subject to Coastal Storm Flowage</td>
<td>1. cubic yards dredged</td>
<td></td>
</tr>
</tbody>
</table>

4. ☐ Restoration/Enhancement
   If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.
   a. square feet of BVW
   b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings
   a. number of new stream crossings
   b. number of replacement stream crossings
C. Other Applicable Standards and Requirements

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in Estimated Habitat of Rare Wildlife as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the Massachusetts Natural Heritage Atlas or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

   a. ☒ Yes ☐ No

   If yes, include proof of mailing or hand delivery of NOI to:

   Natural Heritage and Endangered Species Program
   Division of Fisheries and Wildlife
   1 Rabbit Hill Road
   Westborough, MA 01581

   b. Date of map

   2021

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); OR complete Section C.2.f, if applicable. If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).

c. Submit Supplemental Information for Endangered Species Review∗

   1. ☒ Percentage/acreage of property to be altered:

      (a) within wetland Resource Area

         na percentage/acreage

      (b) outside Resource Area

         na percentage/acreage

   2. ☐ Assessor's Map or right-of-way plan of site

   2. ☒ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

      (a) ☒ Project description (including description of impacts outside of wetland resource area & buffer zone)

      (b) ☒ Photographs representative of the site

∗ Some projects not in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.
C. Other Applicable Standards and Requirements (cont’d)

(c) [ ] MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm). Make check payable to “Commonwealth of Massachusetts - NHESP” and mail to NHESP at above address.

Projects altering 10 or more acres of land, also submit:

(d) [ ] Vegetation cover type map of site

(e) [ ] Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. [ ] Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. [x] Separate MESA review ongoing. 17-37398
   a. NHESP Tracking #
   b. Date submitted to NHESP

3. [ ] Separate MESA review completed. Include copy of NHESP “no Take” determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

   a. [ ] Not applicable – project is in inland resource area only  
   b. [x] Yes  [ ] No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries - Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries - North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP’s Boston Office. For coastal towns in the Southeast Region, please contact MassDEP’s Southeast Regional Office.
C. Other Applicable Standards and Requirements (cont’d)

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
   a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). Note: electronic filers click on Website.
   
   b. ACEC

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
   a. ☐ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
      2. ☐ A portion of the site constitutes redevelopment
      3. ☐ Proprietary BMPs are included in the Stormwater Management System.
   
   b. ☒ No. Check why the project is exempt:
      1. ☐ Single-family house
      2. ☐ Emergency road repair
      3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☐ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.
D. Additional Information (cont’d)

3. ☐ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

   Marine Survey Chart
   a. Plan Title
   b. Compiled by Epsilon Associates and GeoSubsea
   c. Prepared By
   d. Final Revision Date
   e. Signed and Stamped by
   f. Additional Plan or Document Title
   g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☒ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☒ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☒ Attach NOI Wetland Fee Transmittal Form


E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

   Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

   51228
   2. Municipal Check Number
   51224
   4. State Check Number
   Epsilon Associates, Inc.
   6. Payor name on check: First Name
   March 21, 2022
   3. Check date
   March 21, 2022
   5. Check date
   7. Payor name on check: Last Name
Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant: ___________________________ Date: March 23, 2022

2. Signature of Property Owner (if different): ___________________________ Date: March 23, 2022

3. Signature of Representative (if any): ___________________________ Date: March 23, 2022

For Conservation Commission:
Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a copy of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:
If the applicant has checked the “yes” box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.
ATTACHMENT A - PROJECT NARRATIVE

1.0 Introduction and Project Overview

Park City Wind LLC (the Proponent) is in the process of developing and permitting an offshore wind project with a nameplate generating capacity of approximately 800 megawatts (MW). The offshore wind farm for Park City Wind will be located in federal waters, specifically in the northern portion of Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0534 which, at its closest point, is just over 19 miles (31 kilometers [km]) from the southwest corner of Martha’s Vineyard.

The New England Wind 1 Connector (NE Wind 1 Connector, the “Project”) is comprised of the Massachusetts-jurisdictional elements of the broader Park City Wind project (i.e., portions of the offshore transmission that are in Massachusetts waters, as well as the onshore transmission, the onshore substation, and the grid interconnection in the town of Barnstable). Figure 1 in Attachment B provides an overview of the NE Wind 1 Connector.

Project components within Edgartown’s offshore waters are limited to an approximately 12.4-mile (20-km) stretch of the Offshore Export Cable Corridor (OECC) defined for cable installation between the islands of Nantucket and Martha’s Vineyard. This installation corridor was thoroughly evaluated and approved for the Vineyard Wind Connector, and it remains largely the same for the NE Wind 1 Connector. One difference is the OECC has been widened by approximately 985 feet (300 m) to the west, and along the stretch through the Muskeget Channel area it has also been widened by approximately 985 feet (300 m) to the east, bringing its typical width to approximately 3,800 feet (1,150 m) and its range from approximately 3,100 to 5,100 feet (950 to 1,550 m). Since the two cables from the Vineyard Wind Connector will already be installed within the previously identified OECC, this widening will provide greater flexibility throughout the route design process as part of ongoing efforts to avoid and minimize impacts to sensitive habitats.

The areas of OECC widening were surveyed in 2020. The NE Wind 1 Connector includes two offshore export cables, both of which will be located within the OECC, and the Proponent has performed a comprehensive assessment of the geophysical and geotechnical conditions along the route, including the presence of seabed features and considerations such as sand waves, magnetic anomalies, coarse deposits, rocks or boulders, water depths, and seabed slopes. Within the OECC, the two export cables will be installed with sufficient separation to allow for safe installation and any future repair work, if required. The OECC within Edgartown waters is shown on Figure 2 in Attachment B.

The Proponent is seeking approval under the Massachusetts Wetlands Protection Act Regulations as a Limited Project for alteration of Land Under the Ocean and Land Containing Shellfish within Edgartown’s offshore waters (see Section 5.2); this is despite the fact that the Proponent believes the Project does meet the wetland performance standards. Approval is also sought under the Edgartown Wetlands By-law. The alteration includes the installation of two offshore export cables.
as well as associated vessel anchoring and potential placement of cable protection, if needed. Each of these activities and their associated impacts to wetland resource areas in Edgartown are described in this Notice of Intent (NOI) application.

1.1 Current Permitting Status

The Park City Wind project and NE Wind 1 Connector are currently under extensive review by a range of federal, state, and regional agencies to ensure that impacts to the marine environment are avoided and minimized.

All proposed elements of the larger Park City Wind project are being reviewed by BOEM and other participating federal and state regulatory agencies under the National Environmental Policy Act (NEPA). This review will include preparation of Draft and Final Environmental Impact Statements developed by an independent third party in consultation with review agencies and stakeholders (the Draft Environmental Impact Statement [DEIS] and Final Environmental Impact Statement [FEIS] will be publicly available documents as part of the federal review).

While the federal review processes are underway, state-level environmental review for the NE Wind 1 Connector is being led by the Executive Office of Energy and Environmental Affairs (EEA), Massachusetts Environmental Policy Act (MEPA) Office (which completed its review on January 28, 2022), and the Energy Facilities Siting Board (EFSB).

Rigorous environmental reviews will be highly scrutinized by a host of other state and federal permitting and review agencies including the U.S. Army Corps of Engineers (USACE), U.S. Environmental Protection Agency (EPA), Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Division of Marine Fisheries (DMF), and Natural Heritage and Endangered Species Program (NHESP). In addition, portions of the NE Wind 1 Connector will be reviewed by the Cape Cod Commission and Martha’s Vineyard Commission.

The principal environmental permits, reviews, and approvals required for the Park City Wind project and NE Wind 1 Connector (as well as their approval status as of this submission) are listed in Table 1-1. By meeting the requirements for each of these review programs, permits, and approvals, the Project will demonstrate compliance with applicable state and local environmental policies.
Table 1-1  Environmental Permits, Reviews, and Approvals for the New England Wind 1 Connector and Park City Wind

<table>
<thead>
<tr>
<th>Agency/Regulatory Authority</th>
<th>Permit/Approval</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal (for Park City Wind)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bureau of Ocean Energy Management (BOEM)²</td>
<td>Construction and Operations Plan (COP) approval/Record of Decision (ROD)</td>
<td>COP filed July 2020</td>
</tr>
<tr>
<td></td>
<td>National Environmental Policy Act (NEPA) Environmental Review</td>
<td>Initiated by BOEM June 30, 2021</td>
</tr>
<tr>
<td></td>
<td>Consultation under Section 7 of the Endangered Species Act (ESA) with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS), coordination with states under the Coastal Zone Management Act (CZMA), government-to-government tribal consultations, consultation under Section 106 of the National Historic Preservation Act (NHPA), and consultation with NMFS for Essential Fish Habitat</td>
<td>To be initiated by BOEM</td>
</tr>
<tr>
<td></td>
<td>Facilities Design Report and Fabrication &amp; Installation Report</td>
<td>To be filed (TBF)</td>
</tr>
<tr>
<td>U.S. Environmental Protection Agency (EPA)</td>
<td>EPA Permits under Section 316(b) of the Clean Water Act (CWA), including National Pollutant Discharge Elimination System (NPDES) Permit(s)</td>
<td>TBF</td>
</tr>
<tr>
<td></td>
<td>Outer Continental Shelf (OCS) Air Permit</td>
<td>TBF</td>
</tr>
<tr>
<td>U.S. Army Corps of Engineers (USACE)</td>
<td>Clean Water Act (CWA) Section 404 Permit Rivers and Harbors Act of 1899 Section 10 Individual Permit</td>
<td>Joint application TBF</td>
</tr>
<tr>
<td>U.S. National Marine Fisheries Service (NMFS)</td>
<td>Letter of Authorization (LOA) or Incidental Harassment Authorization</td>
<td>TBF</td>
</tr>
<tr>
<td>U.S. Coast Guard (USCG)</td>
<td>Private Aid to Navigation (PATON) authorization</td>
<td>TBF</td>
</tr>
<tr>
<td>Federal Aviation Administration</td>
<td>No Hazard Determination (for activities at construction staging areas and vessel transits, if required)</td>
<td>TBF</td>
</tr>
</tbody>
</table>

¹ In its review of the COP, BOEM must comply with its obligations under the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), the Magnuson-Stevens Fishery Conservation and Management Act, the Migratory Bird Treaty Act, the Clean Air Act, and the Endangered Species Act (ESA). Thus, BOEM coordinates and consults with numerous other federal agencies including the National Marine Fisheries Service (NMFS), United States Fish and Wildlife Service (USFWS), the Environmental Protection Agency (EPA), and the United States Coast Guard (USGC) during the review process. BOEM also coordinates with the state under the Coastal Zone Management Act (CZMA) to ensure that the project is consistent with the state’s coastal zone management program.
Table 1-1  Environmental Permits, Reviews, and Approvals for the New England Wind 1 Connector and Park City Wind (Continued)

