October 3, 2022

Mr. Zachary Jylkka, Bureau of Ocean Energy Management
Office of Renewable Energy Programs
45600 Woodland Road (VAM-OREP)
Sterling, Virginia 20166

Re: Request for Interest in Commercial Leasing on the Gulf of Maine

Dear Mr. Jylkka,

Please accept these comments from the New England Fishery Management Council (Council) regarding the Request for Interest (RFI) in commercial leasing for wind energy development on the Gulf of Maine outer continental shelf.

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, the Council has enacted measures to identify and conserve essential fish habitats (EFH), protect deep sea corals, and sustainably manage forage fisheries. The Council supports policies for U.S. wind energy development and operations that will sustain the health of marine ecosystems and fisheries resources. While the Council recognizes the importance of domestic energy development to U.S. economic security, we note that the marine fisheries throughout New England, including within the Gulf of Maine Request for Information (RFI) 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.

On July 27, the Council requested\(^1\) that BOEM consider developing a programmatic environmental impact statement (PEIS) to support commercial leasing in the region. We acknowledge your September 26 response. Your letter states, “BOEM is best equipped to undertake an EIS analysis when we have adequate information to inform how leases in the area are likely to be developed based on a final lease area size and location and site-specific conditions.” Assuming we understand this part of your response correctly, while we would agree that a clearer picture of the magnitude, design, and location of offshore development would enable a more focused PEIS analysis, we remain concerned that collectively, we lack sufficient information about environmental characteristics in some areas of the Gulf of Maine to develop lease areas that balance multiple tradeoffs in the first place. The opportunity to gather additional information to help overcome some of these data limitations is part of the reason we suggested developing a PEIS.

\(^1\) [https://s3.us-east-1.amazonaws.com/nefmc.org/220727_NEFMC-to-BOEM-re-PEIS-for-GOM-Leasing.pdf](https://s3.us-east-1.amazonaws.com/nefmc.org/220727_NEFMC-to-BOEM-re-PEIS-for-GOM-Leasing.pdf)
We still believe that a PEIS for the Gulf of Maine Planning Area will support a more inclusive, collaborative, and transparent planning effort. A PEIS would help BOEM and ocean users better understand the risks and cumulative effects of offshore wind development on important resources. These resources are diverse, and include fishing communities and their cultural heritages, fishing and shoreside businesses with portfolios located entirely or largely within the Gulf of Maine, commercial and recreational fishery species, deep-sea corals and other sensitive and vulnerable habitats, and endangered/protected species and their designated critical habitat (e.g., North Atlantic right whale, Atlantic salmon, Atlantic sturgeon, sea turtles). Completing a PEIS prior to identifying WEAs would provide increased transparency and a more thorough review of how potential impacts are identified and evaluated when considering offshore wind development in the Gulf of Maine. It is crucial for all stakeholders, especially those likely to be impacted by offshore wind development, to fully understand the types of projects that may be developed as well as any expected impacts.

Acknowledging Ms. Baker’s September 26 response, we agree it is possible that these issues could be addressed through an alternative mechanism, for example via a stakeholder process around spatial planning analyses, combined with engagement through the Gulf of Maine Intergovernmental Renewable Energy Taskforce and the state of Maine’s Offshore Wind Roadmap process. Regardless of the mechanism, inclusive, detailed planning will take time. A transparent process is critical to ensure confidence in the development of offshore wind in the GOM. Careful siting analysis and leasing is extremely important for mitigating impacts on other ocean users and resources.

An important overarching question, which should be addressed through the GOM Taskforce, is how much renewable energy can and should be generated from these lease areas. This overall goal, combined with assumptions about turbine capacity and array spacing and design, is essential for determining the size of the areas that need to be leased through the current opportunity. Input from the states is important in making this determination. For example, the state of Maine is in the process of adjusting its 2009 goal of 5 GW. This topic is well suited for exploration in a PEIS but can and should be considered through the Task Force as well. BOEM does not need to lease enough area to address all state goals through this first opportunity. It is possible, and we suggest desirable, given uncertainties in environmental data, to conduct leasing in the Gulf of Maine through multiple leasing opportunities.

The RFI area is enormous. It will be easier for the Council and other stakeholders to provide a more thorough analysis of a smaller candidate area or areas. To help narrow down the locations for which we need to provide input, including fisheries data, it would be helpful to first understand from potential wind developers where the wind resource is and what types of terrains, depths, habitats, and distances from shore are suitable construction. Also, it appears likely that developers may be restricted by where they are able to bring power to shore and by how much power offtake is possible given the current electrical grid and competition from other projects and other states. We assume this sort of feedback will come out of this RFI comment period, and

2 https://www.maine.gov/energy/initiatives/offshorewind#:~:text=Offshore%20wind%20is%20one%20of%20offshore%20by%202030
it will be important to communicate findings with fisheries stakeholders and other ocean users through the taskforce process.

