



The Commonwealth of Massachusetts

Division of Marine Fisheries

251 Causeway Street, Suite 400, Boston, MA 02114
p: (617) 626-1520 | f: (617) 626-1509
www.mass.gov/marinefisheries



CHARLES D. BAKER
Governor

KARYN E. POLITO
Lt. Governor

KATHLEEN A. THEOHARIDES
Secretary

RONALD S. AMIDON
Commissioner

DANIEL J. MCKIERNAN
Director

June 9, 2021

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
Alex Strycky, EEA No. 16231
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Theoharides:

The Division of Marine Fisheries (MA DMF) has reviewed the Draft Environmental Impact Report (DEIR) and the May 28, 2021 Information to Supplement the DEIR by Vineyard Wind LLC for the Vineyard Wind Connector 2 project, which is part of the larger Park City Wind Project. The overall Park City Wind project includes an 800 MW wind turbine array in the central section of BOEM Lease Area OCS A-0501, which is located to the south, southwest of Vineyard Wind 1. The array is anticipated to include from 50 to 81 Wind Turbine Generators (WTGs) outfitted with monopile or piled jacket foundations and oriented in an east-west, north-south grid with 1 nautical mile spacing. The overall project infrastructure includes an offshore electrical service platform, 2 offshore export cables, and an onshore substation in Barnstable.

The Vineyard Wind Connector 2 project (VW2) represents the portion of the Park City Wind project that is within Massachusetts state waters (the OECC is 63 miles long with approximately 23 miles in Massachusetts) and includes only the OECC. VW2 will largely utilize the OECC developed for the Vineyard Wind Connector 1. However, the OECC has been widened by approximately 985 feet to the west, and also 985 to the east in a section running along Muskeget Channel, increasing the average width to 3,800 feet with a range in width between 3,100 and 5,100 feet.

The cable route would travel between Martha's Vineyard and Nantucket through Muskeget Channel, then continue north through Nantucket Sound to landfall at Craigville Public Beach or Covell's Beach in the Town of Barnstable. It would go through the town waters of Edgartown, Nantucket, Barnstable, and possibly Mashpee. The proposed OECC would contain two 220-kV three-core alternating current (AC) cables and one or more fiber optic cables for communication, temperature measurement, and protection of the high voltage system with a typical separation between cables of 165 feet. The Vineyard Wind 2 cables would be installed with a minimum separation of 330 feet from the Vineyard Wind 1 cables with greater separation anticipated in the deeper regions of the cable route. The target cable burial depth is 5-8 feet. In areas containing sand waves, dredging is anticipated to achieve adequate burial depth, resulting in estimated

potential dredge volumes in state waters up to 106,000 cubic yards across a 25 acre area. An additional 18 acres and 12.7 acres of impact are anticipated from trenching and anchoring, respectively, in state waters. For areas where burial is not feasible, hard structures may be used as cable protection in the form of rock, gabion rock bags, concrete mattresses, or half-shell pipes. Offshore cable installation is proposed using jetting, jet plow, plow, or mechanical trenching. Proposed dredging methods consist of trailing suction hopper dredge (TSHD) or jetting by controlled flow excavation. If TSHD is used, dredge material would be transported and deposited elsewhere within the surveyed area containing sand waves. Horizontal directional drilling (HDD) will be used for the approximate 1,000 to 1,200 foot section reaching the landfall site.

As outlined previously in our Environmental Notification Form (ENF) comment letter, the OECC traverses habitat for a diverse array of fish and invertebrate species. The primary resources of concern in Nantucket Sound that are vulnerable to the adverse effects of cable laying and EMF include (but are not limited to) shellfish, longfin squid (*Doryteuthis pealeii*) and squid eggs, knobbed (*Busycon carica*) and channeled (*Busycotypus canaliculatus*) whelk, and flatfish. Both commercial and recreational fisheries are active throughout the OECC area.

MA DMF previously reviewed the ENF for this project and submitted a comment letter to MEPA on July 28, 2020 including recommendations for consideration in developing the DEIR. The DEIR includes a copy of our comment letter with responses to our individual comments (DEIR 12-41 to 12-46). While some of our ENF comments are clearly and adequately addressed in the DEIR responses or subsequently in the DEIR Supplement, some information requested for inclusion in the DEIR remains outstanding. In many instances, the response section did not directly answer our information requests but instead referenced responses to other agency comment letters or general sections of the DEIR. The response section should provide direct point-by-point answers to our posed questions and information requests to allow us to more efficiently assess the degree to which the DEIR addresses the recommendations provided from the ENF review. We further detail our responses to outstanding requests made previously in our ENF comment letter and provide recommendations for drafting the Final Environmental Impact Report (FEIR) below:

