New England Fishery Management Council (NEFMC)

Wind Energy Policy

DRAFT

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Introduction

The NEFMC's Habitat Policy (Operations Handbook) recognizes that all species are dependent on the quantity and quality of their habitat, and therefore establishes that the NEFMC shall assume an active role in the protection of such habitats, both nearshore and offshore. As required under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) implementing regulations (CFR Part 600 Subpart J), the NEFMC designates essential fish habitat (EFH) for each of the species it manages, and for some species and in some locations, identifies habitat areas of particular concern. Part 600 Subpart K of the MSA regulations details NOAA Fisheries and Regional Fishery Management Council responsibilities to consult with federal agencies when activities proposed by those agencies may affect EFH. Beyond habitat considerations, as a steward of the species and fisheries it manages, the NEFMC has an interest in ensuring that these species are not negatively affected by non-fishing activities occurring in the marine environment. The NEFMC also has an interest in promoting safe operation of commercial and recreational fisheries for these species. To this end, the Council provides input and guidance on the conduct of other marine activities in a way that promotes compatibility with sustainable fishing and fishing communities.

Given the NEFMC's regulatory responsibilities, interests, and expertise, the Council is committed to ensuring that offshore wind projects in New England are developed in a manner that is compatible with the protection of Council-managed species and their habitats, and with commercial and recreational fishing activities. This includes but is not limited to providing input to federal and state agencies on project siting, design, and execution, based on the following list of principles and best management practices. Consultation should take an "early and often" approach, whenever possible, to communicate concerns during the design phase, thus increasing opportunities to avoid and reduce, rather than mitigate, impacts.

Because individual wind projects do not occur in isolation from one another, or from other types of development, it is very important to consider the potential for cumulative effects to Council-managed species and their habitats, when siting and designing projects. Cumulative effects analyses are the responsibility of the lead federal agency preparing the National Environmental

Policy Act document, but the Council will commit to raising specific concerns for possible incorporation into those analyses.

The primary audience for this policy is the Council itself, as it engages in these consultations. Secondary audiences include NOAA Fisheries, other federal agencies, state agencies, fishermen, project developers, and other members of the public.

In addition to supporting the Council's overall Habitat Policy, this Wind Energy Policy is intended to complement the Council's Submarine Cable Policy, approved in 2020, which provides conservation recommendations related to cable siting, installation, operations, and decommissioning.

Policy Goal

The Council supports efforts to mitigate the effects of climate change, including the development of renewable energy projects, provided that risks to the health of marine ecosystems, ecologically and economically sustainable fisheries, and ocean habitats are avoided, minimized, or mitigated.

Best management practices and stakeholder engagement

1. Best management practices[1] should be employed throughout all phases of offshore wind development and operations to avoid adverse impacts on fish, their prey, and their habitats, and to prevent conflicts with other user groups, including recreational and commercial fisheries.
2. The Bureau of Ocean Energy Management (BOEM) and offshore wind developers should engage early and often with the fishing community. Outreach should include individual fishermen and fishing businesses, recreational and commercial fishing organizations, NOAA Fisheries, state resource management agencies, regional science entities, including the Responsible Offshore Science Alliance, other NGOs, the Regional Fishery Management Councils, and any other interested stakeholders.

Project siting and environmental review

3. Developers should accurately map and characterize all benthic habitat types throughout the entire project area (including cable corridors), especially complex habitats and deep-sea coral habitats that are sensitive to impacts, in accordance with NOAA Fisheries' Recommendations for Mapping Fish Habitat.
    a. Complex habitat is defined in NOAA Fisheries' Recommendations for Mapping Fish Habitat (March 2021) as: 1) Hard bottom substrates; 2) Hard bottom

1 MAFMC Offshore Wind Best Management Practices Workshop (2014); BOEM Final Report on Best Management Practices and Mitigation Measures (2014)

substrates with epifauna or macroalgae; and 3) Vegetated habitats (e.g., submerged aquatic vegetation and tidal wetlands).

b. These maps are essential for EFH consultations and to support other management and science needs.
c. Transmission cables, wind turbines, electrical service platforms, or other structures should not be placed in areas with complex habitats. Surveys should be completed as early as possible in the development process with associated data shared to the maximum extent possible to facilitate the review of each project.
d. Robust survey information should be collected to facilitate the micrositing of foundations and alternative cable routing if complex habitat is detected.
e. Habitat characterization and benthic monitoring should occur at all phases of the project: prior to and during construction, as well as during the operational phase to track changes over time.