<table>
<thead>
<tr>
<th>Agency/Regulatory Authority</th>
<th>Permit/Approval</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State/Massachusetts (for the NE Wind 1 Connector)</strong></td>
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</tr>
<tr>
<td>Energy Facilities Siting Board (EFSB)</td>
<td>G.L. c. 164, § 69 Approval</td>
<td>Filed May 28, 2020</td>
</tr>
<tr>
<td>Massachusetts Department of Public Utilities (DPU)</td>
<td>G.L. c. 164, § 72, Approval to Construct G.L. c. 40A, § 3 Zoning Exemption</td>
<td>Filed May 28, 2020</td>
</tr>
<tr>
<td>Massachusetts Department of Environmental Protection (MassDEP)</td>
<td>Chapter 91 Waterways License and Dredge Permit Water Quality Certification (Section 401 of the CWA)</td>
<td>Joint Application TBF</td>
</tr>
<tr>
<td>Massachusetts Department of Transportation (MassDOT)</td>
<td>Highway Access Permits (Barnstable)</td>
<td>TBF</td>
</tr>
<tr>
<td>Massachusetts Board of Underwater Archaeological Resources (MBUAR)</td>
<td>Special Use Permit 17-003 (issued to archaeologist, not Park City Wind LLC)</td>
<td>Permit renewal approved February 26, 2021</td>
</tr>
<tr>
<td>Natural Heritage and Endangered Species Program (NHESP)</td>
<td>Conservation and Management Permit (if needed)</td>
<td>TBF (if needed) (MESA Checklist pursuant to 321 CMR 10.18 filed March 3, 2022)</td>
</tr>
<tr>
<td>Massachusetts Historical Commission (MHC)</td>
<td>State Archaeologist Permit #4006 (950 C.M.R. § 70.00) (issued to archaeologist, not Park City Wind LLC)</td>
<td>Permit #4006 for Reconnaissance Survey received May 12, 2020. Permit #3006 amended and extended March 2, 2021 (survey complete).</td>
</tr>
<tr>
<td>Massachusetts Division of Marine Fisheries (DMF)</td>
<td>Letter of Authorization and/or Scientific Permit (for surveys and pre-lay grapnel run)</td>
<td>TBF</td>
</tr>
<tr>
<td>Massachusetts Office of Coastal Zone Management (CZM) / Rhode Island Coastal Resources Management Council (CRMC)</td>
<td>Federal Consistency Determination (15 CFR 930.57)</td>
<td>Filed with COP as Appendix III-S</td>
</tr>
</tbody>
</table>
### Table 1-1 Environmental Permits, Reviews, and Approvals for the New England Wind 1 Connector and Park City Wind (Continued)

<table>
<thead>
<tr>
<th>Agency/Regulatory Authority</th>
<th>Permit/Approval</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td><strong>Regional</strong> (for portions of the NE Wind 1 Connector within regional jurisdiction)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cape Cod Commission (CCC)</td>
<td>Development of Regional Impact (DRI) Review (Barnstable County)</td>
<td>TBF</td>
</tr>
<tr>
<td>Martha’s Vineyard Commission (MVC)</td>
<td>DRI Review (Dukes County)</td>
<td>TBF</td>
</tr>
<tr>
<td><strong>Local</strong> (for portions of the NE Wind 1 Connector within local jurisdiction)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barnstable Conservation Commission</td>
<td>Order of Conditions (Massachusetts Wetlands Protection Act and, as applicable, municipal wetland non zoning bylaws)</td>
<td>TBF</td>
</tr>
<tr>
<td>Barnstable DPW and/or Town Council</td>
<td>Street Opening Permits/Grants of Location</td>
<td>TBF</td>
</tr>
<tr>
<td>Barnstable Planning/Zoning Zoning approvals (if necessary)</td>
<td></td>
<td>TBF</td>
</tr>
<tr>
<td>Edgartown Conservation Commission</td>
<td>Order of Conditions (Massachusetts Wetlands Protection Act [WPA] and, as applicable, municipal wetlands non zoning bylaws) for OECC within Edgartown waters</td>
<td>This application.</td>
</tr>
<tr>
<td>Nantucket Conservation Commission</td>
<td>Order of Conditions (Massachusetts WPA and, as applicable, municipal wetland non zoning bylaws) for OECC within Nantucket waters</td>
<td>Filed March 7, 2022</td>
</tr>
</tbody>
</table>

#### 2.0 Project Purpose and Public Benefits

The purpose of the Project is to deliver approximately 800 MW of clean, renewable wind energy to the New England electrical grid. By doing so, the Project will serve the public interest by increasing the reliability and diversity of the regional energy supply.

The NE Wind 1 Connector and Park City Wind are expected to create a range of environmental and economic benefits for southeastern Massachusetts, the Commonwealth as a whole, and the entire New England region. These benefits will extend across the design, environmental review, and permitting phase, the procurement, fabrication, and construction/commissioning phase, the multi-decade operating phase, as well as the future decommissioning effort.

Project benefits are expected to include:

- **Clean renewable energy at large scale and a high-capacity factor:** The location of the associated WTGs well offshore in a favorable wind regime, coupled with the efficiency of the WTGs, will enable the Project to deliver substantial quantities of power on a reliable basis, including during times of peak grid demand. WTGs for Park City Wind will be among the most efficient models currently available for offshore use. It is expected that the WTGs will be capable of operating with an annual capacity factor of approximately 50%.
Based on EPA data\(^2\) and assuming a Project generating capacity of approximately 800 MW, WTGs of this efficiency and capability will reduce ISO-NE CO\(_2\)e emissions by approximately 1.59 million tons per year. This is the equivalent of removing approximately 310,000 automobiles from the road. In addition, nitrogen oxide (NO\(_x\)) emissions across the New England grid are expected to be reduced by approximately 850 tons per year with sulfur dioxide (SO\(_2\)) emissions being reduced by approximately 450 tons per year.

- **Reducing winter energy price spikes**: The Project adds high and stable winter capacity factor offshore wind generation to the region, increasing resources available to meet electric demand needs with offshore wind-generated energy, freeing up natural gas resources to be used for necessary home heating demands. The Project will therefore be unaffected by the risk of potential fossil fuel constraints and will help alleviate price volatility. The Project could reduce the need to run the gas- and oil-burning Canal Units 1 and 2 on Cape Cod, especially during winter peak events when winds are high and conditions ideal for wind energy generation.

- **Improving the reliability of the electric grid in Southeastern Massachusetts**: The Project will connect to the bulk power system on Cape Cod, and thus will increase the supply of power to Barnstable County and other parts of southeastern Massachusetts, an area which has experienced significant recent (and planned) generation unit retirements. Because of its interconnection location and generation type, adding an additional approximately 800 MW of offshore wind generation to the current power generation portfolio will provide fuel diversification and enhance the overall reliability of power generation and transmission in the region and in particular the southeast Massachusetts area, which has seen, and will continue to see, substantial changes in generation capacity. This will mitigate future costs for ensuring reliable service for Massachusetts customers.

- **Additional economic benefits for the region**: Project construction will generate substantial economic benefits, including opportunities for regional maritime industries (tug charters, other vessel charters, dockage, fueling, inspection/repairs, provisioning).

- **New employment opportunities**: The Proponent is committed to spurring and facilitating the creation, development, growth, and sustainability of a long-term offshore wind industry in New England, including a robust local supply chain, a well-trained local workforce throughout development, construction, and operations activities, local port facilities capable of fabrication and construction of key project components, and advanced manufacturing capabilities, all of which will cement New England as a leader in

\(^2\) Based on avoided emission rates from EPA’s Emissions & Generation Resource Integrated Database eGRID2018(v2) released March 2020.
offshore wind. The Proponent estimates the Project will generate over 4,700 direct full-time equivalent (FTE) job years and 2,100 indirect FTE job years over its lifetime, primarily in Connecticut and Massachusetts.

Support for Massachusetts policies: The Project is entirely consistent with the Commonwealth’s Global Warming Solutions Act goals because supplying emissions-free energy to the New England electric grid will displace fossil fuel sources, including in Massachusetts, which would otherwise operate to supply that power.

A more extensive discussion of Project benefits was provided in Section 1.7 of the FEIR. The FEIR can be found at https://www.parkcitywind.com/permitting.

3.0 Existing Offshore Conditions

Offshore wind projects are unique infrastructure that utilize rapidly changing technologies deployed in a dynamic marine environment. The high-energy marine environment can cause features like shoals to be in a constant state of change, resulting in corresponding water depth changes. Experience in the offshore wind industry in Europe as well as offshore cable installations in the U.S. has demonstrated that use of an installation corridor can provide flexibility in the engineering and installation stages to maximize the likelihood of successful cable burial while also avoiding and minimizing environmental impacts.

Geological conditions within the OECC are well understood, and the site geology and conditions are suitable for cable installation. Through the OECC survey work completed as part of Vineyard Wind/Vineyard Wind Connector, supplemented by additional surveys in 2020, a large amount of survey data has been collected and the Proponent has a strong understanding of the OECC in terms of potential environmental impacts and construction feasibility. Prior to 2020 surveys, more than 2,307 nautical miles (4,272 km) of geophysical trackline data, 123 vibracores, 83 cone penetrometer tests, 82 benthic grab samples with still photographs, and 50 underwater video transects had already been gathered in support of OECC characterization. Further data collection was performed for the OECC expansion areas in 2020.

Using all these accumulated data, the Proponent has conducted a comprehensive geotechnical evaluation of the shallow subsurface conditions present along the OECC and has determined that cable installation is feasible. While geological conditions vary within the corridor, including limited locations with more challenging conditions for cable installation, conditions are overall within acceptable risk levels. In addition, reconnaissance survey work for Vineyard Wind/Vineyard Wind Connector, which included coverage of the western portion of Muskeget Channel and routes to the east of Horseshoe Shoal in Nantucket Sound, did not identify areas where conditions appeared more favorable for cable installation. To the contrary, such reconnaissance survey work identified features outside the OECC such as shoals, large concentrations of boulders, deep channels, and high currents that would make cable installation and maintenance in an alternate location more challenging. These factors would increase health and safety risk during installation and maintenance, risk of not achieving sufficient burial depths,
and risk of cable exposure. The Proponent has also assessed the OECC for installation feasibility, which includes ensuring that water depths are suitable for fully loaded cable installation vessels, slopes are workable for typical cable installation tools, sufficient room is available for anchoring, etc. Based on these detailed geotechnical and installation feasibility analyses, the Proponent has determined that the identified cable corridor is the most suitable for cable installation and the needs of Park City Wind/NE Wind 1 Connector.

Results from the marine surveys performed since 2017 have been used to identify the proposed OECC. This selection was addressed in detail in the MEPA environmental review process (Section 2.1.3.1 of the DEIR and Section 2.1.1 of the FEIR), and reflected selection of the shortest offshore route with the fewest environmental impacts while remaining technically suitable for cable installation.

The principal technical and environmental considerations and constraints factoring into the geography of the OECC include:

- Feasibility of cable installation, including required spacing from other cables;
- Burial risk assessment/work to limit possibilities of cable failure;
- Avoiding and/or minimizing impacts to special, sensitive, or unique (SSU) areas mapped in the Massachusetts OMP;
- Avoiding and/or minimizing anchorage areas and areas with mapped shipwrecks and boulders;
- Environmental and/or permitting constraints and avoidance of impacts;
- Minimizing cable length to reduce transmission losses and cost;
- Adequate capacity delivered to the grid connection point;
- Available landfall locations;
- Maintaining a water depth of at least 20 feet, and avoiding shoals;
- The route should not turn more than 30 degrees at a time, with a minimum turn radius of 165 feet (50 m);
- Avoiding slopes where the seafloor bathymetry changes dramatically;
- Crossing large seabed slopes and existing offshore cables in a perpendicular, or nearly perpendicular, orientation; and
- Crossing navigation corridors in a perpendicular orientation.
The offshore cable corridor within the jurisdiction of the Edgartown Conservation Commission is shown on Figure 2. The total length of the OECC within Edgartown waters is approximately 12.4 miles (20 km). The Project will avoid core habitat for whales, and the corridor will avoid and minimize impacts to hard/complex bottom habitat mapped in the OECC (see Section 3.1).

