



August 30, 2023

Jessica Stromberg, Chief
Environmental Branch for Renewable Energy
Bureau of Ocean Energy Management
45600 Woodland Road (VAM-OREP)
Sterling, Virginia 20166

Dear Ms. Stromberg,

Please accept these comments from the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) and the New England Fishery Management Council (New England Council) regarding the Notice of Intent (NOI) to prepare an Environmental Assessment (EA) to consider the potential environmental impacts of possible wind energy-related leasing, site assessment, and site characterization activities in the areas recently identified as Central Atlantic Wind Energy Areas (WEAs) off Delaware, Maryland, and Virginia.

The Mid-Atlantic Council manages more than 65 marine species¹ in federal waters and is composed of members from the coastal states of New York to North Carolina (including Pennsylvania). 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. 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, the marine fisheries throughout the Mid-Atlantic and New England 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.

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

- We appreciate that all the Frank R. Lautenberg Deep Sea Coral Protection Areas and many major fishing areas were excluded from the WEAs. Any future consideration of identifying additional WEAs within these Call Areas should avoid deep sea coral areas and major fishing grounds.
- Site assessment and site characterization survey activities need to be sufficient to allow for informed public comment on potential locations for cable routes, turbines, offshore substations, and other project infrastructure. Survey locations should not be so narrowly prioritized or limited that flexibility in the precise final locations of project infrastructure is precluded.

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.

- Transit patterns should be considered when determining the appropriate layout for potential wind projects in these WEAs, especially considering that WEA C-1 is adjacent to the existing Coastal Virginia Offshore Wind lease and WEA B-1 is about 3 miles from the existing U.S. Wind lease. For example, buffers between adjacent projects and/or coordinated grid patterns may be worth considering, depending on the transiting patterns in the areas.
- We support all efforts to avoid impacts to submerged aquatic vegetation (SAV) and other structured habitats, and to avoid impacts to areas designated by the Councils as Habitat Areas of Particular Concern (HAPC).
- BOEM should require that lessees share information about geophysical and geotechnical survey locations, times, and methods.
- BOEM should require lessees to take coordinated approaches to site assessment and site characterization surveys, including fisheries surveys.
- BOEM should work closely with NOAA Fisheries to identify appropriate fishing and habitat data to inform the development of alternatives, impacts analysis, and potential mitigation measures.

General comments

We appreciate that BOEM published this NOI to prepare an EA with an associated public comment period. We understand this is not required by the National Environmental Policy Act (NEPA). BOEM staff has indicated that the draft EA will also be available for public comment, as was done for the leases in the New York Bight WEAs. This is also not required by NEPA, and we appreciate BOEM taking these voluntary steps to increase transparency and opportunities for stakeholder input.

Our understanding is that this EA will inform a proposed sale notice for lease areas within the WEAs and there will be an additional public comment period on the proposed sale notice. The proposed sale notice will include details on the specific lease areas under consideration, as well as any potential conditions associated with the leases, which may include required measures to avoid, minimize, mitigate, and monitor the potential negative socioeconomic and environmental impacts of wind energy projects in these areas. Specific configurations and design parameters for individual wind projects will be considered after lease issuance, once lessees have submitted Constructions and Operations Plans (COP). Therefore, as stated in the NOI, the draft EA will not consider the construction and operation of any commercial wind energy facilities in the WEAs.

Given these considerations, our comments focus on the potential effects of site characterization and site assessment activities within the WEAs; identification of potentially impacted commercial and recreational fisheries, fishery species, and habitats; and terms and conditions that could be considered through the proposed sale notice.

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. The EA should specify both magnitude and direction when characterizing impacts and define short and long term in the context of impacts.

The EA should consider the cumulative effects of all the site assessment and characterization survey activities for all existing lease areas throughout the region. The EA also should acknowledge cumulative removals of fishery species, cumulative takes of protected species, and cumulative habitat impacts resulting from survey activities in lease areas across the region.

