



July 26, 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 and EIS for the Empire Offshore Wind 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 to prepare an Environmental Impact Statement (EIS) for the Construction and Operations Plan (COP) for the Empire Wind project off New York. The COP proposes to install, in two phases, up to 174 turbines, 2 offshore substations, 2 onshore connection points, and up to 326 miles of cables connecting the turbines, substations, and onshore connection points. Empire Wind 1 (western section of lease) and Empire Wind 2 (eastern section of lease) are electrically independent projects that will interconnect with the grid at two separate locations, each with its own offshore substation and export cable.

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 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 Empire Offshore Wind 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

Empire Wind is the first 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. While the construction times for Empire Wind 2 immediately follow those for Empire 1, there will likely be lessons learned during construction of Empire Wind 1 that might inform and mitigate negative effects during construction of Empire Wind 2. Will permit issuance, terms and conditions, and mitigation measures identified via the federal consistency process be adaptive such that lessons learned during Empire Wind 1 can be adopted and applied to Empire Wind 2? Also, given that the two independent projects require two separate cable routes, increasing impacts vs. a single corridor, it would be helpful for the EIS

to explain why the project is being developed in two phases and why two cable corridors are required. Our assumption is that this is because combined offtake cannot be achieved at one or the other location, but this is not explained in the COP.

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 surveys, design, and environmental 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.

Alternatives considered in the EIS

New York procured 816 MW from Empire Wind 1 in July 2019 and 1,260 MW from Empire Wind 2 in January 2021. The project design envelope indicates that up to 174 turbines could generate enough power to satisfy these procurements, so we assume that 12 MW turbines are the smallest under consideration. The COP indicates that Empire Wind expects to select “the most technologically advanced and efficient [turbine] available at the time” (Vol. 1, p. 3-3). It would be helpful for the EIS to specify the range of turbine sizes under consideration for the projects, both in terms of their nameplate capacity in megawatts and the turbine and foundation dimensions. Providing the range of capacities under consideration will allow for a better understanding of how many turbines might be required to meet New York’s procurements. Dimensions for all turbines under consideration are important since foundation dimensions influence the magnitude of seabed impacts.

The layout rules outlined in the COP (Volume 1, Section 3.3.1.8) are helpful in explaining Empire Wind’s overall approach to project layout. It would be useful for the description of alternatives section of the EIS to explain in more detail exactly how the rules were applied to generate the specific layout proposed for the two projects. For example, why does rule 2 (perimeter turbines) take precedence over rule 1 (regularity)? Also, the alternatives should describe how the layout would change if larger, and therefore fewer, turbines are ultimately used. The COP suggests that interior locations would be dropped if turbines larger than 12 MW are selected, but specific locations that may be dropped are not identified (Volume 2e, page 8-185). The description of alternatives in the DEIS should specify the layout that would be used for each of the turbine sizes under consideration, and the rationale for selecting each layout (fishing industry input, etc.).

For all alternatives, the EIS should also be clear on which mitigation measures will be required as opposed to discretionary, and if the same mitigation measures will be applied to both phases of the project. For example, Volume 2e does not include a statement on avoiding, minimizing, or

mitigating impacts for all gear types that occur in the project area; does that assume these types of measures apply to only a subset of gear types? Only required mitigation measures should influence the impacts conclusions in the EIS.

Fisheries and habitat considerations

While the seabed along the export cable route is generally described in the COP as being amenable to burial, there are several places where the COP indicates that crossings with other cables or pipelines might be required. The COP states that the approach to cable laying at such intersections will be negotiated with cable and pipeline owners. The COP describes armoring materials to be used at crossings (Volume 1, page 3-18), suggesting that external armoring is the likely approach. From both a habitat and fisheries operation perspective, the EIS should describe whether shallower burial might be possible at these crossings, or if surface lay with external armoring is most likely, and if so the extent of these unburied sections, because the choice will influence the environmental impacts of the project. We expect that surface lay will have greater impacts on fishing operations compared to buried cables. 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.

To the extent that conditions at the site would allow Empire Wind to select either gravity base or monopile foundations, or a combination of both, the EIS should be clear about the tradeoffs associated with selecting one type over the other, recognizing that the choice will affect various resources differently, and over different time frames. For example, a greater area of seafloor habitat will be altered with gravity base structures, but more substantial acoustic impacts will be associated with the installation of monopiles.

BOEM should coordinate early and often with NOAA Fisheries on the most appropriate data for analyzing 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 commercial fisheries is available on the Council websites, www.mafmc.org, and 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).

Information from stakeholders and local fisheries-specific knowledge are invaluable and necessary to complement available data. The COP describes stakeholder engagement and fisheries outreach well, with emphasis on incorporating input from fishermen, particularly in the Fishing Techniques section where gear types and their occurrence in the project area are thoroughly described along with concerns over continued access expressed by fishermen.

