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October 3, 2022

Zachary Jylkka
Bureau of Ocean Energy Management
Office of Renewable Energy Programs
45600 Woodland Road Mailstop: VAM-OREP
Sterling, VA 20166

Dear Mr. Jylkka:

The Massachusetts Executive Office of Energy and Environmental Affairs (EEA) respectfully submits these comments to the Bureau of Ocean Energy Management (BOEM) in response to the Request for Information (RFI) and Request for Competitive Interest (RFCI) to inform the ongoing planning and leasing for offshore wind in the Gulf of Maine. These comments support the overall goal of balancing the management of vital economic and natural resources in coastal and ocean waters of the shared Gulf of Maine with the introduction of a new ocean use: offshore wind. Ensuring the continuity of maritime commerce, recreation, and commercial fishing are priorities for the Commonwealth along with avoiding and minimizing impacts to existing maritime habitats and species as BOEM commences the planning process for potential commercial leasing of offshore wind in the Gulf of Maine.

In 2008 EEA formed two working groups, a Fisheries Working Group,¹ which includes fishing industry representatives, agencies, and interested non-governmental organizations and a Habitat Working Group,² which involves representatives from state and federal agencies, the offshore wind industry, and interested non-governmental organizations. Discussions within the work groups helped to inform the planning for the Massachusetts/Rhode Island (MA/RI) Wind Energy Areas (WEAs) and will also inform the planning for offshore wind in the Gulf of Maine. We solicited input from these working groups in preparation of this comment letter.

Reducing carbon emissions through the development of renewable energy, including offshore wind energy, is critical to combatting the global climate crisis. The Commonwealth strongly supports

¹ <https://www.mass.gov/service-details/fisheries-working-group-on-offshore-wind-energy>

² <https://www.mass.gov/service-details/habitat-working-group-on-offshore-wind-energy>

the Biden-Harris Administration's ambitious goals to achieve 30 gigawatts (GW) of offshore wind by 2030, 15 GW of floating offshore wind by 2035, and commercial leasing in the Gulf of Maine in 2024. We applaud the federal government's legislative actions in support of this goal, including the Bipartisan Infrastructure Law and the Inflation Reduction Act. The goals of the Commonwealth align closely with those of the Biden-Harris Administration. Since 2016, with the signing of the Act Relative to Energy Diversity, Massachusetts has been a national leader in offshore wind policy and market development and will host the first-in-the-nation commercial-scale offshore wind project in federal waters, the 800 MW Vineyard Wind 1 project. We have committed to renewable energy targets including a statutory authorization of 5.6 GW, 3.2 GW of offshore wind projects under contract to date and currently under development,³ a schedule of future offshore wind procurements to ensure timely delivery of offshore wind to Massachusetts ratepayers, and a goal to achieve net zero emissions by 2050. Offshore wind leasing in the Gulf of Maine is critical for Massachusetts to meet its legislatively mandated offshore wind energy goals.

Modeling conducted for the Massachusetts 2050 Decarbonization Roadmap⁴ indicates that offshore wind will be a significant component of the Commonwealth's and the region's electricity generation, requiring over 15 GW for Massachusetts alone by 2050, and approximately 30 GW for New England to achieve the region's renewable or clean energy targets. With nearly 7 GW currently under contract to Massachusetts, Rhode Island, Connecticut, and New York for projects in the existing lease areas off Southern New England, existing offshore wind procurement authorities and goals in the Northeast are expected to utilize the capacity of the existing lease areas over the next few years. To meet the states' long-term energy and decarbonization goals, new offshore wind areas will be needed. The commencement of the comprehensive planning and analysis process for commercial leasing in the Gulf of Maine is an important step, and the Commonwealth is committed to supporting BOEM through our role on the Intergovernmental Renewable Energy Task Force and in other capacities.

Request for Information

As we look to the Gulf of Maine as the next region to support offshore wind, it is important to consider how the siting of new lease areas can drive advancements in technology, competitive energy pricing, and efficient use of existing transmission infrastructure. As with the southern New England areas, the identification of multiple wind energy areas in the Gulf of Maine would support the offshore wind goals of the northeastern states, increase competition between offshore wind developers, support the industry's growth, and put downward pressure on costs for ratepayers. In the MA/RI WEAs, seven lease areas held by five different developers/leaseholders has led to a relatively competitive offshore wind market in the Northeast and resulted in cost-effective pricing for ratepayers in state procurements and robust commitments to economic and workforce development.