Comments on WEAs

We are pleased to see that the final WEAs avoid overlap with the Frank R. Lautenberg Deep Sea Coral Protection Zones, as previously recommended by the Councils. We appreciate that deep sea corals are listed as one of multiple reasons for not identifying WEAs within Call Areas E and F at this time. The [memorandum for WEA identification](#) states that BOEM is deferring recommending WEAs within the entirety of Call Areas E and F until further study can be completed on technological and cost viability of floating wind facilities in these deep waters, as well as further study of the Department of Defense, NASA, and coral considerations. We recommend that any future consideration of additional WEA identification within Call Areas E and F take a precautionary approach to avoid areas where corals and other sensitive habitats are known or likely to occur, keeping in mind the limitations of the available data. As BOEM is aware, NOAA Fisheries' Deep Sea Coral Research and Technology Program is currently planning research projects in the northeast region that will occur over the next few years. Future leasing should consider the results of this research program.

We also appreciate that BOEM worked with the Blue Water Fishermen's Association to review vessel monitoring system (VMS) data and remove certain areas that are important for pelagic longline fishing for highly migratory species (e.g., tunas and billfish) along the shelf break. Although the Councils do not manage these species, there is some overlap of participants in these fisheries and Council-managed fisheries. We encourage BOEM to continue to work directly with affected fishery stakeholders to minimize the potential for negative impacts of offshore wind energy development.

The memorandum for WEA identification describes remaining conflicts within the three WEAs, including overlap with fishing areas and sensitive habitats. It was helpful for BOEM to communicate this information to potential lessees during this pre-leasing stage. These conflicts warrant further consideration through the next steps for potential leasing. We recommend that more detail be provided on the fisheries conflicts in WEA B-1 and WEA C-1. For example, the area identification memorandum indicates that WEA B-1 has remaining conflicts for "fishing activities" and describes "an area in the center of WEA C-1 that has recently experienced increased fishing effort." In both cases, additional details are not provided on which fisheries and gear types are of greatest concern. Similarly, the area identification memorandum and associated appendix B indicate remaining overlap between the WEAs and "wrecks and obstructions." Greater details should be provided on the nature of these wrecks and obstructions, including if any are used for fishing. This information will be useful as prospective lessees, affected stakeholders, and other interested parties consider how to best minimize and mitigate the potential negative impacts of wind energy projects in these areas.

Site assessment and site characterization survey methods

We recommend that BOEM require consistency and coordination between lessees on site assessment and site characterization survey methods, including fisheries surveys. This can help

ensure that consistent baseline data are collected, considering the [recommendations of the Responsible Offshore Science Alliance](#) for fisheries assessment, and [NOAA Fisheries habitat mapping recommendations](#) for seabed characterization. This can help ensure data can be compared across lease areas and potentially improve our understanding of regional-scale impacts. It can also provide an opportunity to consider ways to address the impacts of offshore wind energy development on fisheries-independent surveys in this region.

As we have stated in previous comment letters, we continue to have significant concerns about the cumulative impacts of offshore wind development on fisheries 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. Nevertheless, cumulative impacts need to be correctly described.

Standardization of survey methods across leases as described above could potentially allow the lease area surveys to fill gaps in fisheries-independent survey coverage if it is not possible to maintain the current fisheries-independent survey methodologies once wind projects are built. BOEM should consult with the Northeast Fisheries Science Center on specific survey design elements to help achieve this goal.

In addition to coordinated survey methods, we also recommend coordinated communication on survey activities. It is already challenging for commercial and recreational fishermen and other mariners to stay informed on all the survey activities taking place. Adding new lease areas will only exacerbate this challenge. Communications should include the vessels and survey gear used, locations, contact information, and procedures for filing gear loss claims.

Site assessment and site characterization within lease areas should be sufficiently detailed to inform subsequent development of alternatives for public comment on specific wind project design parameters, including the specific locations for turbines, offshore substations, cable routes, and any other associated project infrastructure. This information has generally not been available during the public comment periods for other wind projects (e.g., during the comment periods for draft environmental impact statements). This has posed challenges for informed public input on ways to minimize the negative socioeconomic and environmental impacts of individual wind projects. This has also posed challenges for the EFH consultation process. We understand that site assessment and site characterization surveys are costly and therefore lessees tend to prioritize certain areas, rather than survey the entire lease area and multiple potential cable routes. However, this has reduced the flexibility to consider alternative turbine and substation array layouts and alternative cable routes. Outreach with the commercial and recreational fishing communities and other mariners, as well as coordination with the Councils, NOAA Fisheries, the Atlantic States Marine Fisheries Commission, and states can help lessees inform their prioritization of survey locations. However, outreach and coordination are not a substitute for collecting data. Fine scale information to inform these considerations must still be collected.