Habitat and Marine Resource Characterization

- MA DMF recommended that the DEIR document the distribution of species vulnerable to cable trenching activities (shellfish, whelks, squid eggs) as well as strategies for minimizing impacts to these resources. Section 9.1.1 of the DEIR describes observations of squid eggs and bay scallops in relation to towed video surveys but fails to reference other sessile or low mobility species or life stages (e.g., whelks, whelk eggs, horseshoe crabs, shellfish). It also does not include any information beyond the video surveys conducted along the OECC. A more comprehensive description of these resources that are highly sensitive to cable laying activities is needed. Specifically, information from the MA inshore bottom trawl survey would provide a better representation of the resources present in the general OECC region than a narrow video survey alone. For example, still photos or video tracks alone are not appropriate survey methods for whelk presence, since they typically bury in the sediment during daylight hours, thus negatively biasing visual presence estimates. Similarly, while bay scallops were detected in the video survey, the high annual variability in bay scallop abundance and distribution following a

“boom or bust” pattern limits the predictive value of data collected during a single season and year.

- Attachment C of the DEIR provided some added detail to the substrate mapping data presented in the previous ENF filing. However, the DEIR does not address further requests by MA DMF for substrate data. MA DMF requested that all substrate data be produced in the same Excel spreadsheet as the Commonwealth’s substrate data and interpreted substrate units be produced as an ArcGIS shapefile or geodatabase. All data should be provided digitally in formats compatible with ArcGIS to enable comparison with existing datasets. Acoustic mosaics should be provided as geotiffs at the maximum resolution possible. There should be at least four geotiffs provided: multibeam backscatter, sidescan sonar backscatter, multibeam bathymetry, and backscatter draped on bathymetry. The date of data collection should be easily discernable for all products.
- MA DMF requested that the DEIR include detailed descriptions of the existing benthic habitat including survey results of sediment type and benthic invertebrates. While Section 2.7.4 and Attachment C contain sediment type information, information on benthic invertebrate survey results is currently lacking.
- MA DMF continues to request that seafloor features be described using the Coastal and Marine Ecological Classification Standard (CMECS). Vineyard Wind states in the DEIR that it “anticipates including the CMECS mapping in the VWC2 FEIR” (DEIR Response to MEPA 21; 12-11). MA DMF looks forward to the presentation of the CMECS mapping in the FEIR.

Communication with Stakeholder Groups

- The DEIR identified a commitment to coordinate with MA DMF to avoid any direct conflicts between cable laying activities and the MA DMF spring and fall bottom trawl surveys. Communications should be direct to Matt Camisa, the MA DMF resource assessment project lead biologist, to identify the locations of proposed cable laying activities in MA state waters during May and September. Communications can be sent electronically to: matt.camisa@mass.gov.
- The FEIR should also add further detail regarding potential prohibition or relocation of fishing due to survey, installation, or repair procedures. The DEIR states: “Close coordination with fixed-gear fisheries will be necessary prior to construction to ensure fishermen are not placing gear along the cable alignments at the time construction activities begin in a particular section of the route” (DEIR Section 9.1). This statement suggests a temporary restriction on fishing access that should be better detailed in the FEIR. The DEIR refers to safety zones but does not provide further relevant details, specifically safety zone anticipated size, how long they are expected to be in place for any given project phase, and communication plans to notify fishermen of both when gear needs to be relocated outside of a construction area and when it is safe to return gear to these areas. The DEIR Supplement does detail a “Notices to Mariners” protocol being used to inform vessels and Project website updates of construction activities. Given that the waters within the OECC are fished by vessels from a variety of ports, it would be helpful to detail the Notice to Mariners distribution list in the FEIR. Further detail is also required regarding potential fishing gear conflicts in areas where cable armoring is required. Section 9.1 of the DEIR also states: “Should the Project not be able

to achieve target burial depth in certain areas, cable protection may be required. In such cases, it will be designed to minimize impacts to fishing gear, when possible, and fishermen will be informed of the areas where protection is used.” The FEIR should further detail how fishermen will be informed to ensure that the different stakeholder groups fishing in these areas are aware of these structures.