Timing-related concerns and the research array

The Council has repeatedly expressed concerns over the pace and number of offshore wind projects in development along the Atlantic coast. The speed of this process makes it difficult to conduct a thorough analysis of potential individual and cumulative impacts and provide informed recommendations to BOEM on behalf of the individuals and resources we manage. The Council is concerned that the commercial leasing process for the Gulf of Maine will not be adequately informed by development of the state of Maine’s research array. The timelines for these two efforts overlap, making it difficult for us to understand how information gathered from the research array could be used to inform site selection or project design for commercial development. Learning from the research array will be important given that there is less experience worldwide with floating wind technology and only floating foundations are being considered in the GOM. We expect that floating wind arrays will have different impacts on natural resources and other ocean users compared to fixed arrays.

Comments on BOEM’s data inventory

We appreciate that BOEM compiled and made publicly available the data inventory that is being considered as part of the GOM commercial planning and leasing process.

Regarding the fisheries data, we offer the following comments:

- The data are outdated (e.g., 2011-2015). It will be important to use a time series of data that includes the most recent data available. This has implications for many fisheries, especially those where catch volumes or fishing areas have shifted since 2015. For example, scallop fishing in specific parts of the Northern Gulf of Maine management area has become very important in the past few years, and fishing locations have changed through time. It would be helpful to understand how frequently the data being used for GOM planning and leasing will be updated and if there are opportunities for stakeholders to provide any data that become available throughout the planning process (published and ongoing research results). We are aware that Maine is working with the Northeast Regional Ocean Council and partners to update some of these data sets for use in offshore wind planning. We encourage BOEM to work with Maine to understand the scope and timing of these efforts, and to use these data for planning once available.

- Not all fisheries use Vessel Monitoring Systems (VMS) and Vessel Trip Reports (VTR), thus, it is important to include both data sources (e.g., monkfish, skates, and lobster are not required to have VMS if the vessels do not have other federal permits that require VMS; HMS-only vessels are not required to submit VTRs). If a vessel’s only federal permit is for lobster, the vessel might not be represented in either data set and an electronic tracker mandate to collect and transmit spatial lobster data does not go into effect until the end of 2023. Lobster is a major fishery throughout many areas of the Gulf of Maine, thus, it will be important to ensure BOEM work with NMFS and the state of Maine to identify areas of high lobster fishing activity. We understand that updates to lobster effort data are also part of Maine and NROC’s work.
We suggest enhancing the inventory with a description of what specifically will be included from each of the datasets. For example, will species be identified, in addition to fishery management plan and gear type? It is important to understand which species will likely be impacted by wind development in GOM.

- The data do not seem comprehensive. We need to develop a shared understanding of who fishes where, for what species and with what gear types to adequately evaluate where lease areas should be identified for potential development. For example, in addition to Atlantic bluefin tuna, there are other highly migratory species to consider as part of the data inventory including swordfish, billfish, and sharks along with other gear types that are used within the GOM (e.g., purse seine and handline). We recommend consulting with NMFS on additional fisheries and gear types to include to ensure an exhaustive data inventory list.

Regarding habitat data:

- Once the habitat suitability model results from the Northeast Regional Habitat Assessment (NRHA) are finalized, the data outputs should be incorporated in the data inventory. These models will show which locations serve as suitable habitat for a variety of managed fish species and identify environmental variables that drive their distribution. Results from the assessment will be shared via the NRHA Data Explorer later this year: https://nrha.shinyapps.io/dataexplorer/#!/. We provide additional comments about habitat data and uncertainty below.

Regarding Industry, Transport, and Navigation data:

- The Council is unclear how the USCG’s GOM Port Access Route Study will be incorporated to inform planning in the Planning Area, given that it is being completed concurrent with this leasing process. The location of traffic lanes with respect to planning areas is an important consideration for BOEM, as blocks overlapping the traffic lanes out of Boston and Portland have already been removed from consideration.

Other data-related comments:

The RFI states that BOEM will incorporate ecosystem-based spatial models in planning. For the Council to make specific suggestions for models to consider, it would be helpful if BOEM provided details on these ecosystem models, including study objectives. Is the intention to use these models to prioritize competing uses, identify ecologically important areas for one or more species, document oceanographic features, or something else? If certain data and/or areas are prioritized and weighted differently than other areas, we recommend making the weighting scheme publicly available, transparent, and open for public comment opportunities. It will also be important to make sure any data inputs to models are updated and compiled in a transparent manner given the model outputs are highly reliant on the data inputs.

