New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

February 21, 2023

Ms. Jessica Stromberg
BOEM Office of Renewable Energy Programs
Bureau of Ocean Energy Management
45600 Woodland Road
Sterling, Virginia 20166

Re: Draft Environmental Impact Statement for New England Wind Project off Massachusetts

Dear Ms. Stromberg,

Please accept these comments from the New England Fishery Management Council (New England Council) and the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) regarding the draft environmental impact statement (DEIS) for the New England Wind Project (formerly Vineyard Wind South), developed in two phases: Park City (Phase 1) and Commonwealth Wind (Phase 2). The DEIS analyzes the potential environmental impacts of the project as described in the Constructions and Operations Plan (COP) submitted by the developer (i.e., the proposed action), as well as the impacts of two alternatives to the proposed action, and a no action alternative. After considering comments received through this comment period, BOEM will publish a final environmental impact statement (FEIS) that will inform BOEM's decision to approve, approve with modifications, or disapprove the COP.

The New England Council manages over 28 marine fishery species in federal waters and is composed of members from the coastal states of Maine to Connecticut. The Mid-Atlantic Council manages commercial and recreational fisheries for more than 65 marine species[1] 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 habitat (EFH), protect deep sea corals, and sustainably manage fisheries for forage species. 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 marine fisheries throughout New England and the Mid-Atlantic, including within the New England Wind project areas and in surrounding areas, are profoundly important to the social and economic well-being of communities in this region and provide numerous benefits to the nation, including domestic food security.

Given the current pace of offshore wind energy development in this region and workload constraints, we are unable to provide a detailed review of this project and the DEIS. For example, this comment period overlaps with comment periods on DEIS documents for three other wind projects in our region, BOEM's Renewable Energy Modernization Rule, and the Coast Guard's Port Access Route Study for Approaches to Maine, New Hampshire, and Massachusetts. The analysis in the DEIS has important ramifications for terms and conditions which may be implemented through final project approval,

[1] 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.

including fisheries mitigation and compensation measures. With this in mind, we strongly encourage BOEM to consider the recommendations listed in the wind energy policies adopted by both Councils, which apply across all projects.[2] Our two Councils worked together on and adopted the same wording for these policies. We also urge BOEM to adopt the recommendations provided by NOAA Fisheries for this project, including recommendations regarding data considerations, impacts analysis, and ways to minimize the negative impacts of this project on marine habitats, commercial and recreational fisheries, and fishery species.

Our key recommendations are as follows. Additional details are provided below.

- Clarify in the purpose and need section that BOEM is not bound to consider approval only of projects that are large enough to meet existing state energy procurements.
- Describe which turbine placements and electrical service platforms would be removed from consideration under each project phase under Alternative B, the proposed action, given there are more positions than will be needed.
- Clarify how Alternatives C-1 and C-2 minimize impacts to fisheries habitats and ensure each figure clearly labels each alternative.
- Add additional details on the alternatives description and impacts analysis of Phase 2, as is done for No Action and Phase 1. Also, fully analyze the South Coast Variant.
- State if impacts are beneficial or adverse at a minimum at the beginning of each impact section.
- Under No Action, compare to both scenarios, i.e., where all other wind projects are constructed and where no other projects are constructed.
- Expand on discussion of potential impacts to the Mid-Atlantic Cold Pool.
- Identify which mitigation measures are assumed for the purpose of impacts determinations.

Purpose and Need

The National Environmental Policy Act (NEPA) requires consideration of a range of alternatives which could meet the defined purpose and need for the action. We are concerned that the purpose and need section of the DEIS (Section 1.2) implies, though it does not explicitly state, that BOEM will not consider alternatives for smaller scale projects than would be necessary to meet existing state energy procurements. This limits BOEM's ability to consider project modifications to reduce the potential for negative environmental and socioeconomic impacts.

