New England Fishery Management Council
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Eric Reid, *Chair* | Cate O'Keefe, PhD, *Executive Director*

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Zachary Jylkka
Office of Renewable Energy Programs
Bureau of Ocean Energy Management
45600 Woodland Road, VAM–OREP
Sterling, Virginia 20166

Dear Zach,

On behalf of the New England Fishery Management Council (Council), please accept the following comments on the Draft Wind Energy Areas (WEAs) for the Gulf of Maine. The Council appreciates that the Bureau of Ocean Energy Management (BOEM) is providing this formal opportunity for public comment, which goes beyond what is required in BOEM's renewable energy regulations. Also, thank you for attending a recent meeting of our Habitat Committee and Advisory Panel to share information on this issue and answer questions.

As suggested during an October 30, 2023, fishing industry meeting hosted by the Responsible Offshore Science Alliance and attended by yourself and other BOEM staff, we are providing comments on both adjustments to the siting analysis spatial model and on areas of concern with the Draft WEA. We also provide comments on the leasing process including potential lease conditions. In some cases, we are reiterating and expanding upon prior comments.

Suggested adjustments to the siting model

Our understanding is that BOEM plans to continue to work with NOAA National Center for Coastal Ocean Science (NCCOS) to refine the spatial suitability model, and at minimum, that you intend to re-run the model within the draft WEA area. We support this work and offer the following specific comments.

- We recommend re-running the model with the revised habitat layers and weights[1] as suggested by NOAA Fisheries. Council and NOAA Fisheries staff collaborated to develop these recommendations and we agree that the updated layers, weights, and buffers are more focused on key areas of concern.

- We recommend retaining Northeast Fisheries Science Center (NEFSC) fisheries independent survey biomass (2010 – 2019) in any new model run[2]. We understand that this layer did not have a substantial impact on the final suitability layer from the prior

[1] NOAA Fisheries has recommended considering three types of habitat layers: known coral habitats, additional important habitat areas and benthic features, and conservation buffers. They also suggest including and excluding a layer that uses areas shallower than 220 meters as a proxy for where additional complex habitats might occur. Including these layers individually, vs. as a combined habitat layer, should better reflect their different purposes and relative suitability for development.
[2] Species currently included: Atlantic cod, monkfish, pollock, and witch flounder (NMFS spring survey); redfish, American plaice, and Atlantic herring (NMFS fall survey).

model run, which was used to inform the Draft WEA. However, we think that including data on fish distributions that may contrast with fishing effort distributions provides a more complete depiction of important fish areas in the Gulf of Maine. Furthermore, including the interpolated trawl survey biomass in one sub-model may highlight areas that are also shown as important in a different sub-model, thus amplifying the notion that these areas have low suitability for wind development. Within the narrower Draft WEA footprint, these surveys may help BOEM to estimate the relative suitability of different locations in terms of overlaps with these resources.

- BOEM should consider a modeling scenario where fish/fisheries and habitat are within the same sub-model given the Council thinks about these topics similarly; we recommend increasing this sub-model's contribution from 25% (base case scenario in the Draft WEA) to 40%. We defer to NOAA Fisheries on which fish and fisheries layers to include in the new model run along with any individual data layer and sub-model weighting recommendations and area constraints (e.g., removal of priority areas from any Final WEA delineation). This will help minimize impacts to fisheries and habitat.

- We recommend BOEM include any available electronic vessel tracking data in the offshore lobster fishery to help inform any proposed lease areas. The offshore areas in the Gulf of Maine are important lobster fishing grounds. The Atlantic States Marine Fisheries Commission implemented this tracking requirement in September 2023 and electronic tracking will be mandatory beginning December 15, 2023, thus, the data will not be available for the Final WEA delineation.

- Lastly, we recommend constraining areas shallower than 200m deep to serve as a proxy for complex habitat in the next model run to evaluate how suitable areas for wind development change when this constraint is not included.

Concerns related to specific areas of the Draft WEA

- Wind developer nominations have a large influence on the overall suitability model results because they are so heavily weighted within the wind sub-model (12.5%, because this layer represents 50% of the wind sub-model, and there are four sub-models in total). Information related to offshore wind developability is a reasonable consideration to include in the sub-model and siting analysis overall, but, as we understand, developers made assumptions about areas to avoid for protected species, defense, or other reasons when submitting their nominations. As a result, the developer interest layer may not reflect best available information and might be creating flawed or biased results in any Final WEA delineation. In addition, the Draft WEA has some distinct discontinuities in blocks 4F and 4G, and 6E and 6F, which may be influenced by the developer interest layer. Overall, we ask that BOEM carefully consider the influence this layer may be having on the Final WEAs. If low developer interest is the only data source rendering an area unsuitable, BOEM should consider including those areas in the Final WEA, especially if they are otherwise deconflicted with respect to fisheries, habitat, and protected species issues.

