New England Wind 1 Connector
DRI 732

Martha’s Vineyard Commission
July 14, 2022
New England Wind 1 Connector

**Applicant:**  New England Wind (partnership between Park City Wind and Commonwealth Wind); Vineyard Power (Richard Andre)

**Owner:** Park City Wind, LLC

**Location:** Waters off Edgartown, including Muskeget Channel

**Proposal:** Installation of two undersea export cables associated with the Park City Wind project south of the Island.

**Trigger:** 5.1b (Development within 25’ of the ocean)

*Previously CR 7-2022*

*LUPC: 6/14/22 – No recommendation due to low attendance*

*Applicant opted to go straight to hearing*
Material submitted since LUPC

• Application package (narrative and figures), including 2020 Fisheries Communication Plan
• Response to LUPC questions
• Response to staff questions
• Applicant presentation
• Initial offers
• Letters from Edgartown climate and energy committees
New England Wind Connector 1: Permits

Local: Edgartown Conservation Commission, Cape Cod Commission, Nantucket Conservation Commission, Barnstable Conservation Commission, Barnstable DPW and/or town counsel, Barnstable planning and zoning boards

State: Massachusetts Environmental Policy Act Office, Energy Facilities Siting Board, Department of Public Utilities, Department of Environmental Protection, Department of Transportation, MA Board of Underwater Archaeological Resources, Natural Heritage and Endangered Species Program, MA Historical Commission, Division of Marine Fisheries, Coastal Zone Management, RI Coastal Resources Management Council

Project history/context

• New England Wind (formerly Vineyard Wind South) is a partnership between Park City Wind and Commonwealth Wind (both 100% owned by Avangrid Renewables), with Vineyard Power acting as a community partner on behalf of the Island.

• Park City Wind is developing a wind project in federally designated lease area OCS-A 0534, located about 19 miles south of the Island, which will provide about 800 MW of energy to the ISO New England Grid.

• The power will be purchased by distribution companies in Connecticut, but the applicant has stated that project would also increase the power supply to SE Massachusetts.

• Commonwealth Wind is developing a wind farm in the same lease area, which will provide about 1,200 MW of energy to Massachusetts.
Project history/context

• The New England Wind lease area is contiguous with the Vineyard Wind lease area (OCS-A 0501) to the north, which will provide about 800 MW of energy to Massachusetts. (Vineyard Wind ownership is 50% Avangrid and 50% Copenhagen Infrastructure Partners.)

• A similar undersea cable project as the one proposed by New England Wind was recently permitted for Vineyard Wind, and installation is expected to begin this year.

• The Vineyard Wind cable project (DRI 688) had been referred to the MVC under Checklist item 5.1, which at the time required mandatory review and referral. Checklist 5.1 now requires MVC concurrence.

• The MVC approved the Vineyard Wind project with conditions in 2019. A public hearing included a large amount of public testimony, including about 110 letters.
Proposal

• The proposal is to develop two offshore export cables connecting the proposed Park City Wind project to the ISO New England grid.

• The proposed cable corridor includes about 12.4 linear miles in the waters of Edgartown, and generally corresponds to the corridor used for the Vineyard Wind cable.

• The existing corridor would be widened about 985 feet to the west, and the portion within the Muskeget Channel would be widened about 985 feet to the east as well.

• The total width of the corridor would range from about 3,100 to 5,100 feet and is intended to provide flexibility in terms of routing the cable and avoiding sensitive habitat on the ocean floor.

• At its closest point, the cable would be about one mile from Edgartown.

• Each cable would be about 10” in diameter and lie within an approximately 3’ wide trench.

• The cable will connect at an existing substation in Barnstable.
Checklist

5.1 Development in or Adjacent to the Water

Any Development (including any Development such as mooring basins, fill, construction of piers, or armoring of coast), or any improvement or alteration to any existing such development, that is within or adjacent to the following waters of Martha's Vineyard or is within 25 feet landward of the mean high water mark of:

   a. Edgartown, Vineyard Haven, Menemsha or Oak Bluffs harbors or the West Basin in Aquinnah; or
   b. a body of water of ten (10) acres or more (See attached map B-6); or
   c. the ocean.

