Mid-Atlantic Fishery Management Council

Wind Energy Policy

December 13, 2021

Introduction

This document summarizes the Mid-Atlantic Fishery Management Council's (Council's) policies regarding offshore wind energy development. This document complements the Council's general policies on non-fishing activities and projects[1] and the preamble to all Council fish habitat policies.[2] The Council will review and consider revisions to this document on a periodic basis. The Council will consider the responses to and impacts of Council comments when conducting these reviews.

Policy Goal

The Council supports efforts to mitigate the effects of climate change, including the development of renewable energy projects, provided risks to the health of marine ecosystems, ecologically and economically sustainable fisheries, and ocean habitats are avoided. To the extent that they cannot be avoided, they should be minimized, mitigated, or compensated for.

Best management practices and stakeholder engagement

1. Best management practices[3] 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. Engagement should focus on collaboration, shared problem identification, option generation, problem solving, and move beyond only information sharing and communication as its primary purpose and intent.
3. BOEM and developers should communicate in a timely manner how comments from the Regional Fishery Management Councils and other stakeholders were considered, as well as the impacts of those comments.

[1] Available at: http://www.mafmc.org/s/Policy_General_2015-12-15.pdf
[2] Available at: http://www.mafmc.org/s/Policy_Preamble_2015-12-15.pdf
[3] MAFMC Offshore Wind Best Management Practices Workshop (2014); BOEM Final Report on Best Management Practices and Mitigation Measures (2014)

Project siting and environmental review

4. 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 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.
    d. 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.
    e. Robust survey information should be collected to facilitate micrositing of foundations and alternative cable routing if complex habitat is detected.
    f. 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.
5. The Environmental Impact Statement should evaluate the range of potential impacts from construction, operations, and decommissioning to fishery species and fisheries from physical habitat conversions and losses, scour and sedimentation, construction and operational noise, electromagnetic fields, micrometeorological effects, and water-column hydrodynamic effects (including impacts to the Mid-Atlantic Cold Pool, as well as 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. The EIS should clearly document how impact determinations were made.
    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), and considering other actions which impact the sustainability of the fisheries.

6. 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.
7. 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[4].

Construction and operations

8. The technology that is least impactful to aquatic ecosystems should be used for transmission cable installation. This may include horizontal directional drilling to avoid impacts to sensitive fish habitat.
9. 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 electromagnetic field 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.
10. If scour protection or cable armoring is needed, the materials should be selected based on value to commercial and recreational fishery species[5]. The locations where cable armoring materials (e.g., concrete mattresses) are installed should be documented, disseminated, and monitored. Natural materials, or materials that mimic natural habitats, should be used whenever possible. These materials should not be obtained from existing marine habitats. The materials used must not be toxic.
11. 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.
12. 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).

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[4] 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

[5] 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.

13. Developers should avoid in-water activities during spawning seasons or settlement periods (especially for species that have distinct spawning locations and may be sensitive to noise, for example Atlantic cod, or are sensitive to sedimentation impacts, such as longfin squid). 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.
14. 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 and monitored. Effects include but are not limited to the loss of zooplankton and fish eggs/larvae due to water entrainment and associated temperature differentials from discharge waters, which may impact both the entrained species and their predators. Impacts of cooling systems should be avoided or minimized.
15. Consideration should be given to utilization of existing fishing community and other stakeholder resources (e.g., fishing vessels) for construction and operations activities.

Navigation and safety

16. The Council supports turbine and transit lane arrangement and spacing that will reduce impacts to fishing vessel navigation[6].
    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.
17. Threats to safety and navigation (e.g., radar disruption, ice shedding, vessel allisions and collisions, security threats, and impacts on search and rescue efforts) should be routinely monitored within and around wind projects. Safety issues should be efficiently identified and addressed using best management practices (see footnote 3).
18. 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.
19. Wind service platforms should implement adequate fuel spill response plans and protocols[7] for support vessels and platforms.

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

Research and monitoring

20. 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.
    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.
21. 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.
22. Consideration should be given to the impacts of research and monitoring on fisheries. For example, research which may negatively impact fisheries should not be carried out during peak fishing seasons. Developers should consult with the Regional Fishery Management Councils and commercial and recreational fishermen regarding the most important times of year.
23. 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[8], NOAA Fisheries regional survey mitigation protocols (under development), and NOAA Fisheries habitat monitoring recommendations (under development).
24. Developer-funded monitoring and research data should be made publicly available on a timely and regular basis, while protecting fishermen's confidential business information.

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

25. Consideration should be given to utilization of existing fishing community and other stakeholder resources (e.g., fishing vessels) for research and monitoring activities.

Compensation and mitigation

26. 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.
27. The Council supports the creation of a fisheries development and research fund related to ecosystem changes associated with offshore wind energy development, for example to facilitate development of new fisheries or fishing techniques or enhance existing fisheries.
28. 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 avoided whenever possible and minimized and mitigated where avoidance is not possible.