Assuming BOEM plans to work with National Centers for Coastal Ocean Science (NCCOS) to develop spatial models useful for identifying lower conflict areas, it will be important to ensure completeness of data layers. The weighting of these various data layers is also important as this directly influences the suitability score of a particular area relative to another area. The weights should be developed in an open and transparent process with stakeholder input such that it is
clear if and to what extent any data category is receiving a higher weighting for areas to avoid wind siting (e.g., critical species and habitats such as whales and sea turtles).

We have commented in the past about our concerns that wind development will hinder or preclude fisheries independent surveys, which are essential for stock assessment and understanding ecosystem conditions. We know that BOEM and NOAA Fisheries are working to identify and mitigate survey impacts. Any evaluations of wind leasing in the Gulf of Maine must thoroughly consider these issues.

**Incompatible areas; including fisheries and habitat considerations**

The Council regularly recommends avoiding areas with complex habitat, per the 2021 Council’s Offshore Wind Energy Policy. In the offshore portions of the Gulf of Maine, these habitats tend to occur on shallower banks and ledges, for example Jeffreys Ledge, Cashes Ledge, Fippennies Ledge, Platts Bank, and Jeffreys Bank. Many of these features are designated by the Council as Habitat Management Areas, closure areas to protect groundfish species, Dedicated Habitat Research Areas, or Habitat Areas of Particular Concern. Avoiding these management areas for offshore wind siting is also a recommendation made by Maine’s fisheries task force working group. Complex habitats are relatively common inshore and overlap sections of the planning area. We suggest using Barnhardt et al. (1998) substrate maps for Maine coast³ and data from Massachusetts state waters (Sediment and Geology Workgroup, 2021) to understand where complex habitats occur adjacent and inshore of the planning area⁴. The forthcoming Seascape product which presents a CMECS classification of seabed features should also be considered. As the RFI area is narrowed to discrete Wind Energy Areas, the Council recommends mapping and characterizing all benthic habitats following NOAA’s recommendations.

The Council also recommends that BOEM not locate wind energy areas in locations where deep-sea corals are known or likely to occur, particularly where they are found in high abundances, sometimes referred to as “coral gardens”. Via our Deep-Sea Coral Amendment, the Council designated two areas as Deep-Sea Coral Protection Areas in the Gulf of Maine, Outer Schoodic Ridge and Mt. Desert Rock. These designations were implemented by NOAA Fisheries in July 2021. Also, through this amendment, an area in Jordan Basin referred to as “114 Fathom Bump” was designated by the Council as a Dedicated Habitat Research Area. Dense aggregations of deep-sea corals occur in at least three other locations in Jordan Basin, specifically at areas referred to as “96 Fathom Bump”, “118 Fathom Bump”, and further east along the EEZ boundary in the central portion of the basin. Coral habitats also occur in Georges Basin, specifically at a site charted as Lindenkohl Knoll. All these areas were considered by the Council as potential Deep-Sea Coral Protection Zones, and extensive information about the coral species that occur within them, including descriptions of data supporting the identification of these habitats, is available in the Council’s Deep-Sea Coral Amendment document and environmental assessment.⁵ An additional site further northeast along the Hague Line from the Central Jordan

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Basin area shown on Map 1 was surveyed in 2019, and found to have coral gardens. This dive location is indicated on Map 3.

The Council has designated numerous areas for groundfish management including spawning protection. Some of these fishery closures are in effect year-round (Cashes Ledge, Western Gulf of Maine, Closed Area II) and others restrict fishing seasonally to minimize the effects of fishing-related disturbance and removals on species including Atlantic cod (GOM Cod Spawning Protection Area, Massachusetts Bay Cod Spawning Protection Area) or cod and haddock (Closed Area II Spawning Closure, and Closed Area I Spawning Closure). Dedicated Habitat Research Areas are intended to promote scientific studies related to habitat resilience and production. Many sites including Jeffreys Ledge and Stellwagen Bank in the western Gulf of Maine, Cashes Ledge/Cashes Basin, and eastern Georges Bank address multiple objectives and are managed for different purposes, with overlapping designations and regulations. Council managed areas are summarized on Map 1.

The northern flank and northern edge of Georges Bank are important fishing grounds and are also designated as Habitat Management and groundfish closure and spawning areas. The bank drops off steeply between depths of approximately 70 meters to around 140 meters. We are concerned that the RFI area extends up onto Georges Bank. We suggest eliminating portions of the RFI that include this edge, which is outlined on Map 1.