Section 1.2 of the DEIS (Purpose and Need of the Proposed Action) states that BOEM's purpose is to determine whether to approve, approve with modifications, or disapprove the COP. BOEM's need is to fulfill duties under the lease which require an agency decision on the proposal. This section also notes that the goal of the developer (i.e., Park City Wind LLC) is to meet the existing state energy procurements for Park City Wind and Commonwealth Wind. More specifically, the developer's goal is "to generate at least 2,036 MW of commercially sustainable offshore wind energy from within the SWDA (Southern Wind Development Area) to meet the need for clean, renewable energy in the northeastern United States" (page 1-6). The SWDA includes lease area 534 and potentially a portion of lease area 501 which is assigned to Vineyard Wind 1. This section also states that the project could

[2] Available at https://www.mafmc.org/s/MAFMC_wind_policy_Dec2021.pdf

generate up to 2,600 MW across both phases to meet existing and potential future offtake demands (Table 2.1-1).

The project size and minimum number of turbines that would meet BOEM's purpose and need is unclear. This poses challenges for determining which final configurations of the alternatives (or additional modified alternatives) could meet BOEM's purpose and need, while reducing the negative environmental and socioeconomic impacts of the project.

We recommend that the FEIS for this project, as well as future DEIS and FEIS documents for other wind projects, more clearly indicate that BOEM is not bound to considering approval only of projects that can produce a certain amount of electricity. BOEM should consider federal and state renewable energy targets and mandates as well as existing procurements when preparing an EIS and determining whether to approve a project. However, it should be made clearer that BOEM can approve a smaller project than what was proposed or procured. We suggest expanding on this to make it clear that the project will avoid risks to the health of marine ecosystems, ecologically and economically sustainable fisheries, and ocean habitats. BOEM should clearly acknowledge that if these risks cannot be avoided, they should be minimized, mitigated, and compensated for.

Alternatives to Meet the Purpose and Need

The alternatives analyzed in the DEIS include Alternative A, the no action alternative; Alternative B, Proposed Action alternative; and Alternative C, the Habitat Impact Minimization alternative. Alternative C includes two sub-alternatives: Alternative C-1 Western Muskeget Variant avoidance and Alternative C-2 Eastern Muskeget Route minimization. Alternatives B and C would use a uniform east-west and north-south facing grid of 1 x 1 nautical miles between wind turbines, as agreed to by multiple lease holders in this area.

Alternative B (the proposed action as described in the COP) includes up to 129 wind turbine generators with a minimum nameplate capacity of 16 MW, two to five offshore substations, and up to five export cables co-located in a single corridor across both Phase 1 and Phase 2. All cables are AC and landfalls will use horizontal directional drilling. The DEIS also mentions 13 MW turbines on page 3.7-37. It is unclear whether 13 MW or 16 MW will be used for both project phases and the FEIS should clarify what is under consideration. This affects the minimum number of turbine positions that will be needed to meet the purpose and need of the project. We support consideration of higher MW turbines as this can reduce the footprint of the project, while still generating the same amount of power.

The two project phases are:

- Phase 1 (Park City Wind, procured by Connecticut): Up to 62 turbines, 1 or 2 electrical service platforms, 804 MW. Monopile or piled jacket foundations for turbines and presumably the electrical service platforms. Cables up to 139 mi (inter-array), 12.7 mi (interlink, i.e., connecting electrical service platforms to each other), 125 mi (offshore export).
- Phase 2 (Commonwealth Wind, procured by Massachusetts, however, this procurement uncertain based on conversations with Avangrid): Up to 88 turbines, 1-3 ESPs, 1,232-1,725 MW. Monopile, jacket, or bottom-frame foundations; jacket or bottom-frame could have piles or suction bucket bases. Cables up to 201 mi (inter-array), 36.8 mi (interlink), and 226 mi (offshore export).

It is unclear how the number and location of turbine placements and electrical service platform positions will be determined across the two project phases. Phase 1 includes multiple options for electrical service platforms while Phase 2 does not include any selected/preferred locations. We recommend analyzing multiple platform positions for each project phase. Also, it appears based on Figure ES-6 that approximately three turbine locations from lease area 501 not used for development of the Vineyard Wind 1 project may be assigned to Phase 1 of New England Wind. The FEIS should explain the extent to which lease area 501 will be used for the proposed action. We also recommend that all figures use different colors for the Vineyard Wind 1 WTG positions in lease 501 to distinguish those from positions being used for New England Wind.

