



January 22, 2019

Program Manager
Office of Renewable Energy
Bureau of Ocean Energy Management
45600 Woodland Road
Sterling, Virginia 20166

Dear Sir/Madam,

Please accept these comments from the New England Fishery Management Council (New England Council) and the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) on the Draft Environmental Impact Statement (DEIS) for the Vineyard Wind project proposed offshore of Massachusetts.

The New England Council has primary management jurisdiction over 28 marine fishery species under nine FMPs in federal waters and is composed of members from Connecticut to Maine. The Mid-Atlantic Council manages more than 64 marine species with seven fishery management plans (FMPs) in federal waters and is composed of members from the coastal states of New York to North Carolina (including Pennsylvania). Fourteen species are managed with specific FMPs, and over 50 forage species are managed as “ecosystem components” within the Mid-Atlantic Council’s FMPs. In addition to managing these primary fisheries, both Councils have enacted measures to identify and conserve essential fish habitats, protect deep sea corals, and manage forage fisheries sustainably. 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 in Southern New England are profoundly important to the social and economic well-being of communities in the Northeast US and provide numerous benefits to the nation, including domestic food security.

The National Marine Fisheries Service (NMFS) is providing detailed comments and analytical products that describe our fisheries, essential fish habitats, endangered and protected resources, and other important considerations related to the marine environment for the project. Please note for the record that the Councils support and concur with NMFS’ comments and concerns. In this letter, we have focused on aspects of the DEIS that are most relevant to our fisheries resources, habitats, and stakeholders.

General comments about the DEIS

Within the DEIS, impacts are identified as negligible, minor, moderate, and major, and either negative or beneficial. The direction of impacts provided throughout the analysis appears to be left unstated in most or all cases when impacts are negative; it is unclear why this might be, but the approach creates ambiguity. Both the direction and magnitude of impacts should be denoted for each conclusion drawn. The expected cumulative effects are also described resource by resource, which makes it challenging to

interpret important conclusions about how the proposed wind farm will affect all the related resources. BOEM should consider a comprehensive single discussion of cumulative effects rather than a resource-by-resource approach.

Alternatives Including the Proposed Action (Chapter 2)

Impacts of the Proposed Action and Alternatives are only considered 'major' for three of the affected resources: Environmental Justice, Fishing, and Navigation, with the comments under Environmental Justice related specifically to fishing issues (Tables 2.4-1 and 2.4-2). All other affected resources are analyzed as having only negligible, minor, or moderate impacts. These findings of the DEIS suggest that BOEM should view fishery stakeholders as amongst their highest priority participants in this process, and that their comments and viewpoints should be carefully considered as the DEIS is revised. Table 2.4-2 presents BOEM's finding that with mitigation measures, analyzed impacts decrease from major to moderate for both Environmental Justice and Fishing. This suggests that BOEM should do everything possible to ensure that Vineyard Wind utilizes these mitigation measures during construction and operations, perhaps requiring them as a condition of the permit. While we are not providing specific comments on the Navigation section of the DEIS, we note that fisheries stakeholders have expressed significant concerns around their ability to safely navigate within wind farms. Concerns we have heard are related specifically to the possibility of radar interference, the ability to safely fish and transit during severe weather, and the possibility that large number of in-water structures could make search and rescue operations more difficult. We encourage BOEM to collaborate with the United States Coast Guard and the fishing industry to mitigate these concerns.

In terms of the alternatives themselves, it is unclear why one-mile spacing and east-west layout are combined as two sub-options under a single alternative, except that both of these alternatives are linked by the need for relatively extensive additional site assessment work should they be selected (this is compared to Alternative C, which would require more limited additional site assessment).

The Councils are not recommending a specific set of alternatives as preferred, but we are aware of significant concerns on the part of the fishing industry regarding turbine orientation and spacing, including the desire for wider turbine spacing in designated transit lanes. We encourage BOEM to seek the maximum level of consensus possible among developers and the fishing industry on the layout of the Vineyard Wind project. Further, although the Construction and Operations Plan (COP) and DEIS use a design envelope approach with a range of potential wind turbine generator (WTG) sizes and associated spacing requirements, our understanding from Vineyard Wind's public communication is that they intend to use 9.5 MW WTGs for the project. If this parameter has been clearly determined, the analysis in the DEIS could be made more specific to reflect the impacts of using 9.5 MW WTGs.

Finfish, Invertebrates, and Essential Fish Habitat (Chapter 3, Section 3.3.6)

BOEM suggests there is plenty of similar surrounding habitat around the project site as justification for assessing various impacts as negligible, minor, and moderate. Is this a reasonable assessment at the present time? Will this statement remain true if all potential sites attractive for offshore wind energy and currently leased offshore Massachusetts and Rhode Island are developed in 30-year project operation window? We suggest that BOEM should think critically about the availability of similar suitable habitats considering the plausible cumulative development of large areas of the continental shelf for wind power.