   —Mandatory Referral Requiring MVC Concurrence

This section 5.1 does not apply to:

• a private pier or dock serving only the residents of the property on which it is located and which is not located on a state or federally designated barrier beach; or

• municipal dredging projects located entirely within a single Town and conducted in accordance with a dredging management plan that has been adopted by the relevant Town agency.
Planning concerns

Environment/habitat
Climate change resilience
Cultural resources
Economic development
Environment/habitat

- Park City Wind is under National Environmental Policy Act Review led by the Bureau of Ocean Energy Management with other federal and state agencies.

- The state-level environmental review is led by the Executive Office of Energy and Environmental Affairs (EEA), MA Environmental Policy Act Office, and the Energy Facilities Siting Board. Other federal and state environmental review agencies include the US Army Corps of Engineers, US Environmental Protection Agency, MA Department of Environmental Protection, MA Division of Marine Fisheries, and Natural Heritage and Endangered Species Program.

- Approval is also being sought under the MA Wetlands Protection Act for the alteration of Land Under the Ocean and Land Containing Shellfish within Edgartown’s offshore waters.

- A Final Environmental Impact Statement (FEIR) required as part of the federal review was submitted to EEA in 2021.
Environment/habitat

• The applicant has assessed the ocean depths and geological conditions within the proposed corridor, including surveys related to the Vineyard Wind cable project prior to 2020 and more recent surveys.

• The applicant has stated that using a common corridor, and widening the corridor will help to maximize the success of the buried cable and minimize environmental impacts by offering more options for where the cable can be laid.
Environment/habitat

• The applicant has stated that the project will avoid core habitat for whales and minimize impacts to hard/complex seafloor habitats, which are considered sensitive habitat areas. (Similar measures were taken for the Vineyard Wind cable project.)

• Complex habitat covers the full width of the corridor in some areas, and includes features such as ripples and sand forms, which are constantly changing. (The applicant has stated that those areas are considered less optimal as habitat.)

• Hard-bottom habitat covers significant portions of the proposed corridor within Muskeget Channel.

• The corridor within Edgartown waters contains suitable habitat for surf clams and blue mussels, as well as NHESP-designated priority habitat for state-listed rare species.
Environment/habitat

Potential environmental impacts from the project would result from:

• Preliminary clearing of objects
• Dredging
• Vessel anchoring
• Cable burial
• Cable protection
• Electromagnetic fields
Environment/habitat

**Dredging**

- Some complex habitat with sand waves may require targeted dredging in order to lay the cables.
- The applicant estimates the length of possible dredging in Edgartown waters to be about 2.3 miles, with about 58,000 cubic meters of dredged material that would be deposited in other areas with existing sand waves.

**Vessel anchoring**

- Expected along the entire length of the cable path, with up to nine anchor points at a time and up to six vessels deployed on a given day.
Environment/habitat

Cable burial

• The cables have a targeted burial depth of 5-8 feet below the seabed to protect them from anchor strikes and fishing activities over time.

• Burial methods may include jetting or plowing (most common), mechanical trenching, or shallow-water methods using a vehicle.

• The trench width would generally be about 1.3-3.3 ft with jetting and at least a 3.3 ft with plowing, and the installation tool may be fixed to a skid or tracks that slide along the seafloor and could also disturb the benthic habitat.

• Displaced sediments may extend about 12 feet on either side of the trench, based on studies related to the Block Island Wind Farm, and the trench would backfill naturally.

• The applicant has stated that the “least environmentally impactful” method will be used for each segment of installation.
Environment/habitat

Cable protection

• In areas where adequate burial depths cannot be achieved (most likely in areas of hard-bottom habitat), the cable may be protected with rocks, rock bags, concrete slabs, or half-shell pipes.

• The concrete slabs would be about 10 feet wide. The applicant has stated that these would not need to include polyethylene fronds, which are an option to encourage sedimentation.

• Rock placements would be about 30 feet wide, and rock bag placements about 10 feet wide.

