Environmental Assessment for Commercial Wind Lease Issuance, Site Characterization Activities, and Site Assessment Activities on the Atlantic Outer Continental Shelf in the Gulf of Maine Offshore the States of Maine, New Hampshire, and the Commonwealth of Massachusetts

Docket No. BOEM-2024-0020

April 17, 2024

Comment by New England Fishermen's Stewardship Association

Thank you for the opportunity to provide comments on the Bureau of Ocean Energy Management's ("BOEM") Notice of Intent to Prepare an Environmental Assessment for Commercial Wind Lease Issuance, Site Characterization Activities, and Site Assessment Activities on the Atlantic Outer Continental Shelf in the Gulf of Maine Offshore the States of Maine, New Hampshire, and the Commonwealth of Massachusetts.

For the reasons outlined below, the New England Fishermen's Stewardship Association ("NEFSA") urges BOEM to consider the extent to which the Gulf of Maine's Wind Development Area in its current form will have tremendously deleterious effects on the safety and well-being of the men and women who operate in the commercial fishing industry. These hazardous effects are a direct result of the deficient and incomplete data upon which BOEM relied, and the deficiencies in BOEM's data is a direct result of the Agency's decision not to consult with representatives from the commercial fishing industry before drawing its conclusions.

I. Background of New England Fishermen's Stewardship Association.

NEFSA is a fishing advocacy group that represents wild harvesters in fisheries across New England Communities. Founded in the Spring of 2023, NEFSA boasts over 850 members across New England. NEFSA is dedicated to educating the public about how best to manage our seafood resources through sound science and best practices at conservation used by fishermen, with a view toward economic well-being, ecosystem sustainability, and U.S. food security.

II. BOEM's Data Regarding Fish Populations are Defective and Inadequate.

In BOEM's Notice of Intent, the Agency requested "public input regarding important environmental issues and the identification of reasonable alternatives that should be considered in the" forthcoming environmental assessment.[1] Specifically, the environmental assessment is to consider "the potential impacts associated with site characterization activities (*i.e.,* biological,

[1] "Notice of Intent To Prepare an Environmental Assessment for Commercial Wind Leasing and Site Assessment Activities on the U.S. Outer Continental Shelf Offshore Oregon," Federal Register (February 14, 2024), available at https://federalregister.gov/documents/2024/02/14/2024-02985/notice-of-intent-to-prepare-an-environmental-assessment-for-commercial-wind-leasing-and-site.

archeological, and geophysical surveys and core samples) and site assessment activities (*i.e.*, installation of meteorological buoys) that are expected to take place following lease issuance."[2]

NEFSA and its Board have decades of collective fishing experience in the area covered by the Wind Development Area. NEFSA has diligently tracked and studied the data and findings of BOEM with respect to the Wind Development Area and across the New England area. NEFSA's research has revealed that BOEM's data collection practices and conclusions are severely flawed and belie the science. Among other deficiencies, the BOEM data is flawed for the following reasons[3]:

- The National Oceanic and Atmospheric Administration's (NOAA's) Fall 2022 data collection involved towing trips totaling just 42 nautical miles over 66 days. NOAA only completed 82% of its planned trips, with data acquired from 20-minute tows above the 42-degree, 20-minute line. A standard fisherman, however, can tow 48 nautical miles in just one day, which renders NOAA's data deficient and inaccurate.

- NOAA's Spring 2023 data collection was performed 1.5 months later than scheduled, which affects the accuracy of the data.

- NOAA's Summer 2023 data collection in the Georges Bank only consisted of day-time tows, resulting in inaccurate data collection. Specifically, NOAA claims there is a decline in small haddock, but small haddock come out at night to avoid predators.

- NOAA has consistently used insufficient 3-to-1 wire protocols when netting fish. The Agency's use of 16-inch hopper frames (at only 3 knots) results in NOAA nets bouncing over many fish species and fewer fish caught in NOAA's data collection operations. This results in inaccurate data collection that severely underestimates real fish populations. NOAA's use of poor data collection techniques is inexcusable, given the availability of 5-to-1 wire protocols that allows adjustment of nets and depths, which leads to more accurate catches.

- NOAA's use of "random" and inconsistent tows leads to incomplete and insufficient data, which has historically worked to the detriment of the fishing industry (e.g., by forcing the industry to reduce fish-catch limits by 5% for white hake and 82% for haddock).

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[2] *Id.*

[3] Information obtainable via the "Northeast Trawl Advisory Panel (NTAP)," Mid-Atlantic Fishery Management Council (last accessed April 17, 2024), available at https://www.mafmc.org/ntap.

