



New England  
Fishery Management  
Council



MID-ATLANTIC  
FISHERY MANAGEMENT COUNCIL

July 30, 2021

Program Manager, Bureau of Ocean Energy Management  
Office of Renewable Energy Programs  
45600 Woodland Road (VAM-OREP)  
Sterling, Virginia 20166

Re: Notice of Intent to Prepare an EIS for the Vineyard Wind South project

Dear Sir/Madam,

Please accept these comments from the New England Fishery Management Council (New England Council) and Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) regarding the Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for the Construction and Operations Plan (COP) for the Vineyard Wind South project of Massachusetts. The COP proposes to install, in two phases, turbines and offshore electrical service platforms at up to 130 locations, up to 3 onshore substations, up to 5 export cables, and potentially a reactive compensation station (Phase 2 only). Combining both phases, up to 590 nautical miles of cables would connect the turbines, offshore substations, and reactive compensation station (if used), and onshore connection points.

The New England Council has primary management jurisdiction over 28 marine fishery species in federal waters and is composed of members from Maine to Connecticut. The Mid-Atlantic Council manages more than 65 marine species<sup>1</sup> in federal waters and is composed of members from the coastal states of New York to North Carolina (including Pennsylvania). In addition to managing these fisheries, both Councils have enacted measures to identify and conserve essential fish habitats (EFH), protect deep sea corals, and sustainably manage forage fisheries. The Councils support policies for U.S. wind energy development and operations that will sustain the health of marine ecosystems and fisheries resources. While the Councils recognize the importance of domestic energy development to U.S. economic security, we note that the marine fisheries throughout New England and the Mid-Atlantic, including within the Vineyard Wind South project area and in surrounding areas, are profoundly important to the social and economic well-being of communities in the Northeast U.S. and provide numerous benefits to the nation, including domestic food security.

### **General comments**

The pace and number of offshore wind projects in development in our region pose challenges for thorough analysis of potential impacts, informed public input, and adopting lessons learned from each project. There are over a dozen projects for which survey, design, and environmental

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<sup>1</sup> Fifteen species are managed with specific Fishery Management Plans, and over 50 forage species are managed as “ecosystem components” within the Mid-Atlantic Council’s FMPs.

review are already occurring and multiple additional areas in the New York Bight are planned to be leased. Five projects, including this one, entered the DEIS development phase through issuance of NOIs between March and the beginning of July, and additional NOIs are expected later this year. Consulting and coordinating on these projects is already taxing available resources in the fishing, fishery management, and fishery science communities, and we expect at BOEM as well. Consistency in approaches and adopting lessons learned from one project to the next will benefit stakeholders who engage in the review process for these complex projects.

As the impacts analysis is developed, clear terminology will be important for readers to understand the complexity of the alternatives considered and the large number of impact-producing factors and environmental resources evaluated. It also would be useful to specify both magnitude and direction when characterizing impacts, and for the EIS to define short and long term in the context of impacts.

Vineyard Wind South is the second combined, two-stage Northeast U.S. offshore wind project to undergo environmental review and permitting. The EIS should describe how the phased approach works in terms of BOEM's approval process. The concept of adaptive management is raised frequently in relation to U.S. offshore wind development. Because energy generated from Phase 2 has not yet been procured, the timeline for construction remains uncertain, and development may follow several years after Phase 1. There will likely be lessons learned during that time that might inform and help mitigate negative effects during construction of Phase 2. Will permit issuance, terms and conditions, and mitigation measures identified via the federal consistency process be adaptive such that lessons learned during Phase 1 can be applied to Phase 2?

### **Alternatives considered in the EIS**

Phase 1, Park City Wind, was procured by Connecticut and is expected to generate 804 MW. Phase 2 has not yet been procured but is expected to generate 1,200-1,500 MW. The project design envelope for Phase 1 considers turbines ranging from 13-16 MW; Phase 2 turbines could be larger, up to 19 MW. Potential layouts are described in the COP. The alternatives descriptions in the EIS should outline various layout options for each phase, depending on the size of turbines selected and the amount of power to be generated during Phase 2. It will be important to clearly outline a wide range of possible scenarios for Phase 2 in particular, especially if the project size is unknown at the time of EIS completion. However, it is also important that the range of possible scenarios be focused on likely outcomes as too wide of a range will pose challenges for evaluating the likely impacts of the project. The EIS should evaluate whether turbines as large as 19 MW will interfere with U.S. Air Force Weather Division NEXRAD radar by limiting the ability to track tropical storms moving in the area. The Department of Defense raised this concern in the New York Bight lease areas. If there are similar concerns here, it may narrow the design envelope for Phase 2.