• The applicant aims to minimize the need for cable protection, but conservatively estimates that a total of about 3.4 miles of cable protection may be required for the project within Edgartown waters.
Table 4-1  Impacts to Land Under the Ocean from Installation of Two Offshore Export Cables within Edgartown Waters

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

* Assumes an anchored installation vessel may need to reposition every approximately 1,312 feet (400 m).
The process would be the same for each of the two proposed cables, which would be spaced about 165-330 feet apart and to the west of the Vineyard Wind cable.

The applicant expects up to three additional cables associated with New England Wind to be sited in the area at some time in the future. According to a draft Construction and Operations Plan dated October 2021, the three additional cables would be west of the ones currently proposed.

The Notice of Intent states that the areas affected by the proposed cable burial are expected to recolonize in a relatively short amount of time.

The eventual decommissioning of the cables after about 30 years would likely involve similar environmental impacts as installation, with the exception of dredging.
Environment/habitat

- The Notice of Intent states that there would be unavoidable temporary impacts to offshore wetland resources (Land Under the Ocean and Land Containing Shellfish), which the applicant seeks to minimize through the siting of the cable route, along with installation methods and scheduling.

- Various time-of-year restrictions for the project have been proposed in discussion with federal and state agencies.

- Mitigation for unavoidable impacts on marine resources would be in accordance with the Massachusetts Ocean Management Plan and 301 CMR, and would include an Ocean Development Mitigation Fee, which is proposed in the FEIR.

- The applicant plans to work with state and federal agencies to develop a Benthic Habitat Monitoring Plan to document disturbance and recovery following construction. It is not clear at what point the plan would be carried out.

- The cables will generate electromagnetic fields during operation, although the applicant has stated that the possible effects on fish species that are sensitive to electromagnetic fields are unknown.

- The applicant has stated that it has conducted outreach with the Martha’s Vineyard Fisherman’s Preservation Trust (MVFPT), although no stakeholder groups have provided direct comments as part of the review process so far.

- A Fisheries Communication Plan developed between 2011 and 2020 as part of the Vineyard Wind project has been provided and will be updated to include the New England Wind project.
Climate resilience

• The proposed cable would be integral to the Park City Wind project, which would provide about **800 MW of renewable energy to Connecticut**, increasing the reliability and diversity of the New England grid. The applicant has stated that power would also be provided to southeastern Massachusetts.

• The applicant estimates this could reduce greenhouse gas emissions in the ISO New England grid by about **1.59 million tons per year**, or about equivalent of 310,000 automobiles, along with reductions in nitrogen oxide and sulfur dioxide.

• The applicant has stated that its **power purchase agreement** for the project is for 25-30 years, which would correspond to the expected lifespan of the wind farm.

• As part of its **Community Benefit Agreement with Vineyard Power**, New England Wind has committed more than $8 million over seven years (contingent on successful permitting of the Park City Wind project) to fund the Island’s goal of eliminating fossil fuel use and becoming 100% renewable by 2040. The applicant has stated that this process will be incorporated into the Martha’s Vineyard Climate Action Plan.
Cultural resources

• Archaeological review and monitoring for the project is required by the MA Board of Underwater Archaeological Resources (MBUAR), which has identified Nantucket Sound a sensitive resource area with shipwrecks and Native American resources.

• The project area includes Nantucket Sound Wampanoag Traditional Cultural Property, including features that were identified as part of the review for the Vineyard Wind cable, and Chappaquiddick Island Traditional Cultural Property.

• The applicant has stated that it has conducted outreach to the Mashpee and Aquinnah Wampanoag Tribes, and that both tribes were appreciative of the plans to use the same general corridor as the Vineyard Wind cable. However, no stakeholder groups have provided direct comments as part of the review process so far.

• Permits for reconnaissance / field investigation have been granted by MBUAR and Mass Historic.
Economic development

• The applicant has stated that the project would create economic opportunities for the region, including maritime activities and new jobs associated with offshore wind, although the Park City Wind project itself would not create any new jobs on the Island. As such there would also be no direct impacts on housing or traffic on the Island.