- During COVID, the Bigelow research vessel did not collect data at all, which resulted in a massive information gap.

At various times, NOAA has admitted that they have no baseline data—indeed, very little data at all—on habitats in the Gulf of Maine. And what little data they have was furnished by observers with little to no at-sea experience on commercial vessels. They have little to no sampling data collected, and the high turnover rate for NOAA personnel is an example of improperly vetted observers. Taken together, the inescapable conclusion is that, insofar as BOEM has relied on the faulty information that it has received from NOAA, BOEM does not have the information it needs to accurately assess the impact that will be inflicted on the men, women, and sea life by its Wind Energy Area.

Given the defective data on which BOEM has historically relied, NEFSA respectfully asks BOEM (1) to address how it intends to provide a meaningful environmental assessment, and (2) to account for the specific defects pointed out in the above bullet points.

III. BOEM's Actions Will Decimate the New England Fishing Industry.

While it appears as if BOEM lacks the data necessary to determine the effect of its Wind Energy Area on the Gulf of Maine ecosystem, what remains certain is the effect that the Wind Energy Area will have on the commercial fishing industry. The following examples are illustrative:

New codfish restructuring and restrictions will concentrate vessels in the Western Gulf of Maine (Areas 513, 514, and 515). This is where choke fish reside. Restructuring and restrictions will force fishing vessels into a highly concentrated area for competition over three choke fish species.

The Southwest side of the Wind Energy Area is spawning ground for red fish, haddock, white hake, as well as the home of juvenile pollack. These species are specifically located on top of Franklins Swell, a piece of bottom known as "Horses Head," which is the closest section to Cape Cod. The 82% reduction of haddock in the Gulf of Maine in 2023, will, once the allocation limits are close to being breached, force vessels to cross through Wind Area Energy sites to access Georges Bank, which holds a different allocation. This will result in fisherman having to pass through windmill areas and foggy areas to access new, nontraditional fishing waters. This in turn will result in riskier and more dangerous fishing. The concentration of fishing efforts will chew up the allocation sooner in the fishing year, forcing vessels into Area 522, which puts them outside their historical footprint for vessels under 65 feet. And they will have to traverse through the Wind Energy Area to access Area 522.

The danger to the men and women functioning in the fishing industry will not end there. The historical fishing footprint from 2009-2021 shows that vessels under 65 feet generally do not go beyond 100 nautical miles of the four major fishing ports in New England (Portland, ME; Gloucester, MA; Boston, MA; New Bedford, MA). Weather variations in winter months will

endanger fishermen who go outside these traditional fishing areas. That said, these fishermen have little choice; if these fishermen do not expand to these new areas, the Wind Energy Area will trample access to ports and limit fishing hauls, which will have deleterious effects on the economy.

In the Northern region of the Wind Energy Area, NOAA is still completing habitat research. In that region, there are gillnetters, offshore lobster boats, and trawlers from multiple states. The displacement of those vessels will force competition on further grounds to the East, effectively stacking multiple fisheries on top of each other. This will create competition between ports and states regarding fishing grounds, and trigger gear conflicts. Furthermore, forcing fishermen into the same region will create an uptick in the landing of certain fish stocks, which creates market vulnerability and will directly impact regional area stock sustainability. More specifically, the Northern region of the Wind Energy Area (from Rodgers Swell to Davis Swell and Truxton) is a redfish exempt bottom. Redfish is a significant source of revenue for multiple fishing vessels and a large economic driver of sustainability for the larger trawling fleet. Finally, forage fish and bluefin tuna fish use the Western Wind Energy Area as overlapping migration patterns.

It also bears noting that the Northern most part of the Wind Energy Area extends up to where Area 1 and Area 3 meet—directly off the coast of mid-coast Maine. This is a valued lobster territory East of Cashes Ledge. This area has also experienced numerous Right Whale observations over the last few winters, and it borders a 1,000 square mile closure from October 1 through February 1. Sixteen Right Whales were observed in the area in just one day during Winter 2024. Given the perilously low number of Right Whales left in existence, this area should have been removed from the final Wind Energy Area.

BOEM's failure to consider the effects of wind farms on fish species and surface temperatures portends dangerous environmental and economic consequences for the New England area. Wind farms cause an increase in ocean surface temperatures and emit electromagnetic fields (EMFs). There is a wholesale lack of research documenting the effects of windmill heated water and EMFs on fish stocks, specifically bluefin tuna. Without proper information and data, there is the potential for interrupting, or even arresting, the migration of these species.