Alternative B has a contingency export cable route referred to as the South Coast Variant, which is not fully analyzed in the DEIS because the offshore and onshore routing options have not been fully developed by the developer. This contingency would only be considered if technical, logistical, or other issues prevent interconnection to the West Barnstable Substation. If the developer uses this variant, we recommend that BOEM develop a supplement to the EIS so stakeholders can evaluate and provide comments on the proposal (page ES-11). Updates to the COP only are not sufficient for this purpose. As part of this supplemental EIS, we also recommend an evaluation of tradeoffs around different inter-array cable layouts given the exact design depends on the turbine and electrical service platform locations used (page 2-10). Generally, we recommend an inter-array layout that uses the least amount of cabling to minimize impacts to habitats and fisheries. The DEIS is unclear on how likely it is that the "representative inter-array cable layout" shown on Figure 2.1-3 will be used and whether certain areas within the lease are more likely be developed so this project can use the same offshore export cable route as Vineyard Wind 1.

We recommend foundation types that minimize the total construction footprint to reduce the amount of scour protection needed. We recommend the FEIS include information on the amount of scour protection needed and the type of impact anticipated for each type of foundation for each of the phases to evaluate these tradeoffs. For example, comparing pile-driven (jacket or bottom-frame) versus suction bucket bases, the latter will have fewer acoustic impacts given the information provided in Volume 1, page S-11. We also recommend explaining why Phase 2 includes additional foundation types that are not considered in Phase 1. We assume this is depth-related, but the DEIS is unclear.

Alternative C focuses on export cable routing approaches that minimize impacts to complex habitats in Muskeget Channel. The turbine, ESP, and inter-array cable layouts are the same as Alternative B. Alternatives C-1 and C-2 are mutually exclusive. Alternative C-1 precludes the use of the Western Muskeget Variant and places all cables in the Eastern Muskeget Route, which is already being used by Vineyard Wind 1. Alternative C-2 minimizes but does not eliminate use of the Eastern Muskeget Route. The alternatives are not well described, and it is not clear how the impacts to complex habitat would be minimized. Furthermore, Figures 4.1-8a through 4.1-8f of COP Volume 1 (page 225-230) show which export cables go into which corridors; however, it is not clear how these offshore export cable scenarios relate to Alternatives C-1 and C-2 in the DEIS. Similarly, Figures 3.5-3 through 3.5-7 of the DEIS show seafloor habitats within the offshore export cable corridor; however, it is confusing how these figures relate to Alternatives C-1 and C-2. We recommend one figure showing the seafloor habitats of both Alternative C sub-alternatives to fully understand the tradeoffs of constructing export cable corridors through the Muskeget Channel.

The DEIS provides far more detail about No Action and Phase 1 as compared to Phase 2. If BOEM intends to use the FEIS for its stated purpose (project evaluation), Phase 2 must receive full treatment of the alternatives description and impacts analysis.

Recommendations for Preferred Alternatives

We are uncertain about which alternatives to recommend as least impactful to fisheries, fish species, and habitats. The South Coast Variant is not fully analyzed, making it difficult to compare the proposed action, C1, and C2. Cumulative effects across projects are essential to evaluate when determining the impacts of placing cables in the western vs. eastern portion of Muskeget Channel. The impacts of Vineyard Wind 1, which is already under construction, and other future projects, such as Mayflower (SouthCoast) Wind's project, for which the COP is not yet available, will influence the overall impacts to benthic habitats in the channel. The size and number of turbines associated with the proposed action will influence the spatial extent of the project overall, and therefore will affect the magnitude of impacts. We recommend working with NOAA Fisheries habitat staff to optimize the final turbine, cable, and offshore substation locations to minimize impacts to habitat and fisheries.

Affected Environment and Impacts Analysis

The DEIS and FEIS documents for this and other projects should evaluate a range of turbine MW sizes that are realistic for development. There are tradeoffs inherent in the selection of larger or smaller turbines. For example, larger turbines with pile-driven foundations will require larger impact hammers during installation, but the use of larger turbines will allow for fewer locations overall. As previously stated, it is unclear whether 16 MW and 13 MW turbines are being considered. Limiting the design envelope and associated analyses in the FEIS to only one turbine size will limit evaluation of tradeoffs.