With that experience, to maximize the economic benefits, WEAs in the Gulf of Maine should also be geographically distributed, with sufficient WEAs to maximize competition among offshore wind developers, which in turn encourages competition and diversity in developers' strategies for siting and use of innovative floating wind technologies. In addition, ensuring a wide geographic distribution of WEAs would allow for multiple offshore transmission routes to access onshore

³ Current Massachusetts offshore wind procurements totaling 3,204 megawatts (MW) are comprised of Vineyard Wind 1 (800 MW), Mayflower Wind (804 + 400 MW), and Commonwealth Wind (1,200 MW).

⁴ <https://www.mass.gov/info-details/ma-decarbonization-roadmap>

interconnection points that would allow for cost-effective integration of renewable energy into the onshore power grid.

Finally, WEAs in the Gulf of Maine should be sized to allow developers to take advantage of economies of scale, which can help reduce costs for ratepayers and minimize siting impacts to existing maritime uses such as fishing as well as marine habitats and species. Recent offshore wind projects contracted by states have been sized at around 1,200 MW, which can allow for efficient use of high-voltage direct current (HVDC) cable technology that can reduce siting impacts from offshore cabling and maximize use of onshore grid interconnection points.

The Commonwealth supports the delineation of the RFI planning area for the Gulf of Maine which excludes areas from further consideration for the siting of offshore wind. Specifically, we agree with BOEM's determination that the following areas are incompatible with offshore wind development: areas within 3 nautical miles (nm) from shore and those beyond 200 nm from shore; National Parks, National Wildlife Refuges, National Marine Sanctuaries, or any National Monuments; Existing Traffic Separation Schemes (TSS), fairways, or other internationally recognized navigation measures; existing BOEM lease areas; and unsolicited lease request areas that are the subject of a separate request for competitive interest (e.g., State of Maine's requested research lease). In addition, with these comments, we recommend: 1) additional areas that should be excluded from further consideration for leasing by BOEM; and 2) areas that require further data gathering, analysis, and discussion with stakeholders to determine whether they are suitable for the siting of offshore wind in the Gulf of Maine. Below are more details related to these two topics.

While Massachusetts legislation sets out ambitious offshore wind goals, it also requires offshore wind developers exporting electricity to Massachusetts to site wind turbine generators (WTG) at least 10 miles from any inhabited shore.⁵ Areas within 10 miles from the Massachusetts coastline should be excluded from further consideration for the siting of offshore wind. Additionally, we recommend an extended shoreline buffer of an additional 10 nm along the entire Gulf of Maine shoreline to account for the increase in WTG size since 2016 and the potential for even greater increases in WTG size due to technological advancements and increasing efficiency in energy generation. This additional buffer will reduce potential visual impacts along the Gulf of Maine coastline. Further, we acknowledge that nearshore waters tend to exhibit higher concentrations of maritime uses such as recreational boating and day boat commercial fishing. Other maritime activities located closer to shore include offshore disposal sites, pilot boarding areas, port-related vessel traffic, and identified danger zones. Thus, we support BOEM investigating the implementation of an additional 10 nm shoreline buffer to a total of 20 nm to avoid and significantly minimize the potential for conflicts with these existing maritime uses and reduce visual impacts (see attached map).

In addition to a shoreline buffer, we recommend that BOEM exclude offshore wind development from areas designated by the National Oceanic and Atmospheric Administration (NOAA) as Habitat Management Areas (HMA). Fishing by bottom tending mobile gear is prohibited in HMAs due to the areas' importance in supporting various fish populations. These areas include the Western Gulf of Maine HMA, the Fippennies Ledge HMA, the Cashes Ledge HMA, the Ammen Rock HMA, the Jeffreys Bank HMA, and the Eastern Maine HMA (see attached map). Further, we recommend regions of significant seafloor ledges which are known to support diverse populations of

⁵ <https://malegislature.gov/Laws/SessionLaws/Acts/2016/Chapter188>

marine species, including marine mammals, be assessed for exclusion from siting of offshore wind. These areas may include areas encompassing and adjacent to Georges Bank, Jeffreys Ledge, Fippennies Ledge, Cashes Bank, and Platts Bank.