For example, research has shown that prolonged exposure to EMFs can lead to abnormalities in lobster larvae.[4] In one study, lobstermen gathered 20 egg-bearing female lobsters and 25 mature female crabs with sperm plugs. These crustaceans, which were all comparable in size, were then transferred to tanks at the St. Abbs Marine Station for observation by researchers. The researchers exposed one group of crustaceans to EMFs (comparable to the levels of EMFs around a sub-sea power cable), while maintaining another non-EMF-exposed control group. The researchers then allowed the crustaceans to hatch larvae. The researchers

[4] "The Effects of Anthropogenic Electromagnetic Fields (EMF) on the Early Development of Two Commercially Important Crustaceans" Journal of Marine Science and Engineering (April 2022).

studied the larvae and observed that "larvae exposed to EMF throughout their embryonic development had a significantly smaller total length (TL), carapace height (CH) and maximum eye diameter (ED) and a significantly longer carapace length," when compared to the non-EMF-exposed group.[5] The study concluded that EMFs produced by sea cables "could have a measurable impact on early development of two commercially important crustaceans."[6] Further, lobster larvae with prolonged EMF exposure "fail significantly more vertical swimming trials," which makes obtaining food and surviving more difficult.[7] The adverse effects of EMFs—which BOEM has failed to address—could disrupt and decimate fish populations in the New England area.

BOEM has also failed to consider the adverse effects of wind farms on sea surface temperatures and climate change. Wind farms cause an increase in sea surface temperatures and disrupt upper-ocean hydrodynamics in ways that remain incompletely understood by scientists.[8] The mixing of the ocean surface layer is predominantly driven by shear, so "anomalies in the wind field can have severe consequences for the upper ocean dynamics," as noted in a 2022 study in "Frontiers of Marine Science."[9] Additionally, the removal of wind energy near the sea surface results in "extensive areas of reduced wind speed and decrease shear-driven forcing at the sea surface boundary."[10] Moreover, the study reported "coherent patterns of increasing mean sea surface temperature are present in areas of wind farm development."[11] Thus, wind farms disrupt upper ocean sea layers and increase ocean surface temperatures. Such ocean layer disruptions could adversely affect the rates of reproduction in marine life, as demonstrated in a scientific study in the inner German Bight and the North Sea.[12] BOEM's data and conclusions fail to consider this science.

Finally, BOEM fails to consider that wind farms cause the buildup of sea plumes, serve as attractive nuisances to fish, and threaten haddock populations. It has been observed that windmills cause the buildup of suspended particulate matter (SPM) and sediment plumes, which

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[5] *Id.*

[6] *Id.*

[7] *Id.*

[8] "Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes" Frontiers in Marine Science vol. 9 (February 2022).

[9] *Id.*

[10] *Id.*

[11] *Id.*

[12] "Offshore wind farms are projected to impact primary production and bottom water deoxygenation in the North Sea" Communications Earth & Environment vol. 3 (Nov. 2022).

obstruct light for sea organisms and disrupt sea habitats.[13] Wind mills also emit low-frequency operational noise that "overlaps with that [frequency] used by fish for communication, mating, spawning, and spatial movement," according to one study.[14] This operational noise could also disorient fish larvae.[15] In fact, one study has demonstrated that underwater HVDC cables from wind mills cause a reduction in the swimming activity levels of haddock larvae.[16] The study's author admonished that these same effects could occur on a large population-scale for haddock in the wild.

Given these demonstrable adverse effects on the fishing industry and sea life, NEFSA respectfully asks BOEM to address how it intends to mitigate the otherwise catastrophic effects that its actions will inflict.

Conclusion

Part of the reason why these deficiencies exist should be readily apparent. The federal agencies regulating the fishing industry and ecosystem do not consult with the fishermen before making decisions or collecting data. The fisherman who operate in deeper waters are the ones that are most often left out of the conversation. To the extent that the individuals who fish in shallower waters are consulted, their input represents an apples to oranges comparison for purposes of the deeper waters in the Wind Energy Area.

We hope that this practice will change in the future. But for present purposes, NEFSA respectfully asks BOEM to respond to the questions posed above, paying particular attention to the dangers posed to the environment by incomplete and inaccurate data, as well as the forthcoming trauma that BOEM is poised to inflict on the commercial fishing industry.

Sincerely,

/s/ Jerry Leeman
Jerry Leeman
Chief Executive Officer
NEFSA

/s/ Dustin W. Delano
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[13] "Atlantic cod (Gadus morhua) larvae are attracted by low-frequency noise simulating that of operating offshore wind farms" Communications Biology (2023).

[14] *Id.*

[15] *Id.*

[16] "Magnetic fields produced by subsea high-voltage direct current cables reduce swimming activity of haddock larvae" PNAS Nexus vol. 1 issue 4 (Sept. 2022).