Table ES-3 is very confusing. There are multiple impact determination rows for each resource and alternative. It appears that one row represents expected adverse impacts while the second row indicates expected beneficial impacts. This is not stated in the text, however. If this is true, we do not necessarily agree that every resource will experience both adverse and beneficial impacts from offshore wind development. Furthermore, the *a* and *b* alternative superscripts indicate planned activities without New England Wind project impacts and cumulative impacts with New England Wind project impacts, respectively. It is unclear if these superscripts correspond to the impact determination rows. Given Alternative C has two sub-alternatives, we recommend separating out these sub-alternatives in this summary table so stakeholders can compare impacts across alternatives. Also, the table text only specifies a beneficial impact; we recommend denoting adverse impacts as well.

This FEIS, and all future NEPA documents for other wind projects, should clearly specify if an impact is adverse or beneficial. The DEIS indicates that impacts are adverse unless specified as beneficial. However, some impact producing factors (e.g., presence of structures) are expected to have both adverse and beneficial impacts (e.g., adverse for soft bottom species and beneficial for structure-oriented species). The clarity of these descriptions would be improved if "adverse" or "beneficial" were specified for each impact, or, at a minimum, at the beginning of each section. This should be done consistently throughout all sections of the document.

The DEIS acknowledges habitat areas of particular concern (HAPC) within the offshore export cable corridor including HAPCs for summer flounder and juvenile Atlantic cod (page 3.6-5). We

recommend the FEIS evaluate impacts relative to the new NEFMC HAPC designation, currently under review by NMFS. Per the Southern New England HAPC Framework document, the HAPC is defined as the presence of cod spawning and complex habitat within areas where offshore wind development is being planned and/or constructed. The spatial extent of this habitat area is limited to offshore wind lease areas, given that impacts associated with offshore wind development are of significant concern to the New England Council.

Table 3.9-3 of the main DEIS document includes average commercial fishing revenue data over many years. While this is helpful to gain a broad understanding of the level of revenue exposure in the lease area and cable routes, including data by year is most helpful, similar to what is provided in NOAA's Socioeconomic Impacts tool. This annual landings and revenue information is displayed in a poster in the virtual meeting room for 2008-2021, however, these same updated data do not appear in Appendix B or the main DEIS document. Fisheries revenues can fluctuate for a variety of reasons (changing fish distributions, change in fishing regulations, market factors, etc.); therefore, an average value and older data may not always accurately describe the recent economic value of the fishery.

Beneficial reef effect impacts are merged with minor/moderate adverse impacts of habitat conversion. Different species are likely to be affected negatively or positively by the addition of artificial substrates and structures to their environment and by the removal or alteration of existing benthic habitats. The potential for interactions between species attracted to the artificial substrates and structures and other species in the ecosystem should also be considered, for example in terms of predation rates. Whether these structures will increase fish production, or simply cause spatial aggregation, is unclear.

The potential impacts of detonating unexploded ordnance (UXO) are evaluated for mammals but not for fisheries, and should be evaluated for both resources, as well as in terms of possible impacts to navigation. If noise above different thresholds impact mammals and not fish, and such thresholds are exceeded by specific impact producing factors, these details should be specified.

We recommend including more detailed table captions and column headers for tables and recommend including cross references to tables in the corresponding text.

We appreciate that the DEIS mentions impacts to NMFS scientific surveys and the potential for increased uncertainty which "would increase uncertainty in stock assessments and quota setting processes" (page 3.9-22) and could result in "survey indices (that) could be biased and unsuitable for monitoring stock status" (Appendix B, page B-53).

We also appreciate including information on demographics, employment, and references to onshore seafood sectors in Appendix B (page B-29).