3.1 Special, Sensitive, and Unique (SSU) Habitats

The Massachusetts Ocean Management Plan (OMP) identifies “special, sensitive, and unique” (SSU) habitats to which impacts should be avoided and minimized, where practicable. For cable projects generally, these SSU areas include hard/complex bottom, eelgrass, and marine mammal habitats such as core habitat for the North Atlantic Right Whale. Some habitats are known to change and move over time (e.g., complex bottom formed by sand wave fields) while others are prime habitats despite seasonal and long-term changes in organism abundance (e.g., eelgrass).

As described above, the Project will avoid impacts to core habitat for whales, and will avoid and minimize impacts to hard or complex bottom habitat (see Figure 3). The Proponent’s marine surveys have been used to refine the OMP mapping of hard bottom and complex bottom within the OECC based on higher-resolution survey data, with results depicted on Figure 3 as well as the map set provided in Attachment C. As shown on Figure 3 and in Attachment C, within Edgartown waters the preliminary cable alignments within the OECC avoid areas of complex bottom when possible, although in some areas complex bottom covers the full width of the corridor. In addition, most of the OECC within Edgartown waters is free of hard bottom, although hard bottom does cover the full width of the installation corridor in its southernmost reaches in Edgartown waters (see Section 3.1.2).

The discussion below addresses hard bottom and complex bottom mapped within the OECC in Edgartown waters based on the Proponent’s marine survey results; no eelgrass is present within the OECC in Edgartown waters. Eelgrass historically present in the Cape Poge area around the northeast corner of Edgartown is well outside the OECC, and no impacts from the Project are anticipated.

3.1.1 Hard/Complex Seafloor

This broad characterization of the seafloor was first developed by the Massachusetts Office of Coastal Zone Management (CZM) and is documented in the “Regional Sediment Resource Management Work Group Report – 2014 Massachusetts Ocean Management Plan Update” (CZM, 2014). Defined by CZM in this report, complex seafloor is “a morphologically rugged seafloor characterized by high variability in bathymetric aspect and gradient.” CZM (2014) determined the complex seafloor areas by utilizing a USGS 30-meter by 30-meter low-resolution bathymetry dataset and calculated areas of high rugosity using a Vector Ruggedness Measure (VRM) tool, based on a method developed by Sappington et al. (2007) with a 9x9-cell neighborhood size. The values produced by the VRM analysis range from 0 to 1, with 0 indicating no seabed complexity.
and 1 indicating complete seabed complexity. The seabed was classified as complex for VRM values greater than 3/8 standard deviation from the mean value of the whole dataset (CZM, 2014).

Using the CZM (2014) analysis as a guide, which is consistent with the hard/complex bottom revised for the 2021 OMP, the Proponent performed an analysis of multibeam depth sounding data. A VRM was performed on the 0.5-meter by 0.5-meter high-resolution bathymetry collected along the OECC using a 9-cell search radius. Polygons were then created from the VRM grids by clipping the extents to include only values greater than the mean value plus 3/8 standard deviation which resulted in a cutoff of 0.0035 and greater to indicate a complex seafloor. Results of the ruggedness analysis on the 2018 dataset show much more detail and complexity due to the data point spacing considered. Smaller, localized features exhibiting high enough slope gradients and sharp bathymetry aspects are in some areas individually mapped.

Results indicate increased seafloor ruggedness is associated with the bedform habitat, hard bottom habitat, and biogenic structures/surface organics habitat. An overall boundary for the hard/complex seafloor characterization presented in the OMP is thus the combination of all three of these benthic habitats. For the purposes of the NE Wind 1 Connector, the Proponent has separated areas of bedforms (i.e., complex bottom) from hard bottom, since these benthic environments are distinctly different habitats.

3.1.2 Hard Bottom Habitat

Hard bottom areas in portions of Nantucket Sound and Muskeget Channel include high concentrations of coarse material (>50% gravel, cobbles, boulders in a sand matrix) which, even though considered an unconsolidated sediment surface, form a relatively hard substrate to which sessile benthic organisms can attach. Most of these are associated with glacial moraine deposits and consist of rock piles and scattered individual rocks (i.e., boulders) of varying abundance on the seafloor. Some areas are predominantly gravel and cobbles with the sand matrix and a sparse distribution of boulder-sized material. No bedrock outcrops exist within the OECC.

As shown on Figure 3 and in the plan set depicting results from the marine surveys within Edgartown waters (see Attachment C), areas of the OECC that exhibit coarse deposits and associated rugged seafloor topography are present in the Muskeget Channel area, where hard bottom covers the full width of the installation corridor. It is important to note that while some impacts to hard bottom are unavoidable in these areas, almost all of the OECC will remain unaffected by the cable installation; rather, two narrow strips of seabed, one for each cable alignment, will be impacted by the cable installation.

3.1.3 Complex Bottom

As shown on Figure 3 and in Attachment C, within Edgartown waters the preliminary cable alignments within the OECC avoid areas of complex bottom when possible, although in some areas complex bottom covers the full width of the corridor. In some areas along the OECC,
bedform fields (i.e., ripples, megaripples, and sand waves) of varying sizes are present and are morphologically dynamic. Due to the mobility of the sediments in this habitat, development of infaunal communities is greatly reduced compared to more stable seabed areas. While this equates to a lower productive infaunal benthic regime, the bottom morphology and dynamics of the fields is reportedly attractive to finfish. The areal extent of these bedforms is constantly changing with subtle environmental shifts in water depths, sediment grain size, and current flow. This is a laterally extensive habitat due to the predominantly sandy seafloor and tidal currents flowing over the bottom and constantly reworking sediment.

Some areas of Nantucket Sound (including within the Town of Edgartown waters) have active sand waves that can exceed 12 feet (3.7 m) in height. Marine survey work has enabled the Proponent to assess these areas, which may require some pre-cable-laying dredging to ensure that the necessary burial depth can be achieved and maintained. The stretch of the OECC where sand wave dredging may be needed is largely coincident with areas mapped as complex bottom as shown on Figure 3. It is important to note that dredging, if performed, would not occur along the entire stretch where sand waves may be present; rather, dredging would only be performed to remove the tops of each sand wave to the extent needed at the time of construction to ensure sufficient burial within the stable seabed. Dredging will be performed as close in time to cable installation as possible to avoid mobile sand waves re-covering the dredged area.

A number of possible sand wave dredging techniques are under consideration and are described in detail in Section 4.2.4. For both offshore export cables combined, the Proponent’s engineers anticipate that the length of dredging in Edgartown waters could be approximately 2.3 miles (3.8 km). It is important to note that since sand waves are mobile features with shifting morphology, this length of dredging is an estimate.

### 3.1.4 Eelgrass

Eelgrass (Zostera marina) beds form an important habitat in the coastal environment that provides refuge and sustenance for a large number and variety of species, as well as serving as a critical component of sediment and shoreline stabilization. Preliminary routing for the Project considered data from MassDEP’s Eelgrass Mapping Project as well as the OMP, and the Proponent has performed specific eelgrass surveys within the OECC. The Proponent’s marine surveys have not detected any eelgrass within the OECC in Edgartown waters, and the Project is not expected to have any impacts on eelgrass beds inside or outside of Edgartown waters.

### 3.2 Shellfish Habitat

As shown on Figure 4 in Attachment B, the DMF has mapped suitable shellfish habitat for Surf Clam and Blue Mussel along portions of the OECC that passes through Edgartown waters. These areas are believed to be suitable for shellfish based on the expertise of DMF and local Shellfish Constables, input from commercial fishermen, and information contained in maps and studies of
shellfish in Massachusetts. DMF shellfish suitability areas include sites where shellfish have been observed since the mid-1970s but may not currently support shellfish, and therefore represent potential habitat areas.

Anticipated Project impacts to mapped shellfish habitat are discussed in Sections 4.3 and 5.3 of this NOI.

3.3 Rare Species Habitat

The Massachusetts NHESP has mapped all state waters within Nantucket Sound and Muskeget Channel as priority habitat of state-listed rare species (Massachusetts Natural Heritage Atlas, 15th Edition, 2021). As a result, the portion of the OECC that passes within Edgartown waters will necessarily cross priority habitat (see Figure 5 in Attachment B).

The Proponent is consulting with the NHESP in accordance with the Massachusetts Endangered Species Act (MESA) (321 CMR 10.14) to ensure that impacts to offshore rare species are avoided or minimized to greatest extent practicable. The Proponent included a draft MESA Checklist prepared pursuant to 321 CMR 10.18 in the FEIR. The Proponent submitted a complete MESA Checklist to NHESP for review in March 2022. Pursuant to 310 CMR 10.37, the Proponent will submit a copy of this NOI to the NHESP to complete MESA review.

4.0 Cable Installation Activities and Impacts

This section describes the various methods of cable installation that could be used to install the two proposed offshore export cables within the OECC in Edgartown waters. It also includes a description of the anticipated impacts to the seafloor from cable installation and associated activities (e.g., vessel anchoring).

4.1 General Installation Methods

The entirety of the two offshore export cables, including the length within Edgartown waters, will have a target burial depth of 5 to 8 feet (1.5 to 2.5 meters) below stable seabed, which Project engineers have determined is more than twice the burial depth that is required to protect the cables from potential anchor strikes or fishing activities. Several possible techniques may be used during cable installation to achieve the target depth (see description below). Generally, jetting methods are better suited to sands or soft clays, whereas a mechanical plow or mechanical trenching tool is better suited to stiffer soil conditions but is also effective in a wider range of soil conditions. While the actual offshore export cable installation method(s) will be determined by the cable installer based on site-specific environmental conditions and the goal of selecting the most appropriate tool for achieving adequate burial depth, the Proponent will prioritize the least environmentally impactful cable installation alternative(s) that is/are practicable for each segment of cable installation.
The majority of the export cables are expected to be installed using simultaneous lay-and-bury via jetting techniques (e.g., jet-plow or jet trenching) or mechanical plow. However, the various installation methods identified below are retained as options to maximize the likelihood of achieving sufficient burial depth while minimizing the need for possible cable protection measures and accommodating varying weather conditions. The two most common methods are described below under “Typical Techniques.” Additional techniques that may be used more rarely are described below under “Additional Possible Specialty Techniques.” These specialty methods may be needed in areas of coarser or more consolidated sediment, rocky bottom, or other difficult conditions to ensure adequate burial depth is achieved (though it is worth noting that the OECC alignment avoids and minimizes passage through areas of hard bottom to the extent feasible).

**Typical Techniques**

- **Jetting techniques (e.g., jet-plow or jet-trencher):** Based around a seabed tractor, a sled, or directly suspended from a vessel, the tool typically has one or two arms that extend into the seabed (or alternatively a plow share that runs through the seabed) equipped with nozzles which direct pressurized seawater into the seafloor. As the tool moves along the installation route, the pressurized seawater fluidizes the sediment allowing the cable to sink under its own weight to the appropriate depth or be lowered to depth by the tool. Once the arm or share moves on, fluidized sediment will naturally settle out of suspension, backfilling the narrow trench. Depending on the actual jet-plow equipment used, the width of the fluidized trench could vary between 1.3 and 3.3 feet (0.4 – 1 m). While jet-plowing will fluidize a narrow swath of sediment, it is not expected to result in significant side cast of materials from the trench. Offshore cable installation will result in some temporary elevated turbidity, but this is expected to remain relatively close to the installation activities (see Section 4.3 for a discussion of sediment dispersion modeling).

- **Mechanical plowing:** A mechanical plow is pulled by a vessel or barge and uses a cutting edge(s) and moldboard, possibly with water jet assistance, to penetrate the seabed while feeding the cable into the trench created by the plow. While the plow share itself would likely be only approximately 1.6 feet (0.5 m) wide, a 3.3-foot (1-m) wide disturbance area is also conservatively assumed for this tool. The narrow trench will infill behind the tool, either by slumping of the trench walls or by natural infill, usually over a relatively short period of time.