We are encouraged by recent conversations between BOEM and Council staff regarding the potential for Council staff to access the same habitat data provided by lessees to NOAA Fisheries

for EFH consultations. As we have previously commented, the Councils are responsible for identification of EFH and HAPC and are partners with NOAA Fisheries in EFH consultation. It is challenging for Council staff to fully engage in this process when we desire to do so given a lack of access to data and information that is shared with NOAA Fisheries as they develop EFH conservation recommendations. We request access to data viewers that show information such as backscatter, bedforms, boulder fields, etc., as well as numbered turbine positions, so we may be more effective partners with NOAA Fisheries on EFH consultations for future projects. This level of data sharing could be considered during development of the proposed sale notice for the Central Atlantic WEAs.

Fisheries impacts

BOEM should coordinate early and often with NOAA Fisheries on the most appropriate data for analysis of potential impacts to marine habitats, commercial and recreational fisheries, including fishing and transiting locations, and associated socioeconomic impacts. The EA should clearly and repeatedly acknowledge the limitations of each data set. It may be appropriate for the EA to consider additional data beyond what was incorporated into the spatial modeling exercise for WEA identification. For example, it appears that this model incorporated only VMS data for commercial fishing and only Southeast Region Headboat Survey Data for recreational fishing. Only certain commercial fisheries in this region are required to use VMS. The Southeast Region Headboat Survey also does not cover all potentially impacted for-hire fisheries. Vessel trip reports (VTRs) and/or logbooks are required for virtually all commercial and for-hire trips in federal waters in this region.² The fishing locations reported on VTRs are not as precise as the locations provided by VMS; however, VTR data should be considered to allow for a more complete picture of the potentially affected commercial and for-hire fisheries in the WEAs.

Commercial and recreational fisheries provide a wide range of benefits to coastal communities, not all of which can be assessed based on financial metrics and the EA 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.

It is also important to consider that landings, revenue, and the distribution of fishing effort for each fishery can vary over time based on many factors including fluctuations in abundance and distribution of multiple target and non-target species, changes in fisheries regulations, changing market conditions, and other factors. Patterns in future fishing effort can be challenging to accurately predict. Nonetheless, it is important to consider past, current, and potential future changes in fishing activity when considering which, if any, areas within the WEAs to lease. Development will alter these fishing grounds for decades.

We recognize that spatially precise data on private recreational fishing are very limited; therefore, it will be important to clearly articulate the limitations of the available data and to

² Vessels participating in the commercial lobster fishery that did not also hold permits for other federal waters commercial fisheries were previously exempt from the VTR requirements. However, starting with 2023, all commercial lobster vessels are now required to submit trip reports to the states. NMFS published a [proposed rule](#) to require commercial lobster vessels to submit trip reports to NMFS; however, a final rule has not yet published.

work with local fishermen to understand how the project area is used by recreational fisheries. The analysis of potential impacts to recreational fisheries should go beyond estimated numbers of private and for-hire fishing trips, and should also consider potential impacts to angler satisfaction, shoreside economic impacts, and other impacts for recreational fisheries. Quantitative data to assess many of these impacts are lacking; therefore, the EA may be required to describe these impacts qualitatively.