- Based on preliminary results from the first phase of the Saildrone mapping work, there appear to be areas of high seafloor complexity that could support deep-sea corals within 5G, 5H, and 5I grid cells. Grid 1H is thought to also have deep-sea corals, thus, we

recommend considering removal of this grid as well. We recommend working with NOAA Fisheries staff to confirm the coral locations and remove these from consideration in the Final WEA.

- To minimize impacts to the offshore groundfish fishery within the Wilkinson Basin area, where mixed trips predominate (groundfish species, as well as monkfish and whiting), and to reduce the overlap of the WEA on the redfish exemption area, we recommend considering removal of the following grids: 2F, 2G, 2H, 2I, 5A, 5B, 6A, 6B, 7A, 7B, 7C, 8A, and 8B. We recommend overlaying these grids on the top five quantile VMS map (mean polls per year), as recommended by several groundfish fishermen, to constrain the model for areas of moderate to high concentration of groundfish landings and revenue (especially 7A, 7B, 8A, 8B). VMS data are a more spatially comprehensive, reliable, and verifiable data source compared to VTR data and can help show the seasonality of groundfish fishing. The grids northeast of Cape Cod support the harvest of diverse groundfish species, which is unique, and could be difficult to replace if adversely affected from offshore wind development. For additional context, the redfish exemption area was revised in 2020 (final rule), which expanded the western and southern boundaries relative to the original exemption area. This exemption area represents the location where many redfish are harvested and where the proportion of bycatch of other groundfish stocks is low. It is also worth noting that fishing for redfish and other groundfish and monkfish species has a seasonal pattern. This type of fishing pattern might be diluted in the spatial model given the areas are not used year-round.

- In addition to concerns related to the Draft WEA delineation, BOEM should also consider impacts to transit routes for the groundfish fishery based on the potential interconnection points included within NCCOS methodology report. These transit areas to and from the Gulf of Maine and Georges Bank are important to consider from a safety and operational perspective for the groundfish fleet given the fleet at large is most profitable on these offshore mixed trips (harvesting pollock, redfish, haddock, cod, flounders, white hake, and monkfish). Vessels operating in the Draft WEA transit from fishing grounds to multiple ports, including Stonington, Rockland, Portland, Portsmouth, Boston, Scituate, and New Bedford. The large number of ports suggests that multiple corridors would be needed to accommodate these movements.

- The Draft WEA has a substantial degree of overlap with NOAA Fisheries Statistical Area 515. Four groundfish sectors (five, including a sector that operates largely as a permit bank) are active in Statistical Area 515: Northeast Fishery Sectors II and VI, and Sustainable Harvest Sectors 1, 2, and 3. The manager of the Sustainable Harvest Sectors indicated that last year, approximately 60% of the activity in their sectors occurred in Statistical Area 515, with important species being pollock, redfish, and monkfish. Fishermen who are members of these sectors will be best able to share information about their fishing practices in the Draft WEA including areas of greatest importance.

- A challenge with fishing data is that effort varies seasonally and across years, which means that important areas will vary sector to sector, and vessel to vessel within sectors. While we don't have any concrete recommendations for solutions, BOEM should keep in mind where effort might shift to if fishing vessels are displaced from the Draft WEA. For example, interactions with the inshore groundfish fleet, or the offshore lobster fleet, in addition to constraints related to catch limits, may make effort shifts difficult to manage.

More specifically, areas further downeast along the coast of Maine (north of the Draft WEA) have higher catch rates of white hake, which is currently quota-limited.

- To minimize impacts to the Atlantic herring fishery northeast of Cashes Ledge, we recommend either removal of grid 2D or a reduction of 2D to only retain the southeastern portion of the grid for Final WEA delineation.

We have various concerns with the Secondary Areas and recommend that any advancement of Secondary Areas be included only as part of a phased leasing approach, if at all.

- Additional research and data collection are ongoing in these areas (as well as in the larger Draft WEA) and it is important that these results be incorporated prior to any leasing (e.g., Saildrone mapping including identification of high relief areas – potential coral habitat).

- We recommend considering any Secondary Area only after at least two full years of electronic vessel tracking data are collected on lobster activity given portions of these Secondary Areas overlap with important lobster fishing grounds. We recommend at least two years of data collection to smooth over interannual variation in fishing effort.