To reduce potential conflict between future wind development areas and offshore commercial fishing, we recommend that BOEM, with input from fishing industry representatives, advance efforts to accurately represent where fishing activity occurs and identify areas of high priority, value, and density to commercial fishing. Areas known to be highly productive fishing grounds for mobile fishing should be excluded from further consideration for offshore wind.

Highly productive areas should also be identified for the offshore lobster industry where geospatial data are limited but represent the single most commercially valuable wild-harvested species in the northeastern United States. Although geospatial data for the lobster fishery are incomplete, conclusions regarding the general distribution of lobster fishing activity across the Gulf of Maine relative to distance from shore and the federal Lobster Management Areas (LMAs) (see attached map) should inform the selection of areas for further consideration for the siting of offshore wind. Lobster trap densities are expected to be highest in inshore (0-3 miles) and nearshore (3-12 miles) waters where vessels of all sizes, including small open boats make day trips and return to port every day. The largest vessels in the lobster fleet make multi-day trips and frequent waters beyond 12 miles out to the limits of the Exclusive Economic Zone (EEZ). A separate Lobster Management Area (LMA 3) was created for these larger multi-day trip lobster vessels because this fleet is unique in its scale of operation (i.e., vessel size, crew size, trip length, and distance fished from shore). Since 1999, participation in the LMA 3 fishery has been limited and reduced by NOAA National Marine Fisheries Service (NMFS) through a limited entry system and individual, vessel-specific trap limits that are based on the vessel's fishing history. In subsequent years, trap allocations have also been reduced in LMA 3 for conservation purposes by 25% on a per-permit basis. As a result of these management actions, the amount of fishing in LMA 3 is comparatively low and has been substantially reduced with no potential for increases. In total, 123 permit holders and approximately 108,000 traps are allocated for LMA 3 that extends from the Canadian Border south to waters off Virginia. Further, LMA 1 has more dense lobster fishery activity—the trap density in LMA 1 is approximately 122 traps/mile² while the trap density in LMA 3 is 8 traps/mile². Lobster fishing decreases with distance from shore and specifically within LMA 3. Potential conflict with the lobster industry would be reduced if WEAs were sited in the easternmost portions of LMA 1, east of the Western Gulf of Maine HMA, and within LMA 3 (refer to attached map). BOEM should consider this pattern of lobster fishing activity as the planning and leasing process continues.

Although marine spatial data for the Gulf of Maine are robust, there are maritime uses and species for which a reliable and data-driven understanding of their spatial footprints requires further development and analysis. Some work is already underway to fill known data gaps. Vessel tracking on lobster vessels will be required for all federal permit holders by the end of 2023 (MA will require the same beginning in May 2023); additional aerial surveys targeted at North Atlantic right whales have begun in the Gulf of Maine RFI area; seafloor mapping to 24 nm is nearing completion; and tracking of avian species across the Gulf of Maine is ongoing. We recommend that BOEM continue to coordinate with states, federal agencies, and other stakeholders to gather and analyze data to incorporate into the planning and leasing for offshore wind. Further, with these and other data and supplemented by expert input, we suggest that BOEM identify and avoid the following areas in the siting of offshore wind in the Gulf of Maine.

- Areas of high-density fishing activity and value across fishing sectors and inclusive of all state fishing fleets
- Areas of dense concentrations of large whales, especially the North Atlantic right whale and other endangered whales⁶
- Priority migration corridors and nesting, staging and foraging areas for federal and state endangered and threatened avian species

As a new technology, there is some uncertainty surrounding the implementation of floating offshore wind technology and compatibility with existing maritime uses including fixed and mobile fishing gear as well as marine habitats and species including large mammals. We recommend that BOEM solicit information from developers and industry leaders on the emerging technology and lessons learned from Europe and Asia where demonstration and early commercial stage floating wind projects have been deployed. Specifically, information relating to the potential interactions between floating wind platforms and cables with fishing activity; offshore floating array orientation, spacing and configuration to minimize impacts on maritime navigation and fishing activity; and the implementation of floating platform substructure designs, tethering, and cabling to minimize impacts to seafloor habitats while advancing opportunities to enhance habitats.

The offshore wind developers and their equipment suppliers are likely to have the best available information about the evolution of technologies and implementation techniques associated with floating wind energy projects. Thus, we suggest that BOEM seek information from offshore wind developers relating to the placement of WEAs relative to distance from shore and proximity to ports and interconnection points.