**Other Possible Specialty Techniques**

- **Mechanical trenching:** Typically used only in more resistant sediments, a rotating chain or wheel with cutting teeth or blades cuts a trench into the seabed. The cable is laid behind the trencher and the trench collapses and backfills naturally over a period of time.

- **Shallow-water cable installation vehicle:** While any of the above typical techniques could be used in shallow water, the Project envelope also includes specialty shallow-water tools if needed. This system would use either of the Typical Techniques described above but is
deployed from a vehicle that operates in shallow water where larger cable-laying vessels cannot efficiently operate. The cable is first laid on the seabed, and then a vehicle passes over or alongside the cable while operating an appropriate burial tool to complete installation. The vehicle is controlled and powered from a shallower-draft vessel that holds equipment and operators above the waterline.

♦ Pre-pass jetting: Prior to cable installation, a pre-pass jetting run using a jet-plow or jet trencher may be conducted along targeted sections of the cable route with stiff or hard sediments. A pre-pass jetting run is an initial pass along the cable route by the cable installation tool that loosens the sediments without installing the cable. The pre-pass jetting run maximizes the likelihood of achieving sufficient burial during the subsequent pass by the cable installation tool when the cable is installed. Impacts from the pre-pass jetting run are largely equivalent to cable installation impacts from jetting described under “Typical Techniques” above.

♦ Pre-trenching: A trench is excavated by a plow or other device, and the sediment is placed next to the trench. The cable is then laid in the trench. Separately or simultaneous to laying the cable, the sediment is returned to the trench to cover the cable. It is unlikely that the Project will use a pre-trench method, as site conditions are not suitable since sand would simply fall back into the trench before the cable-laying could be completed. Pre-trenching is typically used in areas of very stiff clays, where a displacement plow is used to create a wide trench within the seabed into which the cable is laid.

♦ Pre-lay plow: In limited areas of resistant sediments or high concentrations of boulders, a larger tool may be necessary to achieve cable burial. One option is a robust mechanical plow that would push boulders aside while cutting a trench into the seabed for subsequent cable burial and trench backfill. Similar to pre-trenching, if this tool is needed it would only be used in limited areas to achieve sufficient cable burial.

♦ Boulder relocation: Any boulders identified along the cable alignments will need to be relocated prior to cable installation, facilitating installation without any obstructions to the burial tool and better ensuring sufficient burial. Boulder relocation is accomplished either by means of a grab tool suspended from a crane onboard a vessel that lifts individual boulders clear of the route, or by using a plow-like tool which is towed along the route to push boulders aside. Boulders will be shifted perpendicular to the cable route; no boulders will be removed from the area.

♦ Precision installation: In situations where a large tool is not able to operate, or where another specialized installation tool cannot complete installation, a diver, or Remotely Operated Vehicle (ROV) may be used to complete installation. The diver or ROV may use small jets and other small tools to complete installation.
Jetting by controlled flow excavation: Jetting by controlled flow excavation uses a pressurized stream of water to push sediments to the side. The controlled flow excavation tool draws in seawater from the sides and then jets this water out from a vertical down pipe at a specified pressure and volume. The down pipe is positioned over the cable alignment, enabling the stream of water to fluidize the sediment around the cable, which allows the cable to settle into the trench. This process causes the top layer of sediments to be side cast to either side of the trench. This method will not be used as the conventional burial method for the offshore export cables, but may be used in limited locations, such as to bury splice joints or to bury the cable deeper and minimize the need for cable protection where initial burial of a section of cable does not achieve sufficient depth. Typically, a number of passes are required to lower the cable to the minimum sufficient burial depth, resulting in a wider disturbance than use of a jet-plow or mechanical plow. Jetting is not to be confused with a jet-plow or jet trencher used for typical cable installation described above. Jetting can also be used for dredging small sand waves.

Cable burial will temporarily displace marine sediments, but in normal operations these displaced sediments return to the ocean floor in the wake of the cable installation vehicle generally within a few meters of the furrow created by the cable installation. Particle sediment monitoring studies recently completed for the Block Island Wind Farm’s offshore cable installation found that displaced sediments were an average of 12.5 feet (3.8 m) from the trench with a thickness of 2.8 inches (7 cm).³

For any of the offshore export cable installation methodologies described above, the trench would be expected to backfill naturally after passage of the installation tool since surveys have identified only granular material (not clays) along the OECC. Where cobbles are present on the seafloor, they are mixed with granular material (e.g., sand), and therefore even though cobbles may be present, the sediment is expected to behave as a frictional material, resulting in natural backfilling of the trench. Given the high-energy marine environment along the OECC, this trench backfilling is likely to occur in a short period of time; this process was most recently evidenced in the Martha’s Vineyard Hybrid Cable Project installed from Falmouth to Tisbury (on Martha’s Vineyard) over an approximately seven-month period in 2013-2014.

In accordance with normal industry practice, a pre-lay grapnel run will be made to locate and clear obstructions such as abandoned fishing gear and other marine debris in advance of cable installation. Operations for the pre-lay grapnel run will consist of a vessel towing equipment that will hook and recover obstructions such as fishing gear, ropes, and other debris from the seafloor.

The Proponent estimates this activity will begin any time up to two months prior to cable installation. Any abandoned fishing gear recovered will be disposed of or returned to its owner in accordance with requirements of the Massachusetts DMF and other relevant Massachusetts regulations.

The proposed offshore cables will be deployed from a turntable mechanism aboard a cable ship or cable barge and installed along a surveyed alignment. This alignment will be within the OECC to enable the avoidance or minimization of impacts. For the integrity of the cable, installation is ideally performed as a continuous action along the entire cable alignment up to splice joints. The route engineering process is extensive to avoid and minimize impacts to areas of hard bottom and complex bottom, for example, and to maximize the likelihood of successful cable burial. While a straight-line route is, under ideal circumstances, the most efficient, this route engineering process includes micro-siting around features such as boulders or other obstacles. The pre-lay survey will be the final opportunity to make any additional micro-siting alterations to the intended cable alignment before installation, and as such is the final step of major route planning. Because the cable alignment is the product of careful route engineering and the length of available cable is finite, real-time micro-siting during cable installation is limited. Such micro-siting would only occur if a significant challenge arose such as an unforeseen obstacle. The specific, as-built cable alignment will be recorded by the cable installation contractor during installation to record the precise location (x and y) of each offshore export cable as well as the achieved burial depth (z).

Cable burial tools (e.g., jet-plow, mechanical plow) can be mounted on a sled pulled by the cable-laying vessel or can also be mounted on a self-propelled underwater tracked vehicle. The tracked vehicle would run along the seafloor using a power feed from the cable-laying vessel. This type of vehicle is routinely used for wind energy cable projects in Europe and has proven effective in dynamic marine environments similar to the proposed Project route.

Typical cable installation speeds are expected to range from 100 to 200 meters per hour, and it is expected that installation activities for the offshore export cables will occur 24 hours per day. It is anticipated that installation activities for the offshore export cables will require continuous construction once begun. During installation, the cable will be deployed from a turntable on the installation vessel or barge and buried beneath the seafloor. For the integrity of the cable, this activity is ideally performed as a continuous action along the entire cable alignment up to splice joints.

Although the Proponent is considering the use of dynamic positioning (DP) vessels, many portions of the OECC are too shallow for DP cable-laying vessels. As a result, anchored cable-laying vessels are assumed to be necessary along the entire length of the OECC, as discussed in Section 4.2.2. However, the Proponent will use DP vessels to the maximum extent practicable to minimize actual impacts from anchoring during construction.
The Proponent’s preferred installation approach is to install the offshore export cables sequentially. Given that installation of both cables at the same time would require two separate vessel spreads, at considerable expense and with additional logistical challenges, it is unlikely that both cables would be installed at the same time.

The proposed offshore export cables will be installed within largely the same OECC as Vineyard Wind Connector’s offshore export cables. The cables will typically be separated by a distance of approximately 165 to 330 feet (50 to 100 m) to provide appropriate flexibility for routing and installation and to allow room for maintenance or repairs. This separation distance could be further adjusted, pending ongoing routing evaluation, to account for local conditions such as deeper waters, micro-siting for sensitive habitat areas, or other environmental or technical reasons. Spacing will be adequate to minimize the risk of damaging previously installed cable (e.g., the first cable of the pair) while providing sufficient space for future maintenance and repair activities, should they be necessary.

4.2 Anticipated Project Impacts

Table 4-1 provides the most current estimates for seabed impacts associated with installation of the two proposed offshore export cables in Edgartown waters. As described in Section 3.1, results from multiple seasons of marine surveys have enabled the Proponent to refine mapping of hard bottom, complex bottom, and eelgrass within the OECC, and the Proponent’s engineers have defined preliminary cable alignments within the OECC to avoid and minimize impacts (the cable alignments will avoid eelgrass).
Table 4-1 Impacts to Land Under the Ocean from Installation of Two Offshore Export Cables within Edgartown Waters

<table>
<thead>
<tr>
<th></th>
<th>24.8 (2 cables along 12.4 miles of the OECC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cable Length (statute miles)¹</td>
<td></td>
</tr>
<tr>
<td>Trench impact zone (acres)²</td>
<td>9.9</td>
</tr>
<tr>
<td>Disturbance zone from tool skids/tracks (acres)³</td>
<td>30.1</td>
</tr>
<tr>
<td>Direct dredging impacts (acres)⁴</td>
<td>14.9</td>
</tr>
<tr>
<td>Anchoring (acres)⁵</td>
<td>6.9</td>
</tr>
<tr>
<td>Cable Protection (acres)⁶</td>
<td>4.0-12.1</td>
</tr>
</tbody>
</table>

¹ Route lengths provided in miles, with 1 mile = 0.87 nautical miles. This length is based on the length of OECC within Edgartown waters.

² Based on information from the Proponent’s engineers, depending on the tool used for cable installation (e.g., jet-plow, mechanical plow, etc.), the direct trenching impact area will vary between 1.3 and 3.3 feet (0.4 – 1 m) in width. The impact area provided in the table reflects the most conservative 3.3-foot (1-m) impact width.

³ Depending on the tool used for cable installation (e.g., jet-plow, mechanical plow), each skid/track on the installation tool will have the potential to cause minor disturbance along an area approximately 5 feet (1.5 m) wide, although the functional impact is expected to be minor. The impact area identified in the table reflects the temporary impact from two skids/tracks, and therefore assumes a 10-foot-wide (3-m-wide) disturbance zone.

⁴ Direct dredging impacts are calculated based on the estimated length of dredging and assumed sideslopes of approximately 1:3. Since the dredging area will overlap with the 3.3-foot (1-m) wide trench impact zone and 10-foot (3-m) wide skid disturbance zone, these areas have been subtracted from the dredging impact area to avoid double-counting impacts. See Section 4.2.4 for more details.

⁵ See Section 4.2.2.

⁶ Although the Proponent’s priority is to achieve sufficient burial depth and avoid cable protection, some cable protection may be required. The estimated length of cable protection in Edgartown waters is approximately 3.4 miles (5.5 km). The area of potential impact from cable protection is provided as a range, since the impact width may vary between 10 feet (3 m) and 30 feet (9 m) depending on the method utilized (see Section 4.2.3).

Anticipated impacts associated with specific operations required to complete the offshore export cable installations in Edgartown waters are discussed in the following sections.