4. The ~~Constructions and Operations Plan and~~ Environmental Impact Statement should evaluate the range of potential impacts to fish and fisheries from physical habitat conversions and losses, scour and sedimentation, construction and operational noise, electromagnetic fields, and water-column hydrodynamic effects including thermal changes and changes in currents that influence pelagic habitats. The information provided in the COP, including the detailed results of site assessment surveys and proposed environmental mitigation and monitoring measures, should support this evaluation.
    a. Impacts to fisheries and habitats should be avoided; and if avoidance is not possible, they should be minimized and mitigated to the fullest extent possible.
    b. All life history stages should be considered; i.e., egg through adult, and include activities such as spawning, breeding, feeding, and seasonal migrations.
    c. Cumulative impacts should be assessed both within and beyond an individual project (across multiple projects within a single lease area) as well as across multiple wind energy projects across the region (considering the effects across adjoining lease areas).
5. The Council endorses developing and analyzing alternatives in the Environmental Impact Statement that are explicitly designed to avoid, minimize, and mitigate habitat and fisheries impacts.
6. When ongoing research identifies new fisheries or habitat-related concerns in wind energy areas, BOEM should consider these results and data in siting and permitting decisions, and apply the precautionary principle[2].

[2] The Food and Agriculture Organization of the United Nations states "Management according to the precautionary approach exercises prudent foresight to avoid unacceptable or undesirable situations, taking into account that changes in fisheries systems are only slowly reversible, difficult to control, not well understood, and subject to change in the environment and human values" https://www.fao.org/3/w3592e/w3592e07.htm

Construction and operations

7. The best available technology should be utilized for transmission cable installation to reduce potential impacts on aquatic ecosystems. This may include horizontal directional drilling to avoid impacts to sensitive fish habitat.
8. Export and inter-array cables should be buried to an adequate depth to reduce conflicts with other ocean uses, including fishing operations and fishery surveys, and to minimize effects of heat and EMF emissions. Cables should be monitored after installation and large storm events, to ensure bathymetry is restored and to ensure cables remain buried. All cables should be removed during decommissioning.
9. ~~Cable and~~If scour protection or cable armoring is needed, the materials should be selected based on ~~their habitat~~ value~~, mimicking adjacent habitats when feasible. When mimicking adjacent habitats is not feasible,~~ to commercial and recreational fishery species[3]. The locations where cable armoring materials (e.g., concrete mattresses) are installed should be ~~selected based on habitat value provided, considering factors such as interstitial spacing~~documented and ~~flow.~~ disseminated.
10. Boulder relocation should be minimized; if boulders or unexploded ordnance must be relocated, their new locations should be clearly documented and this information disseminated to the fishing community.
11. Noise generated by wind facilities should be minimized, including sounds produced during surveys (e.g., survey vessel operations and acoustic sampling devices), construction (e.g., installation vessel operations, pile driving, cofferdam installation), and operation (e.g., maintenance vessel operations, spinning turbines).
12. Developers should avoid in-water activities during spawning seasons (especially for species that have distinct spawning locations and may be sensitive to noise, for example Atlantic cod) or settlement periods. If not able to avoid these periods, developers should use noise mitigating and dampening measures for any in-water activities that produce sounds that may injure organisms or alter their behavior. Construction should be monitored in real-time to detect the presence of spawning aggregations, and construction restrictions should be implemented to protect these aggregations as needed.
13. When cooling systems are considered for specific projects (e.g., at AC/DC conversion stations), impacts on marine species and habitats should be fully evaluated. Effects include but are not limited to the loss of zooplankton and fish eggs/larvae due to water