• The applicant has stated that as part of its Community Benefit Agreement with Vineyard Power, New England Wind has committed more than $8 million over seven years (contingent on successful permitting of the Park City Wind project) to fund the Island’s goal of eliminating fossil fuel use and becoming 100% renewable by 2040. The applicant has stated that this process will be incorporated into the Martha’s Vineyard Climate Action Plan.

• The applicant has stated that it has conducted outreach with the Martha’s Vineyard Fisherman’s Preservation Trust (MVFPT), although no stakeholder groups have provided direct comments as part of the review process so far.
The project may involve temporary disturbance to fishing activities in the vicinity of the construction and cable installation vessels, but the applicant has stated that the cables would have no impact on the continued use of mobile fishing gear or anchoring in the area.

Among other efforts related to local fisheries, the applicant is developing a Navigational Risk Assessment for the project, and fisheries liaisons and representatives will be employed to coordinate with local fishermen.

A Fisheries Communication Plan developed between 2011 and 2020 as part of the Vineyard Wind project (including roles and responsibilities of the liaisons and representatives) has been provided and will be updated to include the New England Wind project. The Martha’s Vineyard Fisherman’s Preservation Trust is listed in the current plan as one of the representatives, along with New Bedford Seafood Consulting, the New Bedford Port Authority, and the Massachusetts Lobstermen’s Association.
Large documents to be included in the record

- Observing Cable Laying and Particle Settlement During the Construction of the Block Island Wind Farm, BOEM, 2017
- Vineyard Wind Connector 2: Analysis to Support Petition Before the Energy Facilities Siting Board Vol. 1, May 2020
- Vineyard Wind Connector 2: Environmental Notification Form, June 2020
- Final Environmental Impact Report, New England Wind 1 Connector (formerly Vineyard Wind Connector 2), November 2021
- Massachusetts Ocean Management Plan, Vol. 1, December 2021
- Massachusetts Ocean Management Plan, Vol. 2, December 2021
Vineyard Wind Cables (DRI 688) Conditions

1. Require that all reports, both substantive and monitoring, referred to BOEM and required by BOEM or NOAA and any other permitting authority shall be submitted to the Commission, including but not limited to those listed below:

   • Changes to the seafloor morphology and structure;
   • Changes in abundance, diversity and cover of species with special focus on those that are ecologically or anthropogenically important;
   • Changes in the infaunal density, diversity and community structure;
   • Reports of Benthic Habitat Monitoring and required mitigation, if any; and
   • Effects on eelgrass during installation.

The Commission reserves the right to require the applicant to seek a modification if the impacts reported are greater than those represented in the application (or those assumed by any applicable permitting authority), and the Commission reserves the right to assess the magnitude of those impacts and whether a modification is required.
Vineyard Wind Cables (DRI 688) Conditions

2. Should the applicant decide to remove the cable from the ocean floor, Vineyard Wind must submit an application to and receive approval by the Commission. The application must [include] information on impacts expected during that removal.

3. As offered by the applicant, Vineyard Wind will provide the Commission with any final federal and state environmental approvals for the project that apply to the waters of Martha’s Vineyard, including the Record of Decision issued by BOEM. Vineyard Wind will also provide a copy of the Federal Environmental Impact Statement (FEIS) issued by BOEM to the Commission. Representatives of Vineyard Wind will also make themselves available to MVC staff to discuss the approvals of the FEIS after they are issued.

4. As offered by the applicant, Vineyard Wind shall comply with the January 22, 2019 agreement, as it may be amended, pursuant to its terms with National Wildlife Federation, the Natural Resources Defense Council, and the Conservation Law Foundation, regarding protections of the North Atlantic Right Whale as it pertains to the [waters within the MVC’s jurisdiction].

5. As offered by the applicant, Vineyard Wind will undertake a Benthic Habitat Monitoring Program to document any potential disturbance to and subsequent recovery of marine habitat and benthic communities following construction of the project. The final plan, which the applicant anticipates will be memorialized in the 401 Water Quality Certificate that will be issued by the Massachusetts Department of Environmental Protection following review of the plan by the Massachusetts Department of Marine Fisheries, shall be provided to the Commission.