The DEIS states that "The activity and value of fisheries in recent years are expected to be indicative of future conditions and trends" (page 3.9-5), which is presumed to inform Table 3.9-2, projected revenue exposure for all future Northeast leases by fishery management plan (page 3.9-21). We do not agree with this assumption. The FEIS should more clearly indicate that this is an assumption made for the purposes of analysis; however, future fishery characteristics, including revenues, catches, and the spatial distribution of fishing effort, are uncertain. For example, climate change is impacting fish distributions, which in turn affects fisheries, including where effort is most likely to occur (e.g.,

Morley et al. 2018, Rogers et al. 2019, Tanaka et al. 2020) [3]. In addition, regulatory changes will likely be implemented to protect Atlantic Large Whales (especially the North Atlantic right whale) and Atlantic sturgeon. Furthermore, as indicated in the DEIS, offshore wind development will likely change where fishermen are able to fish and where NOAA Fisheries' surveys are able to be conducted.

Section 3.9 of the DEIS should be broadened to address all types of recreational fishing, not just for-hire fishing. The section purports to focus only on for-hire recreational fishing but also includes some information on private recreational fishing. There will be many similarities and some differences in terms of how party boat, charter, and private recreational fishing will be impacted by offshore wind energy development. Fully describing all types of recreational fishing in the same section of the document would make linkages between biological and fishery conditions easier to explain and understand. The FEIS should more clearly describe the limitations of available recreational fishing data, especially the lack of precise data on fishing locations. For example, data on the locations of fishing effort are not collected for private recreational fisheries and have limited spatial precision for for-hire fisheries. These limitations pose challenges for determining which recreational fisheries will be impacted by this project and how. Rather than ignoring these data poor fisheries, the FEIS should acknowledge the associated uncertainties.

The DEIS describes commercial and recreational fisheries within the lease area and the export cable corridor. Some fisheries will be impacted by activities within both the lease area and the export cable corridor, while other fisheries will be primarily impacted by one or the other. It is important to consider the differences in impacts due to the different activities which will occur in the lease area and the cable corridor and the different fisheries that operate in those areas. Different mitigation measures may also be relevant for the two areas. For these reasons, we support the approach of analyzing the lease area and export cable corridor separately in terms of their impacts on fisheries, as well as considering their combined impacts. This approach should be carried forward in future analyses of other wind projects.

The FEIS should use the most recent data possible. Volume 1 and Appendix B of the DEIS includes several tables with data from 2008-2017 with Figure B.1-10 displaying data from 2001-2010 and vessel monitoring system density figures for squid, multispecies, scallop, surfclam/ocean quahog, pelagic, and herring from 2015-2016. VMS data through 2019 are available via the Northeast Ocean Data Portal. The DEIS includes multiple statements on fisheries based on different data sets and different years, without a clear explanation for this variation. In some cases, the data are quite

[3] Rogers, L. A., R. Griffin, T. Young, E. Fuller, K. St. Martin and M. L. Pinsky (2019). "Shifting habitats expose fishing communities to risk under climate change." Nature Climate Change **9**(7): 512-516.

Tanaka, K. R., M. P. Torre, V. S. Saba, C. A. Stock and Y. Chen (2020). "An ensemble high-resolution projection of changes in the future habitat of American lobster and sea scallop in the Northeast US continental shelf." Diversity and Distributions **26**(8): 987-1001.

Morley, J. W., R. L. Selden, R. J. Latour, T. L. Frölicher, R. J. Seagraves and M. L. Pinsky (2018). "Projecting shifts in thermal habitat for 686 species on the North American continental shelf." PLoS One **15**(5): e0196127.

outdated, especially considering that this document analyzes the impacts of a project that is unlikely to begin construction before 2024 at the earliest.

We appreciate that benthic grabs and transects along the offshore export cable corridor will be done in order to update habitat maps based upon the 2020 Recommendations for Mapping Fish Habitat (Appendix H). These maps will be important to avoid and minimize the impact on eelgrass and complex habitat.