Given that information regarding the location of some existing resources and uses is still under development (e.g., aerial whale sightings, avian migration corridors and foraging areas, lobster fishery activity) and given the vital importance of the Gulf of Maine to the coastal economies of surrounding states, we recommend that BOEM commit to a data-driven Ecosystem Based Management (EBM) approach to identify areas within the Gulf of Maine with the least conflict with proposed floating offshore wind activities. Such an EBM approach would clearly define the data used to winnow the RFI area, how these layers are considered in relative importance in the geospatial analyses, how priorities are determined, how the interactions between maritime uses is incorporated and would include robust stakeholder involvement from maritime uses and state and federal agencies. Specifically, my agencies have a wealth of knowledge and experience in marine spatial planning in Massachusetts waters and within the Gulf of Maine and should be directly engaged in the development of any such EBM approach.

Request for Competitive Interest

The Commonwealth supports the state of Maine's application to develop a floating wind research array in the Gulf of Maine. The research grant represents an important opportunity to test designs and methods, understand impacts and opportunities, and develop technologies for the emerging floating offshore wind industry. The research grant can be used to support a broad range of research interests from regional and national stakeholders and institutions, which in turn will help advance the floating offshore wind in the United States. We support ensuring that the timeline for the research array would closely align with that for commercial leasing in the Gulf of Maine. However, we

⁶ Blue, Fin, Humpback, North Atlantic right, Sei, and Sperm whales are all listed as endangered in Massachusetts.

suggest that BOEM ensures that commercial leasing would not be delayed due to any anticipated or unanticipated timeline or pending research schedules associated with the Maine research array. As with commercial projects, the research array should minimize potential impacts to marine resources, habitats, and users.

The planning for commercial leasing of offshore wind in the Gulf of Maine will require input and participation from those representing the many existing maritime uses, habitats, and species in this incredibly diverse and unique ecosystem. Massachusetts is committed to continuing to work with our stakeholders, ranging from offshore wind technology developers, environmental non-governmental organizations, commercial and recreational fishing industry representatives, scientists, and others to gather the best available data and information to inform BOEM's planning for the Gulf of Maine. We also commit to working across the Gulf of Maine to consider and incorporate inter-state perspectives and interests.

Further, Massachusetts sincerely appreciates the ongoing collaborative efforts among the states of Maine, New Hampshire, and Massachusetts regarding shared interests in planning for offshore wind in the Gulf of Maine and we look forward to continuing our joint efforts in supporting BOEM as the process moves forward. We also appreciate the joint efforts of the six New England states and federal agencies in developing a joint transmission development framework that will support the long-term goals to advance the integration of necessary clean energy, including offshore wind. That effort will be a necessary component in the successful deployment of offshore wind.

Thank you for the opportunity to provide comments to BOEM on the RFI/RFCI for offshore wind development in the Gulf of Maine. The Commonwealth appreciates BOEM for its expertise in siting energy on the continental shelf and working with the various agencies and entities with an interest in Gulf of Maine resources and uses. My agencies and offices look forward to continuing to work with BOEM, key stakeholders like our commercial fishing operations, other federal agencies and the states of Maine and New Hampshire as the planning process for siting offshore wind in the Gulf of Maine continues.