Related specifically to the assessment of cumulative impacts (section 3.3.6.10), the assessment of impacts as ‘moderate’ for installation and ‘minor’ for operations are not well justified in the text especially given the likelihood of additional wind projects. It seems plausible that both WTG underwater noise and electromagnetic frequency emissions (EMF) from cables could have ongoing impacts on benthic and demersal species beyond what is currently known, especially because this is the first major project planned for the Northeast U.S. This would argue for a larger range of potential impacts of operations, i.e. minor to moderate, vs. just minor. Further, the list of projects considered to be reasonably foreseeable (Appendix C, table C.1-3) is extremely narrow. It is evident that energy companies have made significant financial investments in developing these areas, even considering areas that have only been leased (Tier 5, leases OCS-A 0520, 0521, and 0522), given that the December 2018 leases commanded record prices at auction. It seems overly conservative to place only projects with approved or submitted permits and plans into the reasonably foreseeable category.

In addition, increased noise from WTG and EMF are long-term effects, even if the impacts are reasonably evaluated as minor. Under the heading “Aspects of Resource Potentially Affected” (p. 3-74) it is stated that “increased turbidity, noise, sediment deposition, water withdrawal, and EMF are likely to temporarily alter the behavior of finfish and invertebrate species within the wind development area (WDA) and offshore export cable corridor (OECC)”. While turbidity, construction noise, and sediment and water withdrawal may all be considered temporary, operations noise and EMF cannot reasonably be considered as such since the project is expected to operate for 30 years.

Additional specific comments:

- 1) None of the ‘relevant design parameters’ listed on page 3-74 are related to ongoing operations. For example, are there limits on operations during certain wind conditions that would affect the ongoing impacts of the project?
- 2) In ‘Construction and Installation of Offshore Components’, there is a comment that “BOEM could further reduce potential impacts as a condition of COP approval, requiring Vineyard Wind to conduct long-term monitoring to document the changes to the ecological communities on, around, and between WTG foundations and other benthic areas disturbed”. We agree that long-term monitoring is critical and should be a condition of COP approval but fail to see how monitoring will reduce impacts, because it will not change the way the windfarm is constructed. However, monitoring would allow Vineyard Wind and BOEM to better understand the effects of wind farm construction and operations on living resources and habitats and could inform decisions about mitigation and the overall management of these resources.
- 3) In ‘Construction and Installation of Offshore Components’, the discussion of pile driving noise impacts is confusing, and Table 3.3.6-1 is not sufficiently explained. We suggest moving this table to an appendix and rewriting this section to more clearly articulate in narrative form what the radial distance and total areal impact of noise damage to species is expected to be. The first paragraph in this section suggests that fish can be physiologically injured by the pile driving noise up to 5.7 miles away, but impacts are assessed as only minor, owing to the impact area being small relative to “overall habitat available”. This conclusion should be thoughtfully evaluated and better justified if it is valid based on available data.
- 4) Given that turbines will be operated for 30 years and the way sound travels underwater, there could be more detailed discussion of impacts in the section on ‘Vessel Activity/Noise’

(Operations and Maintenance of Offshore Components section, page 3-79). The DEIS states “no study has shown any behavioral impact of sound during the operational phase of wind energy facilities ...” but does not clarify whether studies have been done at all, and impacts have not been identified, or is there simply a lack of research on this topic. If there is a lack of research on this issue, it should be added to the list of topics for which information is ‘incomplete or unavailable’, in section 3.3.6.11 (page 3-86). The effects of cable EMF on marine organisms could also be added to this list of topics.

- 5) In the Operations and Maintenance section, is light flicker a potential concern? It is not addressed as an impact but has been identified as an issue of concern for land-based wind energy projects. The DEIS should note if this is not an operational concern for marine projects, and why not, or alternatively, should address this issue if there are potential effects on marine organisms.
- 6) In the Operations and Maintenance section, reef effects are assessed as ‘moderate’ beneficial impacts. This seems generous based on the lack of information. The DEIS only cites two studies, and one of these indicates that monopoles (which are planned for use for part of the project) are not expected to have much of an effect. Given the studies referenced, perhaps an assessment of ‘minor’ benefit is more appropriate.

Commercial Fisheries and For Hire Recreational Fishing (Chapter 3, Section 3.4.5)

BOEM focuses on relatively direct effects that could impact fishing operations, including reduced access to fishing grounds, competition over alternate fishing locations, the potential for allisions with structures and cables, etc. There is limited discussion of how fisheries might be indirectly affected if fish populations decline or shift as a result of wind farm construction or operations. These population-level effects are difficult to estimate and will be difficult to attribute to any specific wind farm project, but this issue should be discussed in the EIS to the extent possible.

A major question facing the fishing industry is how effort may shift as a result of the windfarm. The DEIS does not reference any studies or experience from other regions on whether or how well fishing operations may be able to continue within offshore wind project areas. The DEIS should reference any lessons learned from the Block Island Wind Farm, as well as from wind farms in Europe. It would be helpful to include this type of information to support the conclusion that displacement will have a moderate impact. Related to this, the possibility of ‘Disruption to Fishing’ doesn’t include any consideration of whether fishermen’s insurance policies would constrain their ability to fish within WDA. These concerns have been raised to the Councils by fishery stakeholders. We suggest that the EIS acknowledge this issue and provide an assessment of whether this is a valid concern.