The Councils are concerned about the impacts of boulder removals required for cable installation, especially when done via "blunt plow used to push aside boulders" (page 3.5-18). The DEIS does not include detailed information on which boulders would be removed and how, and the expected impacts on fisheries and benthic resources. The DEIS states that "Large boulders along the route may need to be relocated, and some dredging may be required prior to cable laying …" but no further information is provided and the impact on fisheries is not discussed. We recommend using grabs to relocate boulders as they have fewer impacts on benthic habitats than plows. The FEIS should specify plow width and the size of the area that will be impacted. The nature of this impact is very different from dredging used to harvest seafood, and the scientific literature on fishing gear impacts is unlikely to provide a reasonable proxy for the impacts of boulder clearance plows. For example, fishermen attempt to avoid boulders to reduce the risk of costly damage to fishing gear, and the penetration depth of fishing gear is much less than a boulder clearance plow.

Entrainment of water during some types of cable installation equipment is briefly mentioned as an adverse impact on pelagic eggs and larvae of some species on pages 3.4-8, 3.4-21, 3.6-20, and 3.6-22. The FEIS should estimate the numbers of eggs, larvae, and zooplankton that may be entrained due to this type of cable installation technique to provide justification for the rationale behind the resulting impacts determination.

The DEIS indicates that hydrodynamic effects and disturbances on benthic resources will result from the presence of human-made structures in the water column; however, we are concerned that their extent may be underestimated. The expected impacts are likely more than "undetectable to small, localized, and to vary seasonally" (page 3.4-12). For example, the presence of structures could impact the structure of the Mid-Atlantic Cold Pool, causing changes in temperature, mixing, larval transport of important commercial and recreational fish species (e.g., sea scallops), and temperature corridors used for migration for multiple important fishery species. This is an area of ongoing research[4]. The FEIS should clearly document what is known about potential impacts to the Cold Pool and resulting potential impacts to marine species and fisheries. The FEIS should acknowledge data gaps and ongoing research and should fully consider potential impacts resulting from this project, as well as cumulative impacts from all planned wind energy projects throughout the region.

In terms of cumulative effects, the DEIS considers future offshore wind energy activities in other lease areas as part of future baseline conditions against which the impacts of this project are compared (Appendix 3, Table E3-1). As we understand it, the DEIS has two baseline conditions, one with other wind projects and one without. Under the No Action alternative, the language indicates that the baseline condition assumes "the continuation of all other existing and reasonably foreseeable future

[4] For example, two reports on potential impacts of offshore wind energy development on the Cold Pool are available at the following links: https://scemfis.org/wp-content/uploads/2021/01/ColdPoolReview.pdf; https://rucool.marine.rutgers.edu/wp-content/uploads/2020/10/PartnersWorkshop_WhitePaper_Final.pdf

activities…without the Proposed Action" (page ES-11). The alternatives should be compared against both sets of conditions in a consistent way.

We also recommend the cumulative effects section include a more rigorous analysis of the impacts of noise generation from multiple wind farms during construction and operation with greater specificity on expected noise levels based on the size of turbines likely to be used. The conclusion that "the impacts could be measurable on a site-level scale but not within the entire proposed Project area" is not clear (page 3.6-33). Is this based upon only pile-driving noise and if so, what are the cumulative effects from operational noise from multiple wind farms? The study on page 3.6-28 mentions that "operational noise from several wind energy facilities with turbines up to 6.15 MW in nameplate capacity showed that operational noise generally attenuates rapidly with distance from the turbines" however the Proposed Action is considering 13-16 MW turbines. We do not think an impact determination should be based on a significantly smaller turbine size than what is being proposed for the project.

Mitigation, Terms and Conditions

Mitigation measures are necessary to reduce the potential negative environmental and socioeconomic impacts of the New England Wind project. The recommendations outlined in our offshore wind energy policies, referenced above, should be reflected as terms and conditions for approval of the project. We provided a separate comment letter on the draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries.[5] These comments supported many of the mitigation measures recommended in that draft guidance. We recommend that all final mitigation guidelines be reflected in terms and conditions for BOEM's approval of this project. For example, the DEIS states that "the applicant would bury the proposed offshore export cables within the OECC to a target depth of up to 5 to 8 feet below the seafloor" (page 3.5-18). BOEM's draft fisheries mitigation guidelines recommend a minimum cable burial depth of 6 feet. The Councils have not endorsed a specific burial depth, but rather have recommended depths that are adequate "to reduce conflicts with other ocean uses, including fishing operations and fishery surveys, and to minimize effects of heat and electromagnetic field emissions" (from the BOEM Draft Fisheries Mitigation Guidance). Assuming a depth of 6 feet is sufficient to address these objectives, we recommend the FEIS include this target burial depth as the minimum end of the range.