We recommend that BOEM develop a habitat minimization alternative that will minimize impacts to sensitive habitats including eelgrass, hard bottom, and complex topography. This alternative should consider reduced numbers of turbines, restrictions on turbine locations, different turbine foundation types, and various cable routing options. Our concerns about habitat impacts are discussed in greater detail in the following section.

Phase 1 considers the use of monopile or piled jacket foundations. In addition to these, bottom-frame foundations are part of the design envelope for Phase 2. The different impacts associated with the various types of foundations should be clearly identified in the EIS, particularly bottom-frame foundations which readers may be less familiar with.

For all alternatives, the EIS should be clear on which mitigation measures will be required as opposed to discretionary. Only required mitigation measures should influence the impacts conclusions in the EIS.

### **Fisheries and habitat considerations**

BOEM should coordinate early and often with NOAA Fisheries on the most appropriate data for analysis of potential impacts to fisheries, including fishing and transiting locations, as well as socioeconomic impacts. The EIS should clearly and repeatedly acknowledge the limitations of each data set. Summary information on Council-managed fisheries is also available on the Council websites, [www.mafmc.org](http://www.mafmc.org), and [www.nefmc.org](http://www.nefmc.org), at fishery management plan-specific links, typically via annual fishery information reports (MAFMC) or recent plan amendment or framework documents (both councils).

Commercial and recreational fisheries provide a wide range of benefits to coastal communities; not all are captured by looking only at financial metrics. The EIS should not overly rely on ex-vessel value when assessing and weighting impacts across various fisheries. Focusing on ex-vessel value can mask other important considerations such as the number of impacted fishery participants, the use of a low-value species as bait for a high-value species, or a seasonally important fishery.

Models exist to estimate the amount of fisheries revenue generated from within the project area; however, it is important to acknowledge that changes in transit patterns will also have economic impacts and the associated economic impacts will be challenging to accurately quantify.

Commercial, for-hire recreational, and private recreational fishing should be considered separately, but in the same or adjacent sections of the document. As the Councils have stated in comment letters on other wind projects, the grouping of private recreational fishing with recreation and tourism, rather than with commercial and for-hire fisheries, is not intuitive to us and makes it challenging for readers to understand the full picture of potential impacts on all fishery sectors. If fishery species are affected by the project (including impacts to target species as well as their prey or forage species and impacts to habitat determinant species), this will affect both for-hire and private recreational fishing. Grouping both types of recreational fishing would make linkages between biological and fishery conditions more straightforward to explain.

The COP specifies mitigation funds to “...assist Connecticut fishermen, and further bolster local communities in Connecticut where offshore wind development is taking place. Vineyard Wind anticipates working with federal and Connecticut state agencies as well as environmental, fisheries, and local community stakeholders in Connecticut to identify key priorities and programs these funds could support” (Volume III, Table 4.2-1). We strongly urge mitigation funds be provided to all affected vessels regardless of homeport. It is not appropriate to prioritize

the needs of Connecticut fishermen over those homeported or landing product in other states who also fish in and around the project area.

Fishing vessels utilize certain fishing grounds based on many factors, including where target species are located and where management regulations allow; thus, vessels cannot necessarily relocate to a different area to avoid the windfarm without socioeconomic impacts. The COP suggests in Volume E9 Appendix III-N that commercial fishing will likely continue in the area and that fishermen can recoup at least some of their losses by shifting effort elsewhere. The analysis considers total loss of revenues from the project area, as well as the potential for 25%, 50%, and 75% of revenues to be recouped elsewhere. These assumptions provide a reasonable range for analytical purposes, but the key question is which of these is most likely to occur, and why? The EIS should explore this issue in detail. The likely extent of impacts will be important to understand in the context of developing mitigation agreements for affected fishing industry members. Fishing effort can change based on management actions such as a change in access areas, or updated state-by-state quota allocations for a target species like black sea bass. It is important to account for the dynamic nature of fishing effort over time when evaluating impacts to fishermen and fishing communities. This is an area of the EIS where cumulative considerations are especially critical and these two projects cannot be considered in a vacuum; many other wind farms are proposed within the Massachusetts and Rhode Island wind energy areas and in other areas throughout New England and the Mid-Atlantic, and fishing will be affected over a large area if all these projects are installed.