It is also worth noting that the Marine Recreational Information Program (MRIP) recently announced results of a [pilot study](#) and plans for a longer term, larger scale follow up study which may eventually result in revised estimates of effort and catch from private recreational boats and from shore. The follow up study will take place during all of 2024 and additional time will be required in 2025, and potentially beyond, to consider the results of this study and determine warranted revisions to the time series of MRIP data. The current MRIP estimates remain the best scientific information available; however, it may be appropriate to note the follow up study as a caveat for any estimates of private recreational fishing effort or catch included in the EA. It is not anticipated that estimates of for-hire effort and catch will be impacted.³

It will be important for the EA and future analyses to convey that the spatial distribution of commercial and recreational fishing effort is influenced by many factors, including the distribution of multiple potential target species, distance to home ports and ports of landing, market and other economic influences, fisheries management regulations, and other factors. Commercial and recreational fishermen cannot easily relocate their fishing effort without socioeconomic impacts. It is also important to understand that most of the factors which influence the spatial distribution of fishing effort change over time. Variations in fishing effort should be considered, either with annual data over 10 or more recent years, or by presenting a multi-year average alongside peak years.

The analysis should consider commercial and recreational fisheries over a wide geographic area that may be impacted by wind projects in these WEAs. For example, vessels traveling from ports north and south of the project areas may transit through and/or fish in the area. Transit patterns should be considered when determining the appropriate layout for wind projects in these WEAs, especially considering that WEA C-1 is adjacent to the existing Coastal Virginia Offshore Wind lease and WEA B-1 is about 3 miles from the existing U.S. Wind lease. For example, buffers between adjacent projects and/or coordinated grid patterns may be worth considering, depending on the transiting patterns in the areas.

As we have stated in many previous comment letters, it should not be assumed that commercial fishermen will switch gear types and/or target species if they are unable to fish in a wind farm. This may not be feasible given the high cost, potentially lower prices, and different permits that would be required. Such adaptation could only occur over the longer term and would likely require fishery management changes. It should not be assumed that fisheries management will adapt in any particular way as it must achieve multiple objectives and offshore wind energy development is only one consideration.

³ More information is available at <https://www.fisheries.noaa.gov/recreational-fishing-data/fishing-effort-survey-research-and-improvements>

The EA should consider the temporary, but nonetheless meaningful, impacts that site assessment and site characterization activities can have on commercial and recreational fisheries. For example, fishing vessels may be temporarily excluded from survey areas. Site survey vessels can also damage fishing gear, which cannot always be repaired or replaced quickly. Some Council stakeholders have indicated that the claims process for gear that is lost or damaged due to survey activities for existing leases can be drawn out, especially when claims are contested. In addition, survey activities can cause behavioral changes for target species, which can result in reduced catches. For example, temporary behavioral changes due to noise or temporary habitat modifications can reduce hook and line catches. These impacts can last beyond the duration of the activities that produced the impact, especially if they occur over multiple seasons, overlap with spawning seasons or important fishing seasons, or if they affect species or fisheries that are already experiencing negative impacts due to other factors such as low availability, restrictive fishery management measures, or climate stressors. It is also important to note that localized impacts can be much greater in magnitude when considered at the level of individual fishing operators or individual communities compared to the regional level. For example, a single day of especially poor fishing on a for-hire vessel can have negative impacts for the captain and crew if it results in fewer repeat customers and fewer recommendations of their business to prospective customers.

Habitat impacts

The EA should consider potential impacts to SAV and other structured habitats. We strongly support all efforts to avoid impacts to SAV and other structured habitats along any potential cable routes. 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.

The EA should also consider potential impacts from electromagnetic fields (EMF). 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.⁴ 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. Given that details on cable types and cable locations are not known at this early stage, the EA should consider and evaluate both HVAC and HVDC cables and potential impacts related to cooling systems which may be required to convert between cable types.

⁴ Hutchinson, Z. L., P. Sigra, 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

Hutchison, Z. L., A. B. Gill, P. Sigra, H. He and J. W. King (2020). "Anthropogenic electromagnetic fields (EMF) influence the behaviour of bottom-dwelling marine species." Scientific Reports 10(1): 4219.

As noted above, we recognize that the WEAs avoid deep-sea coral habitats. If additional WEAs are considered within Call Areas E and F at a later date, it will be essential to evaluate potential impacts of leasing and site characterization on deep-sea habitats specifically. Future consideration of WEAs within Call Areas E and F should require a new EA or other supplemental analysis with an associated public comment period. This is especially important given that leasing areas within Call Areas E and F may have quite different environmental and socioeconomic impacts compared to the recently identified WEAs.