### 4.2.1 Cable Installation Tool

Offshore export cable installation tools are described in detail in Section 4.1. A variety of tools may be used for portions of the OECC, many of which are specialized and would be used only in limited areas where specific conditions are encountered. Typical techniques include jetting techniques (e.g., jet-plow or jet trenching) or a mechanical plow, either of which would have a temporary trench disturbance up to approximately 3.3 feet (1 m) wide. In addition to the trench impact on the seafloor, the cable installation tool may move along the seafloor on skids or tracks. These skids or tracks, each up to approximately 5 feet (1.5 m) wide, will slide over the surface of the seafloor, and as such have the potential to disturb benthic habitat; however, they are not expected to dig into the seabed, and therefore the impact is expected to be minor. Since the cable installation will affect a corridor that will pass similar habitats on adjacent sides, the area affected by cable burial or skids/tracks on the installation tool is expected to recolonize relatively quickly.
As described in Section 4.3, while cable installation activities will result in some temporary elevated turbidity and localized sediment dispersion in the water column, the sediment, which is briefly fluidized by the cable installation tool, will quickly settle out of the water column.

A BOEM study published in March 2017 assessed impacts from cable-laying activities associated with construction of the Block Island Wind Farm. That study identified formation of a temporary 2.7-inch-high “overspill levee” on either side of the cable placement. The overspill levee consisted of material deposited outside of the trench during jet-plow activities. The BOEM study indicated that overspill levees were observed an average distance of 12.5 feet (3.8 m) from the centerline of the trench (for an average total impact width of 25 feet) at an average thickness of 2.7 inches (7 cm). Importantly, the study described the overspill levees as very temporary features that were only apparent for a few days following cable installation, and that they were gone within one to two weeks. The study authors noted:

> We attribute the ability to discern the overspill levees to surveying during jet-trenching and within a few days after the jet-trenching occurred from the mainland cable lay... We have noted that on post-lay surveys conducted 1 to 2 weeks after trenching, that overspill levees are rarely distinguishable.5

Given the dynamic marine environment, the Proponent anticipates that the trench area, regardless of which cable installation method is used, will be quickly reworked by currents, refilling possible low portions of the trench as quickly as they would remove any potential “overspill levees”. The Proponent is committed to developing an appropriate benthic habitat monitoring plan (BHMP) for the Project in consultation with state and federal agencies. In October 2021, the Proponent consulted with agency representatives from CZM, MassDEP, and DMF to specifically discuss a framework for benthic habitat monitoring of the cables proposed for NE Wind 1 Connector/Park City Wind; the framework was presented in Section 2.1.4 of the FEIR. The Proponent will continue to work cooperatively with state and federal agencies during permitting to develop a final plan intended to document habitat and benthic community disturbance and recovery following construction. The Proponent anticipates this plan will be memorialized in the Section 401 Water Quality Certification (WQC) to be issued by MassDEP.

The Proponent will prioritize the least environmentally impactful cable installation alternative(s) that is/are practicable for each segment of cable installation. In addition to selecting an appropriate tool for the site conditions, the Proponent will work to minimize the likelihood of insufficient cable burial. For example, if the target burial depth is not being achieved, operational

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modifications may be required. Subsequent attempts with a different tool (such as controlled flow excavation) may be required where engineering analysis indicates subsequent attempts may help achieve sufficient burial.

4.2.2 Anchoring

In certain locations, the Proponent is assessing the potential use of Dynamic Positioning (DP) vessels, but many portions of the OECC are too shallow for DP cable-laying vessels and/or exhibit strong currents. As a result, conservatively, anchored cable-laying vessels are expected to be used along the entire length of the OECC in Edgartown waters. Anchored vessels will avoid sensitive seafloor habitats to the greatest extent practicable. Contractors will be provided with a map of sensitive habitats prior to construction with areas to avoid and shall plan their mooring positions accordingly. Vessel anchors will be required to avoid known eelgrass beds and will avoid other sensitive seafloor habitats and SSU areas (e.g., hard, or complex bottom) as long as it does not compromise the vessel’s safety or the cable installation. Where it is considered impossible or impracticable to avoid a sensitive seafloor habitat when anchoring, use of mid-line anchor buoys will be considered, where feasible and considered safe, as a potential measure to reduce and minimize potential impacts from anchor line sweep. Mid-line buoys are placed somewhere along the length of an anchor line to support the weight of the line and hold a portion of the line off the seabed. By suspending the anchor lines, mid-line buoys prevent the line from dragging and scouring the seafloor, which minimizes anchor sweep and associated impacts. Vessel operators will determine when the use of mid-line anchor buoys is considered infeasible and/or unsafe.

The discussion below presents a conservative estimate of potential anchoring impacts in Edgartown.

Project engineers estimate approximately 323 square feet (30 m²) of disturbance from each anchor (assuming an approximately 10-ton anchor), such that a vessel equipped with nine anchors would disturb approximately 2,900 square feet (270 m²) per each anchoring set. A nine-point anchor spread provides greater force on the cable burial tool than a spread with fewer anchors, enabling greater burial depth, and the assumptions herein include a larger anchor to accommodate larger installation vessels. In addition, anchored vessels may deploy up to two spud legs at each anchoring location to secure the cable-laying vessel while its anchors are being repositioned. Each deployment of two spuds would affect approximately 108 square feet (10 m²) of seafloor, making the total disturbance per anchoring set approximately 3,008 square feet (280 m²). Potential impacts from anchoring are summarized in Table 4-1, and the calculation of impacts from anchoring is shown in Table 4-2. Anchoring will not be performed in eelgrass.

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6 The impacts from anchor sweep are not quantified at this time due to the difficulty of estimating potential anchoring practices at this planning stage.
### Table 4-2  Estimated anchoring impacts from installation of 2 offshore export cables in Edgartown waters.

<table>
<thead>
<tr>
<th>Impact from Anchoring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length in Edgartown waters (miles)</td>
<td>24.8 (both cables combined)</td>
</tr>
<tr>
<td>Disturbance per anchoring set</td>
<td>3,008 sf</td>
</tr>
<tr>
<td># of repositioned anchoring sets*</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total temporary impact</strong></td>
<td><strong>6.9 acres</strong></td>
</tr>
</tbody>
</table>

* Assumes an anchored installation vessel may need to reposition every approximately 1,312 feet (400 m).

#### 4.2.3 Cable Protection

The Proponent’s priority will be to achieve adequate burial depth of the two offshore export cables and to avoid the need for any cable protection. However, it is possible that achieving adequate burial depth may be unsuccessful in areas where the seafloor is composed of consolidated materials, making complete avoidance of cable protection measures unlikely. In the event sufficient burial depth cannot be achieved, alternative cable protection methods may be necessary. The Proponent will seek to avoid and/or minimize the use of such cable protections, and cable protection will only be used where necessary, thus minimizing potential impacts.

Except for limited areas where the sufficient cable burial is not achieved and placement of cable protection on the seafloor is required, offshore export cables are not anticipated to interfere with any typical fishing practices. 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. Any type of cable protection has the potential to snag fishing gear, but such protection is designed to minimize the risk of such snagging.

If needed, the methods for cable protection will be:

- **Rock placement**: Rocks could be laid on top of the cable to provide protection. If rocks were to be placed, they would be installed in a controlled and accurate manner on the seafloor using a dynamic positioning fall-type vessel. Rocks used for cable protection would be sized for site-specific conditions; where feasible, this protection will consist of rocks approximately 2.5 inches (6.4 cm) in diameter or larger. Some rocks may be fragmented into smaller pieces during handling, transport, and installation.

- **Gabion rock bags**: This method involves rocks encased in a net material (e.g., a polyester net) that can be accurately deployed on top of the cable and subsequently recovered, if necessary, for temporary or permanent cable protection. Each bag is equipped with a single lifting point to enable its accurate and efficient deployment and recovery. These rock bags have been deployed in other high-energy marine environments such as the...
North Sea, and the net material used for the rock bags is designed to have an approximately 50-year lifespan. These bags typically contain gravel approximately 0.8 inches (20 mm) in diameter, since this allows the bag to somewhat conform to the shape of the exposed cable.

- **Concrete mattresses**: These “mattresses” are prefabricated flexible concrete coverings consisting of high-strength concrete profiled blocks cast around a mesh material (e.g., ultra-violet stabilized polypropylene rope) that holds the blocks together. This mattress construction provides flexibility, enabling the mattress to settle over the contours of the cable and seafloor. The mesh in this application would be designed to have a decades-long lifespan. The mattress may also include aerated polyethylene fronds, which will float (resembling seaweed) and encourage sediments to be deposited on the mattress.

- **Half-shell pipes or similar** (only for cable crossings or where the cable is laid on the seafloor): These products are made from composite materials and/or cast iron with suitable corrosion protection and are fixed around the cable to provide mechanical protection. Half-shell pipes or similar solutions are not used for remedial cable protection but could be used at cable crossings or where cable must be laid on the surface of the seabed. The half-shell pipes do not ensure protection from damage due to fishing trawls or anchor drags (although they will offer some protection, they will not prevent damage).

Project engineers estimate that approximately 3.4 miles (5.5 km) of cable protection may be required along both offshore export cable alignments, combined, within Edgartown waters. Assuming concrete mattresses are used, the Proponent’s engineers have determined that cable protection of approximately 10 feet (3 m) wide will be sufficient to protect the cable. Should rock placement be used for cable protection, a greater width of approximately 30 feet (9 m) would be needed to account for sideslopes.\(^8\) If gabion bags are utilized, any width can be installed by using multi-compartment bags. However, at this time the Proponent’s engineers do not anticipate needing a width greater than 10 feet using gabion bags (i.e., the same width as the concrete mattresses). The impact calculations for cable protection, presented in Table 4-1, show the range of possible impacts based on the varying widths of cable protection methods.

The Proponent intends to avoid or minimize the need for cable protection to the greatest extent feasible through careful site assessment and thoughtful selection of the most appropriate cable installation tool to achieve sufficient burial. Areas requiring cable protection, if any, will be the

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\(^8\) There are currently no anticipated cable crossings for the proposed Project. Should a cable crossing become necessary, cable protection of up to 30 feet (9 m) wide may be necessary. In addition, based on the actual conditions encountered at splice joint locations, cable protection width may vary, but if wider than 9 feet (3 m) the cable protection at splice joints is expected to fall within total cable protection estimates.
only locations where post-installation conditions at the seafloor may permanently differ from existing conditions; however, such cable protection would only be expected within hard bottom areas, and the cable protection itself would function as hard bottom.

4.2.4 Sand Wave Dredging

As described in Section 3.0, some portions of Nantucket Sound have areas of complex bottom composed of active sand waves, which have been assessed over multiple seasons of marine surveys. Sand waves are dynamic features with changing morphology that move across the seafloor. As a result, where sand waves are large, it may be necessary to perform pre-cable-laying dredging to remove the tops of these features along the cable alignment to ensure sufficient burial within the underlying stable seabed.

The stretch of the OECC where sand wave dredging may be needed is largely coincident with areas mapped as complex bottom as shown on Figure 3. It is important to note that dredging, if performed, would not occur along the entire stretch where sand waves may be present; rather, dredging would only be performed to remove the tops of each sand wave to the extent needed at the time of construction to ensure sufficient burial within the stable seabed. Dredging will be performed as close in time to cable installation as possible to avoid mobile sand waves recovering the dredged area.

Dredging will be limited to only the extent required to achieve adequate cable burial depth during cable installation. Where dredging is necessary, it is conservatively assumed that the dredged area will typically be approximately 50 feet (15 m) wide at the bottom (to allow for equipment maneuverability) with approximately 1:3 sideslopes for each of the two cables. The depth of dredging will vary with the height of sand waves, and hence the dimensions of the sideslopes will likewise vary with the depth of dredging and sediment conditions. This dredge corridor includes the up to 3.3-foot-wide (1-m-wide) cable installation trench and the up to 10-foot-wide (3-m-wide) temporary disturbance zone from the tracks or skids of the cable installation equipment.