We recognize that data on private angling are limited compared to commercial fishery data, especially data on fishing locations; therefore, it will be important to clearly articulate the limitations of the available data and work with local fishermen to understand how the project area is used by recreational fisheries. Volume III of the COP does a good job describing the number of angler trips and recent research by Kneebone and Capizzano (2020) to evaluate private recreational activity within and near the lease area; however, economic valuation data from these trips and the likely revenue impacts (beneficial and adverse) from wind farms are missing.

The impacts of the project will not be felt only by fishermen from nearby ports; the EIS should consider commercial and recreational fisheries over a wide geographic area that may be impacted by the project. The ports most impacted in terms of revenue in the project area include Point Judith, RI (\$1.8M), New Bedford, MA (\$1.7 M), and to a lesser extent Montauk, NY and Fairhaven, MA ([NMFS 2021](#)). For example, vessels traveling from ports north and south of the project area may transit through and/or fish in the area. Furthermore, if and when fishing effort shifts to other areas, competition with fishermen in those areas could result, causing a decrease in fleet-wide catch per unit effort, resulting in several smaller trips and, thus, additional labor required for onshore infrastructure. This economic multiplier should be considered more thoroughly in the EIS. In addition, some of the data provided as indicators of economic exposure in the project area are from 2011-2015 and 2013-2017, for example, and are thus outdated for the purposes of evaluating baseline fishing activity information (page 2.4 of Volume E9 Appendix III-N). Again, BOEM should coordinate with NOAA Fisheries on the best data regarding fishing and transit, the EIS should clearly acknowledge the limitations of the available data, and local fishermen should be consulted to better understand use patterns not captured in the data.

The COP suggests that only small fractions of the inter array, and slightly larger fractions of the export cables, will require surface lay and external armoring. These are areas of concern in terms of their potential to affect fishing operations. The EIS should clearly document the fraction of the cables where armoring is likely to be required and identify where these areas are located. The New England Council's [submarine cables policy](#) recommends that when cable burial is not possible, cables should be protected with materials that mimic natural, nearby habitats where possible. It would be helpful to identify the characteristics of any cable protection materials, should burial depths of 4-6 feet not be achieved, because these materials contribute to the net amount of complex habitat that would exist in the area once the project is constructed.

The COP proposes to use the same cable corridor for all three projects. We are pleased to see this as we have commented to BOEM in the past that coordinated transmission could have environmental benefits to the extent that it might reduce the number of cable installations required. However, in this case, it should also be noted that adjacent swaths of seabed along the same corridor would be disturbed sequentially as the cables for Vineyard Wind 1 and Vineyard Wind South Phases 1 and 2 are laid. Effects of cable installation include both noise and sediment plumes, which may affect biological processes for fishes, for example Atlantic cod, which are an acoustically sensitive species that rely on particular spawning grounds, and squid, which lay their egg mops on the seabed and could be impacted by sediment deposition. It will be important for the impacts analysis, including the EFH assessment, to consider how installation during different seasons will affect particular species and lifestages during spawning, juvenile settlement, etc. The nature of these repeated effects over time should be accounted for in the analysis of impacts to habitats and fishes. We are concerned about the ability to widen the cable corridor where it runs through Muskeget Channel without impacting complex habitat. The EFH assessment indicates that "several locations within Muskeget Channel contained coarse deposits and hard bottom habitats consisting of pebble-cobble habitat with sulfur sponge (*Cliona celata*) communities." It will also be important to evaluate impacts to eelgrass habitats near the Covell's Beach landfall. Coastal areas off Massachusetts to a depth of 20 meters, including Muskeget Channel and the remainder of the offshore export cable corridor headed to the landfall site, are designated by the New England Council as a Habitat Area of Particular Concern for juvenile Atlantic Cod. Cod spawning grounds occur east of the lease area off Nantucket (DeCelles et al. 2017).

The COP states that electromagnetic fields (EMF) are not likely to affect demersal or benthic fishery resources (positively or negatively) (Volume III, page 4-18, 6-187). We do not believe that sufficient information is available to conclusively support this statement. For example, elasmobranchs (namely skates and spiny dogfish) and other species exhibited a strong behavioral response to EMF in a field study conducted by University of Rhode Island and BOEM.<sup>2</sup> While this study is referenced in the COP, a subsequent study mentioned in the COP (Love et al. 2017)

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<sup>2</sup> Hutchinson, Z. L., P. Sigray, H. He, A. B. Gill, J. King and C. Gibson (2018). Electromagnetic Field (EMF) Impacts on Elasmobranch (shark, rays, and skates) and American Lobster Movement and Migration from Direct Current Cables, U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs.; also see Hutchinson, Z. L., A. B. Gill, P. Sigray, H. He and J. W. King (2020). "Anthropogenic electromagnetic fields (EMF) influence the behaviour of bottom-dwelling marine species." [Scientific Reports](#) **10**(1): 4219.