The Council also recommends that BOEM avoid locating wind energy areas in areas with high fishing activity measured in terms of total revenue, total landings, and vessel traffic patterns. This is also a recommendation made by Maine’s fisheries taskforce, which suggested avoiding fishing hot spots identified by VMS and stakeholder groups. Overall, we recommend avoiding areas of high fishing activity to reduce overall impacts. Based on NOAA Fisheries’ analysis of the RFI area, the most impacted species in terms of revenue found within the Gulf of Maine RFI Area (> $100 million) include American lobster, sea scallop, Atlantic herring, cod, pollock, and haddock. The most impacted species in terms of total landings from the RFI Area (>65 million pounds) include Atlantic herring, pollock, American lobster, redfish, haddock, and cod. We note that fishing for redfish often occurs in specific exemption areas. Further analysis will be needed to avoid and minimize impacts to these economically important species.

From a vessel traffic pattern perspective, the Council urges BOEM to not rely on only Automatic Identification System (AIS) data to evaluate vessel traffic patterns and for access to principal ports within the study area. Not every fishing vessel has AIS, including many small vessels fishing in the Gulf of Maine region. Other data sources to include in identification of vessel traffic patterns are Vessel Monitoring System (VMS) and Vessel Trip Reports (VTR) databases. Like AIS, not every vessel has a VMS unit on board and not every vessel submits a VTR, thus, AIS, VMS, and VTR data sources should be examined together to gain a more comprehensive understanding of vessel traffic patterns.

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. The Council has developed a model to estimate the distribution of fishing impacts to habitat in space.
and time (NEFMC 2020). To support this effort, we compiled seafloor sediment data from various sources, with U.S. Geological Survey’s usSEABED and University of Massachusetts Dartmouth School for Marine Science and Technology drop camera survey databases as our primary sources. At the 5 km x 5 km resolution used for our model, many grids have no sediment data points (hollow grids; Map 2), or only one data point (light grey grids; Map 2).

As another example, we are still learning about the seafloor terrain and associated deep-sea corals in Jordan Basin. Higher resolution data (see Map 3, left panel, with 20-meter bathymetry) enables identification of terrain features that are not clearly visible in lower resolution charts (see Map 3, right panel, with 3 arc second bathymetry; 3 arc seconds represents approximately 67 meters at 43° 30’ N). These features in Jordan Basin are sizeable and have approximately 20 to 25-meter relief above the basin floor. They support complex coral communities (black dots), and more sparsely distributed corals (grey dots). The Council’s Deep-Sea Coral Amendment explores these data in detail. Other sites were surveyed but corals were not observed (white dots). We suggest that sites with documented corals, and those with similar terrain features, are incompatible with offshore energy development. At this time, only a small portion of Jordan Basin is mapped at this resolution, such that additional sites may exist but are not currently mapped. In general, the Council supports the development of high-resolution bathymetric maps for areas of the EEZ where seafloor terrain is poorly understood. The 2012 NOAA-BOEM ACUMEN project, for example, resulted in 25-meter resolution bathymetric maps of the canyons. These maps were fundamental to our development of coral management areas for the canyons south of Georges Bank, and similar mapping should be prioritized for the Gulf of Maine.

**Cumulative impacts**

Cumulative impacts and risks need to be evaluated across ecosystem components, fishing fleets, and other ocean uses. Climate change will also be an essential consideration in the cumulative effects analysis as the distributions and abundance of many species are changing due to climate change and other factors.

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.

**Conclusion**

A deliberate, open, and information-driven process for commercial wind leasing and development in the Gulf of Maine is essential. The wind energy area siting phase for any region, including the Gulf of Maine, represents a critical early opportunity for avoiding impacts through

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scaling development appropriately and locating development areas in locations that will limit effects on resources and users. We appreciate the opportunity to provide comments to ensure that issues of social and ecological importance are considered during the Gulf of Maine commercial leasing process. We also look forward to working with BOEM to ensure that any wind development in the Gulf of Maine minimizes impacts on the marine environment and can be developed in a manner that ensures coexistence with our fisheries.

Please contact me if you have any questions.

Sincerely,

Thomas A. Nies
Executive Director
Map 1. NEFMC Habitat Management Areas, Groundfish Closure and Spawning Areas, Dedicated Habitat Research Areas, and Deep-Sea Coral Protection Areas in the Gulf of Maine.
Map 2. Sediment Data Density product developed for the Council’s Northeast Fishing Effects Model. Many of the 5x5 km grids in the Gulf of Maine have no sediment point data, as indicated by the hollow grids in the figure below.

Map 3. Comparison of 20-meter and 3 arc second bathymetry data for Jordan Basin, with coral observations shown in black and grey.