For both offshore export cables combined, the Proponent’s engineers anticipate that the length of dredging in Edgartown waters could be approximately 2.3 miles (3.8 km) and the area impacted by dredging in Edgartown waters would be approximately 14.9 acres (inclusive of sideslopes but excluding the overlapping impacts from trenching and tool skids). The estimated volume of dredged material in Edgartown waters is up to approximately 58,000 cubic meters (76,000 cubic yards). Due to the morphology of the sand wave features and their mobility across the seafloor, even small changes in the cable alignments can result in changes to the potential dredge volumes. Actual dredge volumes will depend on the final cable alignments and cable installation method; a cable installation method that can achieve a deeper burial depth will require less dredging. The average dredge depth is expected to be approximately 1.6 feet (0.5 m) and may range up to a maximum of approximately 17 feet (5.25 m) in localized areas.
With respect to potential habitat impacts, sand wave areas are intrinsically dynamic and unstable, and while dredging will be avoided and minimized wherever possible, those areas are typically sub-optimal areas for benthic organisms.

Dredging could be accomplished by several techniques. European offshore wind projects have typically used a Trailing Suction Hopper Dredge (TSHD). A TSHD vessel contains one or more drag arms that extend from the vessel, rest on the seafloor, and suction up sediments. Dredges of this type are also commonly used in the U.S. for channel maintenance, beach nourishment, and other uses. For the Project, a TSHD would be used to remove enough of the top of a sand wave to allow subsequent cable installation within the stable seabed. Where a TSHD is used, it is anticipated that the TSHD would dredge along the cable alignment until the hopper is filled to an appropriate capacity, then the TSHD would sail several hundred meters away and deposit the dredged material within an area of the surveyed corridor that also contains sand waves (see Figure 3).

A second dredging technique involves jetting by controlled flow excavation. Controlled flow excavation uses a pressurized stream of water to push sediments to the side. The controlled flow excavation tool draws in seawater from the sides and then propels the water out from a vertical downpipe at a specified pressure and volume. The downpipe is positioned over the cable alignment, enabling the stream of water to fluidize the sediments around the cable, which allows the cable to settle into the trench. This process causes the top layer of sediments to be side cast to either side of the trench; therefore, controlled flow excavation would both remove the top of the sand wave and bury the cable. Typically, a number of passes are required to lower the cable to the minimum sufficient burial depth.

A TSHD can be used in sand waves of most sizes, whereas the controlled flow excavation technique is most likely to be used in areas where sand waves are less than 6.6 feet (2 m) high. Therefore, the sand wave dredging could be accomplished entirely by the TSHD on its own, or the dredging could be accomplished by a combination of controlled flow excavation and TSHD, where controlled flow excavation would be used in smaller sand waves and the TSHD would be used to remove the larger sand waves.

No dredging is proposed in hard-bottom areas (e.g., boulders, cobble bottom). The only dredging proposed for the Project is where large sand waves, features that can be considered “complex” due to their bathymetric relief, necessitate pre-cable-laying dredging to ensure that the necessary burial depth can be achieved. As noted previously, sand waves, although they do provide bathymetric variability, are seafloor features that change quickly and hence do not enable the formation of complex benthic communities.

4.3 Sediment Dispersion and Turbidity

To gain a thorough understanding of the sediment dispersion resulting from the Project’s cable installation operations, a Hydrodynamic and Sediment Dispersion Modeling Study was prepared by RPS and was presented in Section 8.2.1 of the Project’s DEIR, which was provided to the
Edgartown Conservation Commission. The DEIR can also be found at https://www.parkcitywind.com/permitting. The Proponent requests that the more detailed information in the MEPA filing be incorporated by reference into this submission. Results of the study are summarized below:

The modeling was performed to characterize the effects associated with the offshore cable installation activities. The effects were quantified in terms of the above-ambient total suspended solids (TSS) concentrations as well as seabed deposition of sediments suspended in the water column during cable installation activities.

The Hydrodynamic and Sediment Dispersion Modeling Study shows that impacts from cable installation activities are expected to be localized and short term, as most of the mass settles out quickly and is not transported for significant distances by the currents. Above-ambient TSS concentrations stemming from cable installation for the various model scenarios remain relatively close to the cable alignment, are constrained to the bottom of the water column, and are short-lived. Above-ambient TSS concentrations substantially dissipate within one to two hours and fully dissipate in less than four hours for most of the model scenarios. Similarly, for the vertical injector model scenario, above-ambient TSS concentrations substantially dissipate within one to two hours but required up to six hours to fully dissipate, likely due to the relatively slower installation rate and deeper trench (greater volume disturbed per unit length). Above-ambient TSS concentrations greater than 10 mg/L typically stay within approximately 650 feet (200 m) of the cable alignment. Importantly, all suspended sediments are expected to settle out within a matter of hours (less than 4-6) from disturbance during typical cable installation. Simulations of typical cable installation parameters (without sand wave removal) in the OECC indicated that deposition of 1 mm (0.04 in) or greater (i.e., the threshold of concern for demersal eggs) was constrained to within approximately 330 feet (100 m) from the route centerline and maximum deposition was typically less than 5 mm (0.20 in) (the threshold of concern for shellfish), though there was a small isolated area associated with the vertical injector model scenario with deposition between 5 to 10 mm (0.2 to 0.4 in).

For context, BOEM stated in the DEIS for the Vineyard Wind project that “suspended sediment concentrations between 45 and 71 mg/L can occur in Nantucket Sound under natural tidal conditions, and increases in suspended sediment concentrations due to jet-plow are within the range of variability already caused by tidal currents, storms, trawling, and vessel propulsion.” Further, BOEM concluded that it expects only minor impacts on water quality due to suspended sediment during installation, dredging, and cable-laying because of the brief duration and small area of impact.

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For all portions of the OECC, recolonization and recovery to pre-construction species assemblages is expected given the similarity of nearby habitat and species. Nearby, unimpacted seafloor will likely act as refuge area and supply a brood stock of species, which will begin recolonizing disturbed areas post-construction. Recovery timeframes and rates in a specific area depend on disturbance, sediment type, local hydrodynamics, and nearby species virility.\(^{10}\) Previous research conducted on benthic community recovery after disturbance found that recovery to pre-construction biomass and diversity values took two to four years.\(^{11}\) Other studies have observed differences in recovery rates based on sediment type, with sandy areas recovering more quickly (within 100 days of disturbance) than muddy/sand areas.\(^{12}\)

In summary, results of the Hydrodynamic and Sediment Dispersion Modeling Study demonstrate that impacts will be short-term, as excess TSS concentrations are expected to only persist for a few hours and deposition is expected to typically be less than 5 mm, which is less than the sensitivity threshold for benthic organisms. Conservative impact assumptions show that impacts on fish and shellfish will be limited in area and duration and will allow for rapid recovery to pre-installation conditions. The Project will use cable installation techniques that minimize sediment disturbance and dispersion consistent with the best available practices.

5.0 Regulatory Compliance

5.1 Water-Dependent Projects

The Massachusetts Waterways Regulations (310 CMR 9.00) state that facilities ancillary to an offshore wind farm should be characterized as water-dependent, which acknowledges that such projects are unable to be located away from the water. The specific section of those Regulations (310 CMR 9.12(2)(e)) is excerpted below:

\[(e) \text{ In the case of a facility generating electricity from wind power (wind turbine facility), or any ancillary facility thereto, for which an EIR is submitted, the Department shall presume such facility to be water-dependent if the Secretary has determined that such facility requires direct access to or location in tidal waters and cannot reasonably be located or operated away from tidal or inland waters, based on a comprehensive analysis of alternatives and other information analyzing measures that can be taken to avoid or minimize adverse impacts on the environment, in accordance with M.G.L. c. 30, §§ 61 through 62I.}\]

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The Project is water-dependent because to accomplish the purpose of establishing electric transmission facilities linking the offshore wind farm and onshore electric grid, the proposed offshore export cables must unavoidably cross waterways. During environmental review of the very similar Vineyard Wind Connector project, the EEA Secretary concluded in the February 1, 2019 FEIR Certificate: “Consistent with 310 CMR 9.12(2)(e), I have determined that the project is water-dependent because the facility requires location in tidal waters and cannot reasonably be located or operated away from tidal waters.”

For further clarity, the WPA Regulations provide a definition of “water-dependent uses,” which is excerpted here from 310 CMR 10.04.

Water-dependent Uses mean those uses and facilities which require direct access to, or location in, marine, tidal or inland waters and which therefore cannot be located away from said waters, including but not limited to: marinas, public recreational uses, navigational and commercial fishing and boating facilities, water-based recreational uses, navigation aids, basins and channels, industrial uses dependent upon waterborne transportation or requiring large volumes of cooling or processing water which cannot reasonably be located or operated at an upland site, crossings over or under water bodies or waterways (but limited to railroad and public roadway bridges, tunnels, culverts, as well as railroad tracks and public roadways connecting thereto which are generally perpendicular to the water body or waterway), and any other uses and facilities as may further hereafter be defined as water-dependent in 310 CMR 9.00” (emphasis added).

A finding of water dependency is relevant for certain aspects of this filing.

5.2 Limited Project Status

Under the Massachusetts WPA, certain activities are afforded Limited Project status (310 CMR 10.04), which allows permitting authorities to allow projects that are inherently unable to meet wetland performance standards. The Proponent believes the Project does meet the wetland performance standards, but nonetheless requests a determination that the Project is afforded Limited Project Status. Specific activities that qualify for Limited Project status are listed in the Massachusetts WPA Regulations at 310 CMR 10.04 and 310 CMR 10.53. Water-dependent projects such as the NE Wind 1 Connector are one such category of Limited Projects in this section of the Regulations:

310 CMR 10.53 (3) Limited Projects.

(l) The construction, reconstruction, operation or maintenance of water dependent uses; provided, however that: 1. any portion of such work which alters a bordering vegetated wetland shall remain subject to the provisions of 310 CMR 10.55, 2. such work in any other resource area(s) found to be significant to flood control or prevention of storm damage shall
meet the performance standards for that interest(s), and 3. adverse impacts from such work in any other resource area(s) shall be minimized regarding the other statutory interests for which that resource area(s) is found to be significant.

Accordingly, the Project should be regarded as a “Limited Project” under the Massachusetts WPA Regulations. Regardless, the Proponent is striving to satisfy all applicable wetlands performance standards to the extent possible.

5.3 Wetland Resource Areas and Performance Standards

Proposed work in Edgartown waters will be located in coastal wetland resource areas (Land Under the Ocean and Land Containing Shellfish) subject to protection under the Massachusetts Wetlands Protection Act (WPA) and associated regulations (310 CMR 10.00), and the Edgartown Wetland Protection Bylaw. The entire stretch of OECC in Nantucket waters will also pass through NHESP-mapped Priority Habitat for State-Protected Rare Species and Estimated Habitat for Rare Wildlife (see Figure 5 in Attachment B). Accordingly, the Proponent will submit copies of this NOI to the NHESP pursuant to the Massachusetts WPA Regulations (310 CMR 10.37).

Cable installation will have some unavoidable and temporary impacts to these resource areas, but these impacts will be minimized with appropriate construction methods and best management practices and will meet the applicable performance standards. Specific Project-related impacts are quantified in Table 4-1. The relevant performance standards for each of the above-referenced resource areas are discussed below.