Marine Impact Characterization

- The proposed post-cable installation EMF monitoring for Vineyard Wind 1 described in the DEIR Supplement will provide information on field EMF conditions for the project area under different burial depths (~ 3-6 feet). Additional monitoring along areas where burial is not feasible (i.e., armored sections) should also be performed. EMF impacts on many important local species have not been studied and published with peer review. Given this consequent uncertainty regarding potential EMF impacts and the large area of seafloor proposed to include cable for this and other WEA projects, further experimental investigation of the interaction between EMF and potentially susceptible species is warranted (Hutchison *et al.*, 2021). A targeted study would improve the understanding of EMF impacts on local species and provide an important reference for current and future cable projects in local waters. Recent modeling indicates that burial reduces but does not eliminate emissions (Hutchison *et al.*, 2021). While this modeling was based on HVDC cables and Vineyard Wind 2 is proposing HVAC cables, results nonetheless demonstrate that cable burial cannot be assumed to fully mitigate EMF impacts. Without a better understanding of fish and invertebrate response to EMF emissions, it will be difficult to assess the adequacy of burial as mitigation in cases where low levels are still detected in the overlying substrate surface and water column.
- The DEIR Supplement provides some useful discussion of the different potential armoring materials and their relative ecological value. The FEIR should also provide information on the vulnerability to fishing gear impacts of each material. The DEIR only notes potential anchoring and/or trawling impacts anticipated for the half-shell pipes proposed for cable crossings. Potential anticipated conflicts with fishing activity for the other protection materials and designs still need to be assessed. The rock burial would appear to be more vulnerable to gear impacts than the other protection methods considered in the DEIR, but its potential vulnerability is not discussed. The rock cover option should also be further detailed in terms of the anticipated maximum and median grain size in addition to the reported minimum (2.5”) size. The same details should be provided for the rocks that would be included in the gabion bag approach. Anticipated width should also be described for the gabion bag design. The area is estimated to be greater for the rock cover option due to required side slopes, but it is unclear if this greater width would be required for the gabion bag design. The concrete mattress appears to be presented as the preferred alternative in the DEIR. While it appears to be more protective against gear or anchor interactions than the other armoring designs, it would likely provide less habitat value than rock or gabion rock bags since the concrete mattresses would have fewer interstitial spaces (Callaway, 2018). If a concrete mattress approach is pursued as the preferred alternative, it would be beneficial to incorporate additional interstitial spaces into the mattress design to increase the habitat value of this armoring type.

- The DEIR Supplement provides some additional discussion of anticipated time-of-year (TOY) restrictions on cable laying activities in addition to anticipated TOYs for landfall work associated with piping plover nesting and Town of Barnstable stakeholder conflicts detailed in the main DEIR. While MA DMF agrees that specific TOY restriction conditions can be developed in the permitting process, information on anticipated timing of cable laying would be helpful to include in the FEIR as such information is relevant in determining the extent to which construction activities might directly impact marine resources and by association the need to characterize the distribution of potentially sensitive species. This is particularly relevant for squid eggs in Nantucket Sound waters.
- The Fisheries Monitoring Plan associated with Vineyard Wind 1 still has outstanding issues requiring resolution (see attached MA DMF comment letter submitted to MA DEP on April 1, 2021). These issues remain relevant to the current Vineyard Wind 2 project given the high degree of spatial and methodological overlap across projects and by association similarity in potential impacts to marine fisheries resources. The DEIR Supplement Item 3, Fisheries monitoring and mitigation, only discusses mitigation and communication with fishing industry stakeholders and does not include proposed monitoring activities. These issues should be addressed in the FEIR.

Questions regarding this review may be directed to John Logan in our New Bedford office at john.logan@mass.gov.

Sincerely,

Daniel J. McKiernan

Director

cc: Barnstable Conservation Commission
Edgartown Conservation Commission
Mashpee Conservation Commission
Nantucket Conservation Commission
Amy Croteau, Barnstable Natural Resource Officer and Shellfish Constable
Corinne Snowdon, Epsilon Associates
Alison Verkade, Sue Tuxbury, Kaitlyn Shaw, NMFS
Lisa Engler, Todd Callaghan, Robert Boeri, Steve McKenna, CZM
Ed Reiner, Tim Timmerman, EPA
Amy Hoenig, Eve Schluter, DFW
David Wong, David Hill, David Johnston, Mille Garcia-Serrano, DEP
Tori LaBate, DFG
Tracy Pugh, Steve Wilcox, Derek Perry, Melanie Griffin, Kelly Whitmore, Erin Burke, Robert Glenn, Tom Shields, Eileen Feeney, Ryan Nuttall, Mark Rousseau, Kevin Creighton, DMF

References

- Callaway, R. (2018). Interstitial space and trapped sediment drive benthic communities in artificial shell and rock reefs. *Frontiers in Marine Science*, 5, 288.
- Hutchison, Z. L., Gill, A. B., Sigray, P., He, H., & King, J. W. (2021). A modelling evaluation of electromagnetic fields emitted by buried subsea power cables and encountered by marine animals: Considerations for marine renewable energy development. *Renewable Energy*, 177, 72–81.

DM/JL/KW/SW/TP/MP/MR/sd