The Councils are concerned with the scour protection measures included within the DEIS (e.g., rock placement, concrete mattress protection, half-shell) and that "BOEM assumes that up to 10 percent of the cables may not achieve the proper burial depth and would require cable protection in the form of rock placement, concrete mattresses, and/or half-shell" (page 3.9-11). Appendix H (Table H-1) states that "cable protection measures within complex hard-bottom habitat…will consist of natural or engineered stone that does not inhibit epibenthic growth and provides three-dimensional complexity." Per the Council's offshore wind energy policy, we recommend that if scour protection or cable armoring is needed, the materials should be selected based on value to commercial and recreational fish species. Natural materials, or materials that mimic natural habitats, should be used whenever possible. These materials should not be obtained from existing marine habitats and must not be toxic.[6]

[5] Available at https://www.mafmc.org/correspondence.

[6] For examples, see: Glarou, M., M. Zrust and J. C. Svendsen (2020). "Using Artificial-Reef Knowledge to Enhance the Ecological Function of Offshore Wind Turbine Foundations: Implications for Fish Abundance and Diversity." Journal of Marine Science and Engineering 8(5). Hermans, A., O. G. Bos and I. Prusina (2020). Nature-Inclusive Design: a catalogue

We recommend clarifying whether different materials are being considered as a mitigation measure as compared to what is planned as part of the proposed action. We appreciate that scour protection performance will be evaluated but we are not clear whether performance monitoring is in relation to protecting the cable from exposure or performance in terms of rates of benthic recovery. If the former, then we recommend this be done on a more frequent basis and at more locations than the proposed 20% of locations every 3 years (Appendix H). If the latter, then three-year intervals may be reasonable.

The Councils support time of year restrictions to reduce potential impacts to sensitive life stages of fishery species, to reduce impacts to fisheries, and to minimize impacts to important habitat throughout the project area, including the offshore cable route. Appendix H states that pile driving activities will not occur from January 1 to April 30 and that non-horizontal directional drilling cable laying activity within Nantucket Sound waters will not occur from April to June (Table H-1). The DEIS states that the pile driving restrictions are meant to protect the North Atlantic Right Whale, which would confer benefits to any cod spawning activity in the area (page 2-37). The purpose of the cable laying activity time-of-year-restriction is a request from Massachusetts Department of Marine Fisheries to avoid high concentration of fishing activities (squid, whelk, flounder) and spawning and egg laying activities (page 3.9-24). The DEIS should clarify which species are spawning and egg laying during this time period in this area and whether this includes cod spawning. There is also the assumption that species would return to the area and normal fish behavior would resume once the pile driving stops (page 3.6-27 and 3.9-10). Additional rationale should be provided on this as it is possible the impacts could be longer-term or even permanent, depending on the species. For example, research by the Massachusetts Department of Marine Fisheries found that relatively minor disturbances from gillnet fishing interrupted the development of cod spawning aggregations (Dean et al. 2012);[7] it is reasonable to expect construction activities may do so as well. Also, given time-of-year restrictions are mitigation measures, the rationale for why this restriction is proposed should be included in Appendix H and cross-referenced in the DEIS.

UXOs can be uncovered during site preparation activities. Exposed UXO presents a significant risk to mariners, especially those towing mobile gear that could bring UXO to the surface. Offshore wind project construction activities can uncover UXO devices. We recommend that the terms and conditions specify that developers are responsible for the safe disposal of UXO exposed due to construction activities. Our understanding is that some UXOs might be detected via surveys but are not exposed; in such cases, only mariner notification may be sufficient given disposal may present greater risks. Clear, timely, and repeated communication about UXO locations and any changes in the location or status of UXOs is essential and should not rely only on email notifications.