5.3.1 Land Under the Ocean

The Massachusetts WPA Regulations require that projects located within Land Under the Ocean satisfy certain general performance standards when the resource is found to be significant to the protection of marine fisheries, protection of wildlife habitat, storm damage prevention, or flood control (310 CMR 10.25 (3) through (7)). Of relevance to this Project, 310 CMR 10.25(5) states:

(5) Projects not included in 310 CMR 10.25(3) or (4) [relating to dredging projects for navigational purposes] which affect nearshore areas of land under the ocean shall not cause adverse effects by altering the bottom topography so as to increase storm damage or erosion of coastal beaches, coastal banks, coastal dunes, or salt marshes.

Installation activities associated with the NE Wind 1 Connector will occur approximately one mile or more from the Edgartown shore, and are sufficiently limited in scope to avoid any direct or indirect impact on nearshore or onshore areas of Edgartown.

Installation of the offshore export cables will require the temporary disturbance of two narrow strips of seafloor within the OECC to achieve cable burial (see Section 4 for a more detailed discussion of construction). Cable burial will temporarily displace some sediments that do not immediately re-settle back into the fluidized trench, but in normal operations these displaced sediments return to the seafloor in the wake of the cable installation tool generally within a few
meters of the furrow created by cable installation. Particle sediment monitoring studies completed for the Block Island Wind Farm’s offshore cable installation found that displaced sediments were an average distance from the trench centerline of 12.5 feet (3.8 meters) at a thickness 2.8 inches (7 cm).\textsuperscript{13} Such a minor alteration to the bottom topography approximately one mile or more from the nearest shoreline would not alter water circulation or sediment transport patterns, and would not increase erosion of coastal beaches, coastal banks, coastal dunes, or salt marshes.

In addition, as described in Section 4.2.4, dredging may be required in areas where currents have created large, mobile sand waves. These sand waves are located in both Muskeget Channel and Nantucket Sound, and dredging of the tops of any sand waves is expected to occur more than 6,500 feet (2,000 meters) from the nearest coastal beach, coastal bank, coastal dune, or salt marsh. Where the offshore cable installation must cross a sand wave, it will be necessary to provide additional burial depth to achieve sufficient coverage beneath the stable seabed surface and prevent the cable from being exposed as the sand wave advances across the seafloor. Therefore, where large sand waves are encountered, it will be necessary to carve a notch into the sand wave of sufficient width and depth so the cable installation tool can proceed through it, installing the cable beneath the stable seabed. The Project’s dredging methods and related impacts are discussed and quantified in Section 4.2.

Any dredging required for offshore cable installation through sand waves will occur within narrow corridors in areas relatively far from shore (approximately 1 mile or greater); therefore, regardless of the dredge method selected through sand waves, installation of the offshore export cables is not expected to increase the risk of erosion in coastal areas. Sand wave dredging in Edgartown waters is expected to temporarily impact approximately 14.9 acres, and dredging will comply with performance standards.

Also potentially relevant to this Project, 310 CMR 10.25(6) states:

\textit{(6) Projects not included in 310 CMR 10.25(3) which affect land under the ocean shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water-dependent, have no adverse effects, on marine fisheries habitat or wildlife habitat caused by:}

\textit{(a) alterations in water circulation;}

\textit{(b) destruction of eelgrass (Zostera marina) or widgeon grass (Rupia maritina) beds;}

\textit{(c) alterations in the distribution of sediment grain size;}

(d) changes in water quality, including, but not limited to, other than natural fluctuations in the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants; or

(e) alterations of shallow submerged lands with high densities of polychaetes, mollusks or macrophytic algae.

As discussed in Section 5.1, the Project is water-dependent as defined in the Massachusetts Waterways Regulations at 310 CMR 9.12(2)(b)10, which includes infrastructure facilities used to deliver electricity to the public from an offshore facility located outside the Commonwealth. As a water-dependent use, the Project must be designed and constructed using best available measures to minimize adverse effects.

As described in Section 4.0 of this NOI as well as in the MEPA documents that are incorporated by reference, the proposed cable installation methods are well documented as environmentally-conscious operations with minimal temporary impacts to the seafloor and water quality. Installation of the export cables will require some displacement of marine sediments to achieve desired cable burial, but in most areas, the method of installation will result in minimal alteration to seafloor topography. More alteration will be required in high-energy areas where large sand waves are encountered, but these high-energy areas are characterized by constantly changing bathymetry, and any alteration due to the Project is expected to be temporary. None of the affected areas will be altered to the extent that any significant changes occur to water circulation or sediment grain size distribution.

The OECC has been sited to avoid areas of eelgrass or widgeon grass, and the installation methodologies will minimize impacts to benthic organisms.

In addition, under 310 CMR 10.25(7), projects with certain adverse effects are presumed impermissible:

(7) Notwithstanding the provisions of 310 CMR 10.25(3) through (6), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

The NHESP has mapped all of Muskeget Channel and adjacent state waters as priority habitat of state-listed rare species (Massachusetts Natural Heritage Atlas, 15th Edition, 2021). As a result, the OECC will necessarily cross priority habitat within Edgartown waters. The Proponent has been consulting with NHESP in accordance with the Massachusetts Endangered Species Act (MESA, 321 CMR 10.14) to ensure that impacts to offshore rare species are avoided or minimized to greatest extent practicable. The Proponent has completed a Massachusetts Endangered Species Act (MESA) checklist pursuant to 321 CMR 10.18 with regard to priority habitat within state waters, and the checklist was submitted to NHESP for review in March 2022. Pursuant to 310 CMR 10.37, the Proponent will submit a copy of this NOI to the NHESP.
5.3.2 **Land Containing Shellfish**

Offshore export cable installation may result in some localized impact to shellfish and other organisms in the direct path of the installation tool, and within the water column from water withdrawals. Soon after disturbance, recolonization and recovery to pre-construction species assemblages is expected given the similarity of nearby habitats and species, the limited area of disturbance, and the mobility of the organisms in some or all life stages. Nearby, unaffected areas will likely act as refuge areas and supply a brood stock of species, which will begin recolonizing disturbed areas post-construction. A post-construction marine survey conducted in 2015 within six weeks of installation of a submarine cable from Falmouth to Tisbury on Martha’s Vineyard found that benthic disturbances only occurred along some parts of the cable route.14

As described in Section 4.2.2, anchoring may be required along the entire OECC to enable the use of installation tools capable of achieving the target burial depth. Anchors would disturb the substrate and leave a temporary irregularity in the seafloor resulting in some localized mortality of infauna. In addition, portions of the seafloor would be swept by an anchor cable as the installation equipment moves along the cable. The Proponent will implement a monitoring plan to document disturbance and recovery of marine habitat along the cable installation corridor. A monitoring program focusing on benthic habitat and communities will be performed to measure potential impacts and the recovery of these resources comparable to controls outside the area of construction.

The Massachusetts WPA Regulations require that projects located in resource areas that are determined to be significant to the protection of land containing shellfish and therefore marine fisheries shall satisfy certain general performance standards (310 CMR 10.34 (4) through (8)). These performance standards are excerpted below:

> (4) Except as provided in 310 CMR 10.34(5), any project on land containing shellfish shall not adversely affect such land or marine fisheries by a change in the productivity of such land caused by:

> (a) alterations of water circulation;

> (b) alterations in relief elevation;

> (c) the compacting of sediment by vehicular traffic;

> (d) alterations in the distribution of sediment grain size;

> (e) alterations in natural drainage from adjacent land; or

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(f) changes in water quality, including, but not limited to, other than natural fluctuations in the levels of salinity, dissolved oxygen, nutrients, temperature or turbidity, or the addition of pollutants.

The Project is not anticipated to result in any permanent alterations to water circulation, relief elevation, or distribution of sediment grain size. There will be no change to natural drainage from adjacent land, and no compacting of sediments from vehicular traffic or installation gear. Offshore export cable installation will result in some temporary impacts to shellfish in the area immediately along the installation path, but these impacts are regarded as negligible given that the area of potential affect is incrementally small in comparison to the wide area of habitat present in the Project vicinity.

(5) Notwithstanding the provisions of 310 CMR 10.34(4), projects which temporarily have an adverse effect on shellfish productivity but which do not permanently destroy the habitat may be permitted if the land containing shellfish can and will be returned substantially to its former productivity in less than one year from the commencement of work, unless an extension of the Order of Conditions is granted, in which case such restoration shall be completed within one year of such extension.

The Proponent has assembled a benthic habitat monitoring framework and remains in active consultations with state and federal agencies (including the Massachusetts Office of Coastal Zone Management [CZM], Division of Marine Fisheries [DMF], Massachusetts Department of Environmental Protection [MassDEP], Bureau of Ocean Energy Management [BOEM], and the National Marine Fisheries Service [NMFS]) to develop a Benthic Habitat Monitoring Plan (BHMP) out of that framework. The BHMP will document habitat and benthic community disturbance and recovery as a result of construction and installation. The Proponent expects the BHMP will be memorialized in the Water Quality Certification (WQC) that will be issued by MassDEP.

(6) In the case of land containing shellfish defined as significant in 310 CMR 10.34(3)(b) (i.e., those areas identified on the basis of maps and designations of the Shellfish Constable), except in Areas of Critical Environmental Concern, the issuing authority may, after consultation with the Shellfish Constable, permit the shellfish to be moved from such area under the guidelines of, and to a suitable location approved by, the Division of Marine Fisheries, in order to permit a proposed project on such land. Any such project shall not be commenced until after the moving and replanting of the shellfish have been commenced.

The Proponent will work with the DMF and the shellfish constable for the Town of Edgartown to minimize impacts to shellfish habitat but is not proposing to relocate shellfish prior to cable installation.

(8) Notwithstanding the provisions of 310 CMR 10.34(4) through (7), no project may be permitted which will have any adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.
The Massachusetts NHESP has mapped all state waters within Nantucket Sound and Muskeget Channel as priority habitat of state-listed rare species (Massachusetts Natural Heritage Atlas, 15th Edition, 2021). As a result, the OECC will necessarily cross priority habitat within Edgartown waters. The Proponent is consulting with the NHESP in accordance with the MESA (321 CMR 10.14) to ensure that impacts to offshore rare species are avoided or minimized to greatest extent practicable. The Proponent has completed a Massachusetts Endangered Species Act (MESA) checklist pursuant to 321 CMR 10.18 with regard to priority habitat within state waters, and the checklist was submitted to NHESP for review in March 2022. Pursuant to 310 CMR 10.37, the Proponent will submit a copy of this NOI to the NHESP.

5.4 Edgartown Wetland Protection Bylaw

The local wetland protection bylaw was established to protect ten identified interests of public and private water supply, groundwater, flood control, erosion control, storm damage prevention, fisheries, shellfish, wildlife and their habitats, recreation, and preservation of natural and historic views and vistas. Most, but not all, of these same interests are protected under the Massachusetts Wetlands Protection Act, but the local bylaw extends the jurisdiction of the Edgartown Conservation Commission by adding the protected interests of recreation and preservation of natural and historic vistas. The Project will not significantly affect either recreation or preservation of natural and historic vistas. No above-ground or above-water structures are proposed in Edgartown. Furthermore, except for temporary safety zones around vessels actively involved in cable installation, the Project will not restrict recreational use of Edgartown waters. Please refer to the preceding sections for a discussion of the interests for Land Under the Ocean and Land Containing Shellfish protected under the Massachusetts Wetlands Protection Act.