[3] For examples, see:
Glarou, M., M. Zrust and J. C. Svendsen (2020). "Using Artificial-Reef Knowledge to Enhance the Ecological Function of Offshore Wind Turbine Foundations: Implications for Fish Abundance and Diversity." Journal of Marine Science and Engineering 8(5).
Hermans, A., O. G. Bos and I. Prusina (2020). Nature-Inclusive Design: a catalogue for offshore wind infrastructure. Den Haag, The Netherlands, Wageningen Marine Research: 121p.
Lengkeek, W., K. Didderen, M. Teunis, F. Driessen, J. W. P. Coolen, O. G. Bos, S. A. Vergouwen, T. C. Raaijmakers, M. B. de Vries and M. van Koningsveld (2017). "Eco-friendly design of scour protection: potential enhancement of ecological functioning in offshore wind farms. Towards an implementation guide and experimental set-up." (17-001): 87p.

entrainment, which may impact both the entrained species and their predators. Impacts of cooling systems should be avoided or minimized.

Navigation and safety

14. The Council supports turbine and transit lane arrangement and spacing that will reduce impacts to fishing vessel navigation[4].
    a. These issues should be coordinated across offshore wind projects and developers.
    b. Developers should consult directly with affected fishermen to develop project layouts that minimize impacts.
15. Threats to safety and navigation (e.g., radar disruption, vessel allisions and collisions, security threats, and impacts on search and rescue efforts) should be routinely monitored within and around wind farms. Safety issues should be efficiently identified and addressed using best management practices (see footnote 1).
16. For floating wind turbines, locations of inter array cables, mooring lines, and anchors in the water column around each turbine should be clearly marked using the most appropriate technology.
17. Wind service platforms should implement adequate fuel spill response plans and protocols[5] for support vessels and platforms.

Research and monitoring

18. Research and monitoring should be conducted at project and regional scales to understand project-specific and cumulative effects on aquatic species, habitats, and ecosystems. Important research topics include but are not limited to:
    a. Acoustic issues: impacts of geotechnical and geophysical surveys, benefits of applying additional noise dampening technology during construction or operations, and differential acoustic impacts of larger vs. smaller turbines on the ecosystem, including on fish behavior.
    b. Short and long-term impacts of wind facility operations on aquatic species and ecosystems: impact-producing factors include habitat changes, specifically reef effects and habitat conversion, electromagnetic fields, hydrodynamic changes, and turbine noise. Individually and in combination these factors may alter managed species' distributions, behaviors, and predator-prey relationships.
    c. The Council develops and routinely updates a list of research priorities, including priorities related to fisheries and offshore wind. Work supporting these priorities is also recommended.

[4] Navigation encompasses both fishing and transit.
[5] Consistent with the US Coast Guard, US Environmental Protection Agency, Occupational Safety & Health Administration/HAZMAT, and other state or Federal requirements.

d. Monitoring should occur 2-3 years before, during, and after construction for the life of the project at regular intervals.
e. There may be important area-specific / project-specific issues that require tailored research in project areas to understand effects that go beyond what is described above. Once preliminary impacts are determined, expertise should be sought (from the Fishery Management Councils) to fully understand impacts.

3. Developers should coordinate monitoring survey designs and methods across projects wherever possible to generate datasets that can be used in combination. Benthic habitat, geological and geophysical, and fisheries surveys should be coordinated to ensure that the prosecution of one survey does not affect the results of another. Coordinated monitoring will support cumulative impacts analysis.

19. Monitoring and survey designs should be consistent with regionally developed survey mitigation and monitoring protocols, including the Responsible Offshore Science Alliance's monitoring framework and guidelines[6], NOAA Fisheries regional survey mitigation protocols (under development), and NOAA Fisheries benthic habitat monitoring recommendations (under development).

Compensation and mitigation

20. The Council supports the development of a compensatory mitigation fund for damages that occur to the marine environment and fish habitat as well as damages or losses to fishing vessels or their gear, or reductions in operations/revenues, resulting from wind activities.

21. The Council supports the creation of a fisheries development and research fund related to ecosystem changes associated with wind farm development, for example to facilitate development of new fisheries or fishing techniques or enhance existing fisheries.

~~21.~~22. Federal and state-operated fishery independent monitoring surveys are critically important for stock assessments and setting fishery catch limits. Impacts to these surveys ~~should be identified and mitigated~~ should be avoided whenever possible and minimized and mitigated where avoidance is not possible.

[6] Available at: https://www.rosascience.org/resources