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# Martha's Vineyard Commission

## DRI 732 New England Wind 1 Connector

### MVC Staff Report – 2022-7-13 UPDATED

#### 1. DESCRIPTION

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- 1.1 **Owner:** Park City Wind, LLC
- 1.2 **Applicant:** New England Wind (partnership between Park City Wind and Commonwealth Wind); Vineyard Power (Richard Andre)
- 1.3 **Project Location:** Waters off Edgartown, including Muskeget Channel
- 1.4 **Proposal:** Installation of two undersea export cables associated with the Park City Wind project south of the Island.
- 1.5 **Zoning:** N/A
- 1.6 **Local Permits:** Edgartown Conservation Commission (including public hearing), Cape Cod Commission, Nantucket Conservation Commission, Barnstable Conservation Commission, Barnstable DPW and/or town counsel, Barnstable planning and zoning boards
- 1.7 **State Permits:** 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
- 1.8 **Federal Permits:** Bureau of Ocean Energy Management, Environmental Protection Agency, Army Corps of Engineers, National Marine Fisheries Service, Coast Guard, Federal Aviation Administration
- 1.9 **Surrounding Land Uses:** N/A
- 1.10 **Project History:** 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 residents of Connecticut. Commonwealth Wind is developing a wind farm in the same lease area, which will provide about 1,200 MW of energy to Massachusetts.

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 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 had been referred to the MVC under Checklist 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 (DRI 688) with conditions in 2019.

**1.11 Project Summary:** The proposal is to develop two 275 kV 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 off Edgartown, and generally corresponds to the corridor used for the Vineyard Wind cable. However, 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. Each cable would be about 10" in diameter and lie within an approximately 3' wide trench. At its closest point, the cable would be about one mile from Edgartown. The New England Wind 1 Connector project includes onshore transmission and a new substation in Barnstable, which are outside the MVC's jurisdiction.

The applicant has highlighted the following benefits of the Park City Wind project as a whole, although not all of these would apply directly to the Vineyard. (More information is available in the applicant's [DRI Application Narrative](#).)

- *Clean renewable energy at large scale and a high-capacity factor*
- *Reducing winter energy price spikes*
- *Improving the reliability of the electric grid in Southeastern Massachusetts*
- *Additional economic benefits for the region*
- *New employment opportunities [in the region]*
- *Support for Massachusetts policies*

## **2. ADMINISTRATIVE SUMMARY**

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- 2.1 DRI Referral:** Edgartown Conservation Commission, April 1, 2022
- 2.2 DRI Trigger:** 5.1b (Development within 25' of the ocean), potentially 9.2b (Wind energy facilities in an ocean zone)
- 2.3 LUPC:** June 14, 2022
- 2.4 Public Hearing:** July 14, 2022 (applicant opted to bypass MVC modification review)

## **3. PLANNING CONCERNS**

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- 3.1 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.

The applicant has assessed the ocean depths and geological conditions within the proposed corridor, including as part of 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 as described above, 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.

The applicant has stated that the project will avoid core habitat for right 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 the full width of the proposed corridor within Muskeget Channel. The corridor within Edgartown waters contains suitable habitat for surf clams and blue mussels, and is mapped as NHESP-designated priority habitat for state-listed rare species. The corridor was routed in part to avoid any eelgrass beds.

Potential environmental impacts from the project would result from the installation of the cables, including preliminary clearing of objects, dredging, vessel anchoring, cable burial, and placement of cable protection, as described in the Notice of Intent. 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. (The applicant stated at the LUPC meeting on 6/14/22 that the sand would not be available for beach nourishment on the Island, since Coastal Zone Management requires it to stay in the same area.) Vessel anchoring is expected along the entire length of the cable path, with up to nine anchor points at a time, and up to six vessels used for installation on a given day. 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 about 5 ft wide 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.

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 and include polyethylene fronds resembling seaweed to encourage sedimentation. (The applicant stated at the LUPC meeting on 6/14/22 that the fronds were included as a possibility but were not strictly necessary.) 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. The cable protection is considered the only permanent impact from the project, but would itself potentially serve as hard-bottom habitat.

The installation process (expected in 2025) would take about nine months and 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 also expects up to three additional cables associated with Commonwealth Wind to be sited within the proposed corridor 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 applicant has stated that due to the permitting schedule of each project, it would not be possible to install all of the proposed and future cables at once and avoid repeated impacts, and that there could be no new cable development within the corridor after the Commonwealth Wind cables are installed. The Notice of Intent states that the areas affected by the proposed New England Wind 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.

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 base fee is \$287,500, which would be deposited into the Commonwealth’s Ocean and Waterways Trust, and the state would determine how the funds are spent.) A Benthic Habitat Monitoring Plan has been discussed, but a timeframe for carrying out the plan has not been determined.

The cables will generate electromagnetic fields during operation, although the applicant has stated that because the cables would be buried, they would generate only magnetic fields above the ocean floor, and those would decline significantly within about 20 feet of the cable. A BOEM report titled *Evaluation of Potential EMF Effects on Fish Species of Commercial or Recreational Importance in Southern New England* concludes: “The operation of offshore wind energy projects is not expected to negatively affect commercial and recreational fishes within the southern New England area. Negligible effects, if any, on bottom-dwelling species are anticipated. No negative effects on pelagic species are expected due to their distance from the power cables buried in the sea floor.”

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 about the New England Wind 1 Connector project so far. The applicant notes that the MVFPT is a local representative to the Vineyard Wind project, for which it receives compensation. 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.

More information, including in regard to potential mitigation efforts, is available in the applicant’s [DRI Application Narrative](#).

**3.2 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. (A 2021 ISO New England study on the transmission upgrades necessary to connect offshore wind resources to the grid has been provided.) 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, and the funds managed by Vineyard Power:

*Vineyard Power, through its elected nine-member board of directors, shall manage the fund and develop funding award mechanisms and distribution processes that, among other things, are equitable and transparent for the greater benefit of our community and to help our island and its municipalities reach their 100% renewable energy targets. Vineyard Power has established an advisory committee comprised of appointed representatives from each of the six towns, the Wampanoag Tribe of Gay Head (Aquinnah), the County of Dukes County and the Martha's Vineyard Commission to support program implementation.*

**3.3 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.

**3.4 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.

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. According to the applicant: "The funds will be used to support Martha's Vineyard's transition to a 100% renewable energy community. An example is the development and funding of an Energy Transition Program that will educate and support residents, businesses, and

the building trades in a transition towards a 100% renewable energy economy including a 100% reduction in fossil fuel usage by 2040. This program will build on the framework set in the 2022 Climate Action Plan in meeting the increased renewable and greenhouse gas reduction targets, including but not limited to building weatherization, energy efficient construction, electric vehicles, and other aspects of transportation and electricity consumption.”

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.