Sincerely,

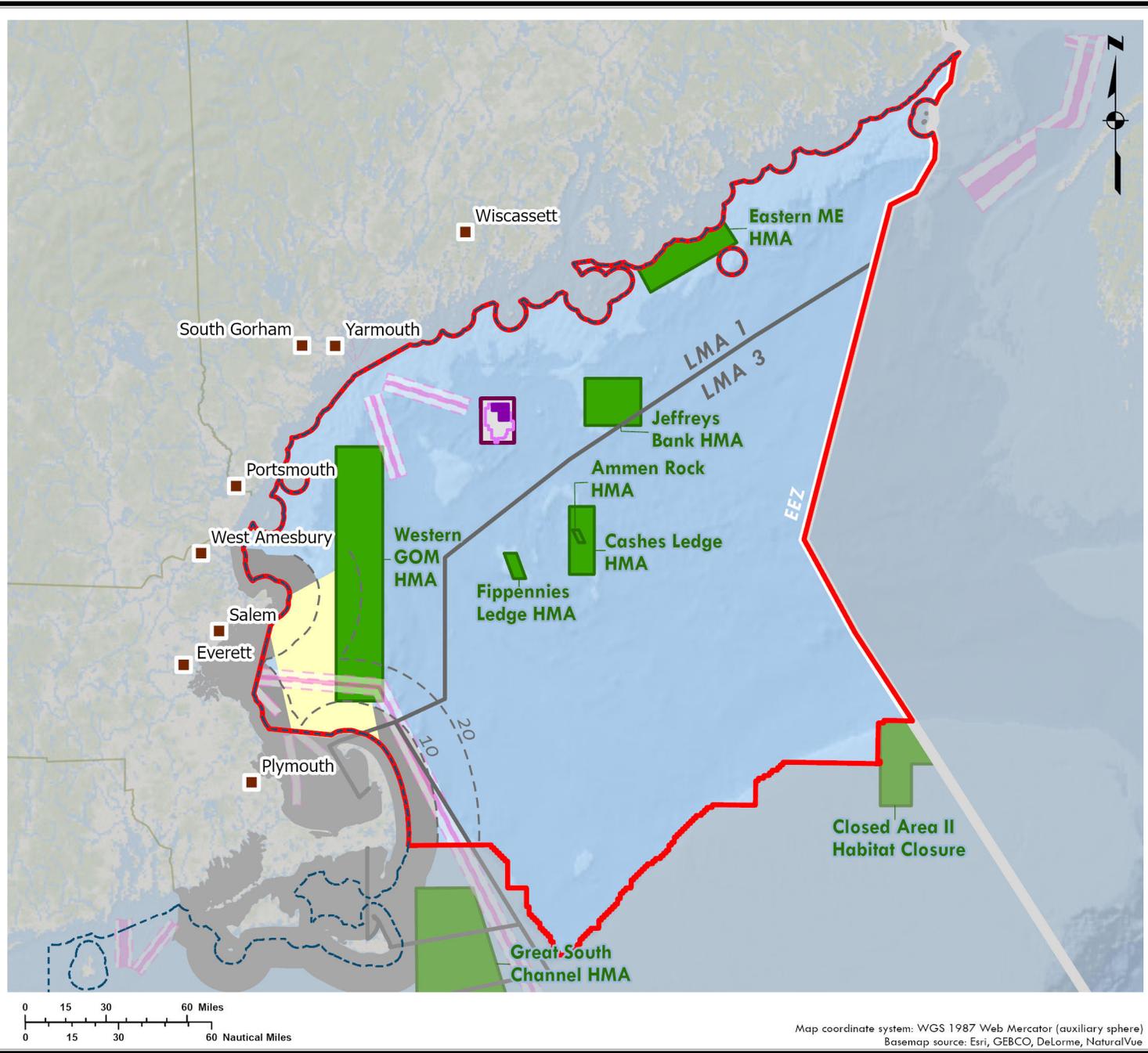
A handwritten signature in cursive script that reads "Bethany A. Card". The signature is written in black ink and is positioned to the right of the word "Sincerely,".

Bethany A. Card
Secretary

Attachment: BOEM Gulf of Maine RFI/RFCI map

cc:

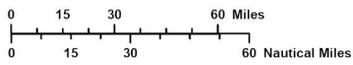
James Bennett, David MacDuffee, Luke Feinberg, Bureau of Ocean Energy Management
Marc Sanborn, NH Department of Environmental Services
Dan Burgess, Maine Governor's Energy Office



Legend

- RFI Planning Area
- Gulf of Maine RFCI
- Maine Research Array Narrowed AOI
- Maine Research Array Requested Lease Area
- NOAA/NMFS Habitat Management Areas
- Stellwagen Bank National Marine Sanctuary
- Lobster Management Areas
- Traffic Separation Schemes
- Traffic Lanes
- Select New England Electrical Transmission Substations
- Submerged Lands Act Boundary
- *MA Shoreline Buffer (nm)
- *Area within 10 nm from MA shoreline

**Based on unofficial lateral seaward boundaries*



Map coordinate system: WGS 1987 Web Mercator (auxiliary sphere)
 Basemap source: Esri, GEBCO, DeLorme, NaturalVue



Massachusetts Office of Coastal Zone Management
 Executive Office of Energy & Environmental Affairs

10/3/2022

BOEM Gulf of Maine RFI/RFCI