- We do not recommend including Secondary Area A given this area partially overlaps with the Request for Competitive Interest Area for the state of Maine's proposed research array lease and overlaps with Toothaker Ridge, an important fishing ground. Despite not knowing the exact location of this research lease, we recommend removing Secondary Area A entirely from any Final WEA given the nature of this research lease is to provide insight into a floating offshore windfarm. As such, including a Final WEA directly adjacent to or near a research lease could cause confounding results, especially if site assessment activity for the commercial leasing process occurs in waters adjacent to or near the research floating wind farm.

- We also do not recommend Secondary Area C given its overlap in the Maine, New Hampshire, Massachusetts Port Access Route Study (MNMPARS) recommended safety fairways, which is undergoing final rulemaking (timing for implementation is unknown). While this area does not overlap Lobster Management Area 1 (unlike the other two Secondary Areas), the overlap with the recommended fairways is highly problematic. Furthermore, this Secondary Area is close to Jeffreys Bank Habitat Management Area, which was designated to protect vulnerable, hard bottom habitats.

Additional information about potential conflicting uses of the Draft WEA including navigation, fisheries, habitat, and protected species:

- We recommend excluding high dependency areas versus reworking the model with these areas having lower suitability to ensure they are not part of the Final WEA.

- Regarding recreational 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. We recognize that many vessels targeting highly migratory species do not have VMS, however, it is important to exclude areas identified by fishermen that are important for pelagic longline fishing for highly migratory species (e.g., tunas and billfish), including Wilkinson Basin and parts of Jordan Basin. Although the Councils do not manage these species, there is some overlap of participants in these fisheries and Council-managed fisheries. We also 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 work with local fishermen to understand how the Final WEA is used by recreational fishermen.

- Regarding MNMPARS, the coincident timing between this leasing process and the MNMPARS rulemaking remains extremely problematic. The United States Coast Guard has suggested fairways to promote navigation safety for mariners transiting the Gulf of Maine. Fairways are defined as "a lane or corridor in which no artificial island or fixed structure, whether temporary or permanent, will be permitted" (33 CFR §166.105). This suggests that fairways are fully incompatible with renewable energy leasing and development. Rulemaking to implement these fairways is underway but is not likely to be completed prior to Final WEA identification.

Recommendations related to the layout of leases and cabling

We recommend BOEM provide additional detail on the offshore floating wind technology and likely foundation types first before soliciting for public comment on any recommended distance between leases to minimize wake effects and to allow vessel traffic and/or fishing activity to occur in the WEA. This information will affect the layouts within leases and therefore transit through the lease areas. During our recent Habitat Committee and Advisory Panel meeting, you commented that all anchors and cables, aside from export cables, would need to be located entirely within a lease area. This is helpful information since the mooring cables associated with floating turbines are of concern to fishing vessel operators with gear in the water column or on the seafloor.

Generally, buffers between adjacent projects and/or coordinated grid patterns may be worth considering, depending on the vessel transiting patterns through these areas. BOEM should consider tradeoffs between different configurations to understand the difference in impacts on fisheries and transiting through the Gulf of Maine. For example, individual, non-adjacent leases, vs. two or three leases grouped together, vs. one or two large groups of 5-7 leases would likely pose different sorts of challenges for fishing operations. Depending on the floating wind cabling and anchoring footprints, it may make sense to group leases as close together as possible in areas where there is least conflict to minimize the footprint of any development. In areas where there are known fisheries and habitat conflicts, discrete lease areas with large transit lanes may be preferred to help minimize impact on fishing operations (at least ~5 nm between each lease). These tradeoffs likely depend on gear type, target species, and the ability to co-use an area with offshore wind infrastructure. The New York Bight leases for fixed bottom structures have a requirement to incorporate a 1 nm setback of turbines from the boundary of any neighboring leases if a design with two common lines of orientation between adjacent leases cannot be agreed upon (87 Federal Register 2446). Given that floating wind turbines will have anchoring systems and cables in the water column, setbacks required for wind farms that employ this technology should include not only turbines but also mooring lines and anchors in the list of structures that cannot be placed close to the edge of a lease area. It is also likely floating wind farms will be

unfishable by most types of fishing gear, more so than fixed bottom wind farms. For this reason, discrete project areas, or leases with wide transit corridors between them will be most appropriate to minimize impacts to fishing operations.

It is difficult to provide more specific comments on lease configuration at this time without knowing more specifics on the total area and megawatt goal that might be planned for any phased leasing, the total number of phased leasing opportunities, and the floating technology that is likely to be used in the Gulf of Maine.