6.0 Mitigation Measures

The Project will result in unavoidable temporary impacts to offshore wetland resource areas (Land Under the Ocean and Land Containing Shellfish) as discussed and quantified in Sections 3 and 4. These impacts have been avoided and minimized through thoughtful selection of route and installation methods, and mitigation for impacts will be provided as appropriate. Perhaps most importantly, the alignment of the OECC is the product of an extensive consideration of alternatives and is itself intended to avoid and minimize potential impacts to sensitive resources, including SSU areas (i.e., eelgrass, hard bottom, complex bottom, and core habitat of the North Atlantic Right Whale). Wherever possible, the Project will avoid sensitive habitats, and where impacts cannot be avoided, the Project will attempt to minimize their extent through cable installation methodology and scheduling.

The Proponent, through consultations with state and federal agencies, has considered the timing of export cable installation and potential TOY restrictions. There are two critical schedule considerations for the Project:
1. **Safe operating conditions for cable-laying vessels.** Cable-laying vessels can only safely operate in certain wave conditions. To ensure the welfare of the vessel and its crew, the Proponent can only conduct cable-laying if there is a greater than 50% probability of obtaining the required weather conditions during the installation activity. An extensive analysis of historic weather conditions indicates it is statistically likely to obtain safe weather conditions for cable-laying during the period of approximately April to September. Scheduling work within safe weather conditions is critical for the Project because, if weather conditions exceed the limiting operational conditions for the cable and safe working limits for the vessel, then the crew may have to undertake a controlled abandonment of the cable, whereby the cable will be cut and placed on the seabed so the vessel can seek refuge. In this instance, the cable would then have to be spliced. Such a repair joint would take approximately six days to complete, which would then seriously compromise the progress of the operation since it would require a favorable weather window both for the repair joint and the remaining cable-laying activity.

2. **Sequencing the Project to begin to deliver power by 2026.** Offshore export cable installation is currently anticipated in 2025-2026, so that the process of WTG commissioning (which is partially dependent on having power from the offshore export cable(s) can start and some power can be delivered 2026.

Therefore, the definition of TOY restrictions for export cable installation arises from consideration of the safe operational conditions for cable-laying vessels and the need to provide power on schedule in addition to environmental considerations. Extensive discussions with federal and state agencies, including but not limited to NMFS and DMF, regarding TOY restrictions occurred for Vineyard Wind/Vineyard Wind Connector. The outcome of those discussions resulted in a set of TOY restrictions that are also reasonable to apply to Park City Wind/NE Wind 1 Connector given the similarities between the projects. Final determination of TOY restrictions for the NE Wind 1 Connector is not complete and the Proponent will continue to consult with regulatory agencies regarding relevant TOY restrictions for all aspects of Project construction. At this time, the Proponent is proposing the following TOY restrictions based on Vineyard Wind Connector and ongoing consultations with permitting and resource agencies, though most are not relevant to Edgartown Conservation Commission jurisdiction:

- HDD activities at the landfall site will begin in advance of April 1, or will not begin until August 31, to avoid and minimize noise impacts to Piping Plover during the breeding season.

- Activities at the landfall site where offshore cables will transition from offshore to onshore cables will not be performed during the months of June through September unless authorized by the Town of Barnstable.
Cable installation of the sections of cable that pass through the portion of Nantucket Sound with an active squid fishery (specifically, from the landfall site to a distance of approximately 24-27 km offshore) will occur between July and March, but will avoid April through June. This installation schedule will avoid cable installation during the spring months in Nantucket Sound, and avoid and minimize impacts to the squid fishery.

Finally, to comply with federal protections for the Northern long-eared bat, the Proponent does not plan to perform tree removal activities from June 1 through July 31.

As with Vineyard Wind Connector, the Proponent expects these TOY restrictions will be memorialized during permitting and anticipates that the final TOY restrictions in state waters will be incorporated into the Project’s 401 Water Quality Certification (WQC).

In addition, the Proponent has selected installation techniques that will minimize the amount of seafloor disturbance during installation of the export cables (see Section 4). Based on post-installation monitoring of a similar submarine cable project in Nantucket Sound, cable burial is expected to have no long-term impact on the benthic habitat, and the affected area of the seafloor is expected to be fully restored within a relatively short time. As an example, a post-construction marine survey conducted in 2015 within six weeks of installation of a submarine cable from Falmouth to Tisbury on Martha’s Vineyard found that benthic disturbances only occurred along some parts of the cable route.15

Mitigation for unavoidable impacts to marine resources will be provided in accordance with provisions established under the Massachusetts OMP and its implementing regulations (301 CMR 28.00). Those regulations specify that projects subject to the OMP are required to pay an Ocean Development Mitigation Fee intended to compensate the Commonwealth for unavoidable impacts on public interests and rights in the Planning Area and to support planning, management, restoration, or enhancement of marine resources and uses. A fee proposal was included in the Proponent’s FEIR, and the Secretary’s Certificate on the FEIR contained the final fee determination.

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Attachment B

Figures
New England Wind 1 Connector

LEGEND

- HDD
- Preferred Offshore Route
- U.S. Public Land Survey System
- State/Federal Boundary (Submerged Lands Act)
- Offshore Export Cable Corridor (OECC)
- Federal Waters
- BOEM Wind Lease Area

Scale: 1:202,752
1 inch = 3.2 miles

Map Coordinate System: NAD 1983 UTM Zone 19N
Basemap: USGS Topo Maps, Esri

This product is for informational purposes and may not be suitable for legal, engineering, or surveying purposes.

West Barnstable Substation (Interconnection Point)
Craigville Public Beach Landfall Site
Southernmost Starting Point for New England Wind 1 Connector
Vineyard Wind 1
Southern Wind Development Area/Park City Wind
OCS-A 0534
OCS-A 0501

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

![Project Overview, USGS Locus](G:\Projects2\MA\MA\5526\2022\Task_10\MXD\Fig 1_Project_Overview_USGS_Locus_20220228.mxd)
LEGEND

- Preliminary Offshore Export Cable Alignments (Within Edgartown Limits)
- Preliminary Offshore Export Cable Alignments
- Offshore Export Cable Corridor (OECC)
- Approximate Offshore Town Boundary
- State/Federal Boundary
- Federal Waters

NOTE: Cable alignments represent preliminary engineering estimates. The alignments within the installation corridor will continue to be refined throughout the route engineering process.

This product is for informational purposes and may not be suitable for legal, engineering, or surveying purposes.
Figure 3

LEGEND

- Preliminary Offshore Export Cable Alignments (Within Edgartown Limits)
- Preliminary Offshore Export Cable Alignments
- Offshore Export Cable Corridor (Oecc)
- Approximate Offshore Town Boundary
- State/Federal Boundary
- Federal Waters

2018 Survey

- Hard Bottom/Coarse Deposits
- Complex Seafloor/Bedforms

2020 Survey

- Hard Bottom/Coarse Deposits
- Complex Seafloor/Bedforms

NOTE: Cable alignments represent preliminary engineering estimates. The alignments within the installation corridor will continue to be refined throughout the route engineering process.

Map Coordinate System: NAD 1983 UTM Zone 19N
Basemap: Nautical Chart 13237, NOAA

Scale 1:63,360
1 inch = 1 miles

This product is for informational purposes and may not be suitable for legal, engineering, or surveying purposes.

New England Wind 1 Connector

Southernmost Starting Point for New England Wind 1 Connector
Figure 4

OECC – Shellfish Suitability Areas

LEGEND
- Preliminary Offshore Export Cable Alignments (Within Edgartown Limits)
- Preliminary Offshore Export Cable Alignments
- Offshore Export Cable Corridor (OECC)
- Approximate Offshore Town Boundary
- State/Federal Boundary
- Federal Waters

Shellfish Suitability Areas
- Bay Scallop
- Blue Mussel
- Quahog
- Razor Clam
- Soft-shelled Clam
- Surf Clam

NOTE: Cable alignments represent preliminary engineering estimates. The alignments within the installation corridor will continue to be refined throughout the route engineering process.

Map Coordinate System: NAD 1983 UTM Zone 19N
Basemap: Nautical Chart 13237, NOAA
1 inch = 1 miles
Scale 1:63,360

NOTE: This product is for informational purposes and may not be suitable for legal, engineering, or surveying purposes.

Southernmost Starting Point for New England Wind 1 Connector
Figure 5

Rare Species Habitats within OECC in Edgartown Waters

LEGEND
- Preliminary Offshore Export Cable Alignments (Within Edgartown Limits)
- Preliminary Offshore Export Cable Alignments
- Offshore Export Cable Corridor (OECC)
- Approximate Offshore Town Boundary
- State/Federal Boundary
- Federal Waters
- NHESP 2021 Priority Habitats for State-Protected Rare Species
- NHESP 2021 Estimated Habitats for Rare Wildlife: For Use with the MA Wetlands Protection Act Regulations (310 CMR 10)

NOTE: Cable alignments represent preliminary engineering estimates. The alignments within the installation corridor will continue to be refined throughout the route engineering process.

Map Coordinate System: NAD 1983 UTM Zone 19N
Basemap: Nautical Chart 13237, NOAA

This product is for informational purposes and may not be suitable for legal, engineering, or surveying purposes.
Charts Depicting Results of Marine Surveys in Edgartown Waters
Attachment D

Filing Fee Information
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(401) 714-2584
hans.vanlingen@avangrid.com

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3. Property Owner (if different):

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<td>Park City Wind LLC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d. Mailing Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>125 High Street, 6th Floor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. City/Town</th>
<th>f. State</th>
<th>g. Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>h. Phone Number</th>
<th>i. Fax Number</th>
<th>j. Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

**B. Fees**

Fee should be calculated using the following process & worksheet. Please see Instructions before filling out worksheet.

**Step 1/Type of Activity:** Describe each type of activity that will occur in wetland resource area and buffer zone.

**Step 2/Number of Activities:** Identify the number of each type of activity.

**Step 3/Individual Activity Fee:** Identify each activity fee from the six project categories listed in the instructions.

**Step 4/Subtotal Activity Fee:** Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

**Step 5/Total Project Fee:** Determine the total project fee by adding the subtotal amounts from Step 4.

**Step 6/Fee Payments:** To calculate the state share of the fee, divide the total fee in half and subtract $12.50. To calculate the city/town share of the fee, divide the total fee in half and add $12.50.
### B. Fees (continued)

<table>
<thead>
<tr>
<th>Step 1/Type of Activity</th>
<th>Step 2/Number of Activities</th>
<th>Step 3/Individual Activity Fee</th>
<th>Step 4/Subtotal Activity Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 4h. - dredging</td>
<td>1</td>
<td>$1,450.00</td>
<td>$1,450.00</td>
</tr>
<tr>
<td>Category 2j. - other (cable burial and protection, anchoring)</td>
<td>1</td>
<td>$500.00</td>
<td>$500.00</td>
</tr>
</tbody>
</table>

**Step 5/Total Project Fee:** $1,950.00

**Step 6/Fee Payments:**

- Total Project Fee: $1,950.00
  - a. Total Fee from Step 5: $962.50
  - b. 1/2 Total Fee less $12.50: $987.50
  - c. 1/2 Total Fee plus $12.50:

### C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

**To MassDEP Regional Office** (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)
Epsilon Associates, Inc

1. Nine Hundred Sixty Two and 50/100
   - Date: 03/21/22
   - Amount: $962.50
   - Pay to the order of COMMONWEALTH OF MASSACHUSETTS

2. Nine Hundred Eighty Seven and 50/100
   - Date: 03/21/22
   - Amount: $987.50
   - Pay to the order of TOWN OF EDGARTOWN

3. Three Hundred and no/100
   - Date: 03/21/22
   - Amount: $300.00
   - Pay to the order of COMMONWEALTH OF MASSACHUSETTS-NHESP