Additional specific comments:

- 1) In the Regional Setting section (3.4.5.1), conclusions about the magnitude of different types of fishing in either the Wind Energy Area (WEA) or WDA are uncertain, and vessel trip report and vessel monitoring system data each have important limitations. These uncertainties should be referenced in the DEIS. Section 3.4.5.12 on page 3-194 describes these caveats very briefly, but this paragraph would be more useful in the section where the fisheries data are presented and could be expanded upon.
- 2) Pages 3-179 through 3-181 discuss potential disruption of fishing associated with construction. The DEIS concludes that compensation will help to offset impacts to fisheries,

but also notes on page 3-181 that the Construction and Operations Plan provides insufficient detail to determine the effectiveness of these compensation programs. The reliance on compensation programs to mitigate impacts despite a lack of clarity about how they would operate is concerning.

- 3) On page 3-182 the section heading 'Navigation – Port Impacts' seems inaccurate, since this section includes impacts of navigation constraints on fishing activities, not just on ports.
- 4) Pages 3-182 through 3-184 discuss potential disruption of fishing associated with construction. As mentioned in general comments above, the lack of any references to experience with other wind farms is problematic.
- 5) On page 3-183, there is a lengthy discussion of trip costs, but then these data aren't used to project increased costs associated with potential effort displacement and changes in transiting behavior. We suggest that these trip cost data could be better utilized to estimate impacts, and to justify why this is a moderate vs. major impact, since fuel costs are a key element of trip costs.
- 6) On page 3-184 in reference to fishing vessel displacement issues, it says that "BOEM expects that disruptions to access or unavailability of fish as a result of the Proposed Action during operations and maintenance may be limited to pelagic fisheries and highly migratory species". Based on previous comments in this section of the DEIS and on our own knowledge, a variety of fishing vessel types may be impacted by displacement, and availability of other species, particularly sessile species, may be reduced. This sentence should be reworked if the meaning is not as intended.
- 7) In the following paragraph on page 3-184, effects of hanging up on project infrastructure are described as moderate for mobile and for-hire recreational gears, but minor for fixed gear fishermen. It is counter-intuitive that for-hire recreational fishing with hook and line would be as likely as mobile bottom-tending gear fishing to have moderate negative impacts due to interactions with infrastructure, particularly with respect to cables.
- 8) In the fourth paragraph on page 3-184, BOEM refers to pelagic resources as especially interannually variable, but the description of the affected environment for the commercial and for hire fishery component describes variability across many fisheries, including those for demersal species. The focus here on pelagic species seems inconsistent with the earlier discussion. The comments from item 2 above about compensation being relied on to reduce impacts from moderate/major to minor/moderate apply here as well; without a clear sense about how the compensation program will work, and that it will be effective, it is difficult to reach a conclusion about the resulting reduction in impacts.
- 9) Tables 3.4.5-10 and 3.4.5-11 that summarize the impacts of each alternative considered across the different aspects of commercial and for-hire fisheries are not very effective, because the impacts are the same across all the alternatives, except for Alternative F. It would be much more useful to discuss the additive impacts of a range of plausible combinations of Alternatives B-F in addition to the impacts of Alternative A.
- 10) In the cumulative impacts on page 3-193, there are a very large number of potential WTGs (232) that are considered Tier 3 and therefore not reasonably foreseeable, which again, seems an overly conservative estimate of foreseeable future projects. Understanding the overlaps in fisheries uses between the Tier 1, 2, and 3 projects would provide a more realistic sense of how wind farm development might affect fisheries in the coming years, even if these projects are less certain. The discussion about affected fisheries the South Fork Wind Farm project area (last paragraph on page 3-193) is very useful. Including these

- additional projects could increase impacts from moderate to major to major.
- 11) Section 3.4.5.12 describes 'Incomplete or Unavailable information'. Not mentioned in this section is the substantial uncertainty surrounding whether or how well it will work for fishing operations to take place in and around WTG and the cables. This seems like a huge gap in available information that is fundamental to estimating the magnitude of impacts to commercial and for-hire fisheries.

Consultation and Coordination (Chapter 4)

Section 4.2.5 describes consultation with the NMFS on development of the EIS. It would be useful for this section to summarize coordination with NMFS on non-EFH aspects of the analysis. It would also be useful to include the draft EFH assessment as part of the DEIS for review by the public.

Conclusion

We appreciate the opportunity to provide comments, along with our partners at NMFS, to ensure this DEIS provides a comprehensive and effective evaluation of expected impacts from this Vineyard Wind project. The Councils look forward to working with Bureau of Ocean Energy Management 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 of our fisheries with future wind development activities.

Please contact us if you have any questions.

Sincerely,



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