states “research investigating habitat use around energized cables found no evidence that fishes or invertebrates were attracted to or repelled by EMFs emitted by cables.” Potential EMF impacts are a concern to the fishing community and the extent to which EMF may or may not impact marine species should be thoroughly described in the EIS. EMF is listed as an impact-producing factor in Table 6.6-4, where cable burial and cable protection are listed as mitigation measures to reduce the impact to fishery resources, however, further research citations would be helpful to verify the effectiveness of these mitigation measures. Potential differences in impacts between HVAC and HVDC cables should be evaluated in the EIS since both are under consideration for Phase 2.

Turbine foundations and their associated fouling communities will create artificial reefs, which are expected to attract certain fishery species (e.g., black sea bass). Volume III Appendix III-N (page E-8) briefly describes this impact on commercial vessels and concludes no significant adverse economic impact to commercial fisheries, with the assumption that commercial fishing will continue in this project area and will benefit from this effect. We do not believe this conclusion is certain, as commercial fishing vessels may choose to avoid fishing within wind energy areas due to safety and navigation concerns. The EIS should acknowledge that the benefits of this artificial reef effect will vary by target species and by fishing sector within Volume III Table 4.2-1. For example, any benefit to recreational anglers targeting highly migratory species (e.g., tunas and sharks) could be offset by the inability to anchor or to drift throughout the area. If operators shift their effort outside the project area during construction or long-term operations, this will potentially put them in areas of higher vessel traffic and gear conflict. Also, depending on operating conditions at sea, commercial and recreational fishermen cannot always reap the benefits of any increased catchability of target species due to safety concerns of fishing in swells around the turbines. These safety considerations will be different than the existing artificial reefs in the Greater Atlantic region which, except for the Block Island Wind Farm turbine foundations, are all submerged structures.

In the context of both cable and turbine installation, any place where the bottom sediments will be disturbed must be evaluated for sediment contamination to understand the potential for environmental effects associated with contaminant release. Two obvious sources of contamination are dredged spoils from inshore, nearshore, or harbor maintenance and disposal of onshore materials (including waste). For many years, such disposal was not evaluated carefully and not regulated as it is today. As a result, sediments and other material with unacceptable levels of heavy metals and persistent organic pollutants (POPS) were disposed in ocean waters and may remain in locations where they could be disturbed. These sources of contamination need to be assessed and managed as part of the offshore wind development process.

The COP considers “retirement in place (if authorized by BOEM) or removal of the offshore cable system” (Volume 1, Section 3.3.3). It is essential that cables be removed during decommissioning. Abandoned, unmonitored cables could pose a significant safety risk for fisheries that use bottom-tending gear and the long-term risks to marine habitats are unknown.

### **Cumulative impacts**

The EIS must include a meaningful cumulative impacts assessment. We supported the criteria used in the Vineyard Wind 1 EIS for defining the scope of reasonably foreseeable future wind

development; however, that scope should now be expanded to include the anticipated New York Bight lease areas. The cumulative effects analysis should also consider the impacts of cables from the many planned offshore wind projects.

Cumulative impacts and risks need to be evaluated for species that are widely distributed on the coast. Species such as bluefish, flounder, and others that migrate along the coast could be affected by multiple offshore wind projects, and well as other types of coastal development. Climate change will also be an essential consideration in the cumulative effects analysis.

We continue to have significant concerns about the cumulative impacts of offshore wind development on fishery independent surveys. Major negative impacts to these surveys would translate into greater uncertainty in stock assessments, the potential for more conservative fisheries management measures, and resulting impacts on fishery participants and communities. We are encouraged by BOEM's commitment to working with NOAA on long term solutions to this challenge through the regional, programmatic, Federal Survey Mitigation Program, described in the Record of Decision for the Vineyard Wind 1 project.

### **Conclusion**

We appreciate the opportunity to provide comments to ensure that issues of social and ecological importance are considered in the forthcoming EIS for the Vineyard Wind South COP. We look forward to working with BOEM to ensure that any wind development in our region minimizes impacts on the marine environment and can be developed in a manner that ensures coexistence with our fisheries.

Please contact us if you have any questions.

Sincerely,



Thomas A. Nies  
Executive Director, New England Fishery Management Council



Dr. Christopher M. Moore  
Executive Director, Mid-Atlantic Fishery Management Council

cc: J. Beaty, M. Luisi, W. Townsend, J. Bennett, A. Lefton