Appendix H includes several compensation-related mitigation measures for Phase 1, as negotiated with CT during project procurement, including: establishment of an offshore wind protected marine species mitigation fund, providing up to $2.5 million to support fisheries research and education; up to $7.5 million to support environmental initiatives, assist Connecticut fishermen, and support local communities in Connecticut; and $26.5 million to support the economic and community initiatives

for offshore wind infrastructure. Den Haag, The Netherlands, Wageningen Marine Research: 121p. Lengkeek, W., K. Didderen, M. Teunis, F. Driessen, J. W. P. Coolen, O. G. Bos, S. A. Vergouwen, T. C. Raaijmakers, M. B. de Vries and M. van Koningsveld (2017). "Eco-friendly design of scour protection: potential enhancement of ecological functioning in offshore wind farms. Towards an implementation guide and experimental set-up." (17-001): 87p

[7] Dean, M., W. Hoffman and M. Armstrong (2012). "Disruption of an Atlantic Cod Spawning Aggregation Resulting from the Opening of a Directed Gillnet Fishery." North American Journal of Fisheries Management 32: 124-134.

(workforce development, supply chain integration, etc.) (Table H-1). We support these types of compensation measures but note that fishermen from multiple states fish in the project area and compensation for these individuals may also be needed. The vast majority of commercially harvested fish (pounds and revenue) for the project area is landed in RI and MA[8]. The table in Appendix H also mentions that additional economic and community initiatives will be developed for Phase 2. Compensation to be provided for Phase 2 should be fully described in the FEIS. We recommend including how these compensation measures will affect the impact determinations and overall conclusions in the FEIS.

The FEIS should also establish a compensation fund and process for all wind projects to address all relevant impacts to commercial, for-hire, and private recreational fishing, as well as shoreside commercial and recreational fishery support businesses. Relevant impacts include, but are not limited to, adverse impacts on revenues, costs, travel times, and the value of permits and vessels. It is also important to consider that many individuals other than captains, permit holders, and business owners will be impacted (e.g., crew members, processing plant employees); however, not all individuals will have the documentation necessary to demonstrate the degree of income impacted by specific wind projects.

Appendix H states that "all survey and monitoring work will be publicly available" and that "the applicant will work with the Responsible Offshore Science Alliance and the Regional Wildlife Science Entity to help streamline and standardize available data across all offshore efforts" (page H-4). We strongly urge that the survey data are also made publicly available. We are supportive of the scientific survey mitigation measures for recurring surveys; however, more detail should be provided on these measures, how these measures will be funded and executed, and the overall impact the measures will have on existing surveys and use of the survey data to inform fisheries management.

We strongly support all efforts to avoid impacts to submerged aquatic vegetation (SAV) and other structured habitats along the cable route, as recommended in the Council policies. The New England Council has designated inshore areas from the coastline to 20 meters depth as HAPC for juvenile Atlantic cod. Structurally complex habitats, including eelgrass, mixed sand and gravel, and rocky habitats (gravel pavements, cobble, and boulder) with and without attached macroalgae and emergent epifauna, are essential habitats for these fish. In inshore waters, young-of-the-year juveniles prefer gravel and cobble habitats and eelgrass beds after settlement, but in the absence of predators also utilize adjacent un-vegetated sandy habitats for feeding. The New England Council recently recommended an HAPC for cod spawning habitat and complex habitats. The designation overlaps the New England Wind lease area and other Southern New England lease areas and is pending approval by NOAA Fisheries. The Mid-Atlantic Council has designated all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, as HAPC for summer flounder. In defining this HAPC, the Mid-Atlantic Council also noted that if native species of SAV are eliminated, then exotic species should be protected because of functional value; however, all efforts should be made to restore native species. SAV also provides important habitat for many other species.

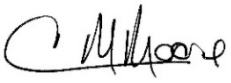
[8]https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/WIND/WIND_AREA_REPORTS/com/OCS_A_0534_New_England_Wind_com.html#Landings_and_Revenue_by_State

Conclusion

We appreciate the opportunity to provide comments to ensure that issues of social and ecological importance are considered in the final EIS for New England Wind. We look forward to working with BOEM to ensure that 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