Conditions for potential future leases in the WEAs

Although this EA will not consider the specific design parameters of individual wind projects within these WEAs, some potential negative socioeconomic and environmental impacts can most easily be avoided by not leasing certain areas or by establishing conditions associated with leases. We strongly encourage BOEM to consider the recommendations listed in the wind energy policies adopted by both Councils, which apply across all projects.⁵ Our two Councils worked together on and adopted the same wording for these policies.

Clear communication of the specific locations, times, and gear types for site characterization and site assessment survey activities is essential. There have been issues in the past with verbal communication from individuals associated with survey activities, including contractors, conflicting with the formal, written notices from the developers. All individuals associated with these survey activities who may communicate with commercial and recreational fishermen and other mariners should receive communications training to help reduce the potential for conflicts.

We strongly encourage BOEM to consider coordination across leases through the proposed sale notice. As previously described, this could include consistent survey methodologies and communications across projects. This could also include consideration of coordinated transmission, for example through shared cable corridors where possible, as well as considerations for regional transmission systems, meshed systems, and the development of an offshore grid.

Avoidance of SAV, artificial reefs, and other structured habitats when planning cable routes, the locations of turbines offshore substations, and other project infrastructure should be required through the proposed and final sale notices as a condition of leases.

Fishermen have noted there is a need to declutter radar within lease areas, otherwise fine scale targets may be lost while navigating through them. If AIS transponders are most appropriate on a subset of structures only (versus on every turbine, offshore substation, and any other offshore structures), BOEM should consult with the fishing industry and the U.S. Coast Guard to identify where AIS would be most helpful.

The Councils have not endorsed a specific cable burial depth, but rather have supported 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

⁵ Available at https://www.mafmc.org/s/MAFMC_wind_policy_Dec2021.pdf

these objectives, as suggested in the BOEM Draft Fisheries Mitigation Guidance, we recommend that a minimum cable burial depth of 6 feet be required as a condition for all current and future leases.

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. It would be helpful to identify the characteristics of any cable protection materials, should target burial depths 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. BOEM's recent response to the EFH conservation recommendations for Revolution Wind includes text about the types of protection materials that will be recommended. These should be minimum criteria for future leases.⁶

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 must be assessed and managed as part of the offshore wind development process.

Our Councils generally support the use of lease auction bidding credits to encourage practices to avoid, minimize, and mitigate the potential negative environmental and socioeconomic impacts of offshore wind energy projects. Bidding credits could be used for fisheries compensatory mitigation funds, fisheries innovation funds, research on fisheries and marine habitats, or for committing to a certain minimum spacing between structures to minimize impacts to fisheries. Specific bidding credits and any associated limitations should be described in the proposed sale notice to allow for public comment on the details before they are finalized.

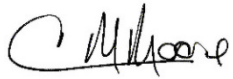
Conclusion

We appreciate the opportunity to provide comments to ensure that issues of social and ecological importance are considered through the next steps for potential leasing within the Central Atlantic WEAs. 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.

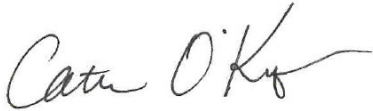
⁶ “However, BOEM will require the Lessee to avoid the use of engineered stone or concrete mattresses in complex habitat, as technically and/or economically feasible or practicable. The Lessee will also be required to ensure that all materials used for scour and cable protection measures consist of natural or engineered stone that does not inhibit epibenthic growth and provides three-dimensional complexity in height and in interstitial spaces, as technically and/or economically feasible or practicable.” From BOEM's August 2023 response to NOAA Fisheries on the Revolution Wind EFH CRs.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Moore".

Dr. Christopher M. Moore

Executive Director, Mid-Atlantic Fishery Management Council

A handwritten signature in black ink, appearing to read "Cate O'Keefe".

Dr. Cate O'Keefe

Executive Director, New England Fishery Management Council

cc: J. Beaty, W. Townsend, M. Luisi,