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 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 with lower year-round value or participation. A focus on ex-vessel value also understates the importance of the shoreside economic activity generated from landings – such as processing and distribution, and vessel support activities.

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 costs 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 EIS. This is generally the approach taken in the COP, except that for-hire and private recreational fishing are combined. 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, so we appreciate what appears to be an effort to combine them here. However, the for-hire and private recreational fishing sectors are distinct, and impacts on each should be evaluated separately. The Regional Economic Overview of Commercial Fishing on page 8-131 of the COP should only include commercial fishing and not incorporate recreational fishing when determining important fishing ports.

Data on private angling are very limited; 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. More specificity on where recreational fishing is occurring is needed to estimate impacts more accurately. For example, COP Volume 2 (page 8-127) states “there were a total of 13.4 million recreational saltwater angler trips in New York, and 13.3 million recreational saltwater trips in New Jersey,” however there is no way of determining how many of those recreational trips (including shore-based, private vessels/rentals, and party/charter trips) occurred in or near the project area; presumably, many of these trips occurred elsewhere. It should be made clear that this information is intended to provide context about the importance of recreational fishing to New York and New Jersey, rather than as a measure of project-level impacts.

The EIS should describe the commercial and recreational fisheries that operate within the project area as well as fisheries that occur in other areas but may be impacted by changing fishing effort distribution or changes in transit that may occur during and after project construction. The maps of fishing activity on page 8-117 of Volume 2e are good examples of regional characterization. The COP should be clear about when it is describing baseline information within a broader region, vs. when baseline data reflect project area estimates only.

Vessels traveling from ports north and south of the project area may transit through and/or fish in the area. More specifically, based on NOAA’s socioeconomic impacts analysis, the top ports (by revenue) that receive the most landings from fishing within the Empire Wind area from 2008-2019 include: New Bedford, MA (\$2 M), Cape May, NJ (\$1 M), Point Pleasant, NJ (\$1 M), and Newport News, VA (\$600k). The COP does include these ports as the most exposed to development within the lease area, mostly driven by scallop landings. Although total revenues and landings from the lease area have [declined](#) in recent years, changes in patterns of fishing activity can be cyclical, so the potential for landings to increase in the future should be considered. 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 (Volume 2e, Section 8.8.3) describes Empire Wind’s assumptions related to the estimation of effects on fishing: (1) some displacement of fishing activity is expected during

project operations, (2) transit through the project will continue, with the potential to seek alternate routes around the project in bad weather, and (3) inter-array and export cables are not expected to restrict access to traditional fishing grounds. These assumptions are fundamental to estimating the magnitude of impacts associated with the project and the extent to which they are likely to hold should be laid out clearly in the EIS.

Turbine foundations and their associated fouling communities will create artificial reefs, which are expected to attract certain fishery species (e.g., black sea bass). The EIS should acknowledge that the benefits of this artificial reef effect will vary by target species. For example, any benefit to 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.

The COP proposes connecting Empire Wind-1 and Empire Wind-2 to shore independently via two cables along two distinct cable routes, with multiple export cable landfalls for Empire Wind-2 to reduce impacts to the onshore power grid. As noted above, the EIS should explain why the use of multiple cables is needed, develop and analyze alternatives to this approach, and acknowledge that the use of two cable routes greatly increases offshore impacts, including habitat disturbance and modification, as well as safety concerns for fisheries that use bottom tending mobile gear. The turbine layouts selected for the projects will influence the amount of inter-array cabling required. The Empire Wind-1 project uses more inter-array cabling per MW of power generated than Empire Wind-2 (214 km for 816 MW vs. 267 km for 1,260 MW, page ES-3 of Volume 1 of the COP). Tradeoffs between total cable length and layout configuration should be considered when estimating impacts.

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 states that offshore cables will be removed during decommissioning, which we think is essential. 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 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, especially because they are in relatively close proximity to this lease.

Cumulative impacts and risks need to be evaluated for species that are widely distributed along the coast. Species such as bluefish, summer flounder, and others that migrate along the coast could be affected by multiple offshore wind projects, and well as other types of coastal development.

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.

The EIS should also consider how the Empire Wind project and the other offshore wind projects planned for the east coast may impact the Mid-Atlantic Cold Pool. Impacts to this unique oceanographic feature have implications for stratification and mixing of the water column, primary productivity, and recruitment and migration of many species, including those targeted by commercial and recreational fisheries, as well as protected species. Climate change should also be an essential consideration in the cumulative effects analysis.

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 Empire Wind 1 and Empire Wind 2 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,



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

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