- Information on constraints and advantages of possible electrical cable transmission routes

We defer to the state agencies of Maine, New Hampshire, and Massachusetts to identify onshore landing and interconnection points for cables connecting offshore wind energy facilities to the onshore electrical grid and to identify future demand for electricity in the Gulf of Maine region. Generally, we recommend considering requirements related to coordinated transmission across multiple lease areas and projects including shared cable corridors, backbone transmission lines, etc. Considering coordinated transmission in the Final WEA can help communicate to wind energy project developers that this is a priority of federal and state agencies that will play a role in reviewing, approving, and procuring energy from offshore wind energy projects.

We also recognize that there is the potential for transmission cabling through the Stellwagen National Marine Sanctuary for which we recommend following the Sanctuary's guidance on areas to avoid, any requirements for installing the cable (cable plows, concrete mattresses, etc.), data collection for monitoring and research, and so on.

Suggestions for the leasing process

- Phased commercial leasing program in GOM with multiple lease sales

BOEM should consider phased leasing for the GOM where the size and scope of the first phase is based, at most, on the current state offshore wind goals (13 MW total across Maine and Massachusetts). Subsequent leasing should be delayed only until additional data collection and lessons learned during the first phase can be incorporated. This delay would also help account for any shifts in fishing activity and fisheries displacement from the first phase of leasing. This subsequent leasing opportunity should also include a public comment opportunity before BOEM holds a lease auction.

Substantial uncertainty in seabed characterization within the GOM remains a concern to us, and NOAA Fisheries is currently working with partner agencies, including BOEM, to survey additional areas, and to plan surveys that will occur in 2024. Phased leasing should allow for these data to be incorporated into suitability analysis and planning. It will be difficult to site lease areas without knowing the extent of complex seabed habitats throughout the region. The wind energy area development process must acknowledge areas of uncertainty in habitat and fisheries data. For example, outside of coastal areas, some shallower features offshore, and selected areas surveyed for deep-sea corals, sediment data in the Gulf of Maine are sparse. It is desirable, given scarce habitat data, to conduct surveys that identify less complex habitat areas before issuing leases. For example, NOAA's Deep-Sea Coral Research and Technology Program and NCCOS are mapping the eastern portion of the Gulf of Maine to identify the presence of corals in draft WEAs. The first part of this work was completed in early November and included a survey of

875 km; the second part of this work is expected in the spring to survey other areas of the Draft WEA. To the extent these data can be incorporated into spatial modeling to inform final WEAs and proposed leases, we recommend doing so. This may require multiple leasing opportunities given it is possible that only some of these coral data will be collected and summarized in time for the Final WEA delineation and potentially the proposed lease areas. A sequenced leasing program would enable the incorporation of additional data (coral, any geological constraints that would prevent development, etc.).

Furthermore, lessons learned during construction of the first issuance of GOM leases might inform and mitigate negative effects during construction of any subsequent leasing in the area. Examples of adaptive management in lessons learned include permit issuance, terms and conditions, and mitigation measures and could also allow for shared cable corridors, depending on offtake location.

- Bidding credits

The Council generally supports 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, general community benefit agreements, fisheries innovation funds, research on fisheries and marine habitats, for committing to a certain minimum spacing between structures to minimize impacts to fisheries, etc. Once leases are issued, we recommend BOEM require developers commit to any bidding credits given these are only considered proposed credits. The proposed sale notice should describe the specific bidding credits, the characterization of criteria for evaluating the credits, how these credits are weighted, the verification process and description of penalties if the developer does not follow through with the bidding credit commitments. All of this information should be described in the proposed sale notice to allow for public comment on the details before they are finalized.

- Compatibility with individual NMFS scientific surveys

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 to NMFS scientific surveys need to be correctly described.

It is worth noting that 13 surveys are listed in the NCCOS methodology report, however, there is no surfclam survey in the Gulf of Maine and the scallop survey does not overlap this region either. This should be corrected in the final NCCOS report.

Additional recommendations

As part of the Final WEA documentation, BOEM should include an evaluation of conflicts that remain in the Final WEA delineation, including fisheries, fish species, and habitat. This will help inform the identification of proposed lease areas and any phased leasing, both of which should be available for public comment.

In addition, BOEM should evaluate cumulative impacts across all projects that are likely to occur in the Gulf of Maine region given there is potential for hydrodynamic effects across the region. This should be done during the proposed leasing stage and include impacts on recruitment of economically and ecologically important species. As far as we understand, this type of evaluation is not done on a regional scale later in the leasing process. We recommend the proposed sale notice also include a monitoring strategy to address these cumulative impacts; we anticipate mitigation and compensation strategies will be included as part of the national and/or regional guidance. We recognize BOEM does a project-level NEPA evaluation, however, BOEM has not taken authority to implement regional monitoring once areas are leased.

Please contact Michelle Bachman (mbachman@nefmc.org) on my staff with any questions.

Sincerely,

Cate O'Keefe
Executive Director