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Federal Actions to Deliver on America's Offshore Wind Potential



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INTRODUCTION



Offshore wind is a critical part of making a rapid transition to clean energy, including meeting the Biden administration’s goals of a carbon pollution-free power sector by 2035 and net-zero emissions economy-wide no later than 2050.

Achieving major carbon emissions reductions in the electricity sector will require development of hundreds of gigawatts of new renewables by 2050 in the United States alone, and offshore wind represents the single largest ocean-based mitigation opportunity in both the U.S. and globally.^{1,2} Increasing the deployment of offshore wind, if executed correctly, could also have significant economic, community, and environmental justice benefits, including opportunities for well-paying, quality jobs, economic recovery, and development in vulnerable coastal communities. Responsible and equitable offshore wind can also replace dirtier energy sources that disproportionately impact underserved communities.

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- 1 Michelin, M., et al. 2020. *Opportunities for Ocean-Climate Action in the United States*. Report. San Francisco, CA: CEA Consulting. Available online at: oursharedseas.com/oceanclimateaction.
 - 2 High Level Panel for a Sustainable Ocean Economy. Summary for Decision Makers. The Ocean as a Solution to Climate Change. Available online at: live-oceanpanel.pantheonsite.io/sites/default/files/2019-10/19_4PAGER_HLP_web.pdf.

Fulfilling the potential of offshore wind will require overcoming a variety of barriers to achieve the dramatic increase in the pace and scale of development needed to meet clean energy goals. We are already well on our way to overcoming the threshold issue of securing sufficient opportunity and demand for offshore wind. While there are currently only two operational offshore wind projects in the United States (both pilot-scale, 7 turbines with 42 MW total capacity), demand is rapidly increasing. There are currently 22 active leases on the East Coast and plans to develop additional wind energy areas around the country, including the West Coast and Gulf of Mexico where the Bureau of Ocean Energy Management (BOEM) has initiated steps towards leasing. Many states have committed to acquire a specific number of megawatts from offshore wind projects to meet their state climate mitigation goals. Various forms of renewable energy standards are being actively debated or adopted in states and in Congress. And as the technology for floating offshore wind platforms advances, development potential will grow in deeper waters offshore including the Gulf of Maine, Central Atlantic, and West Coast.

Similarly, the mechanisms needed to address financing, infrastructure, and supply-chain barriers to offshore wind are advancing. Policies to advance predictable and long-term tax credits and investments in power transmission planning and technology research are being actively debated. The wind industry is developing more robust infrastructure and supply chains to support offshore wind construction, operation, and maintenance. Addressing these issues should be a priority for policymakers.

The barriers posed by the planning and permitting process required to move from project conceptualization to transmitting energy to the nation's electric grid have been given much less attention. Some of the most serious impediments to progress on offshore wind are driven by questions of tradeoffs among current and proposed uses of ocean space and resources, and a variety of legal, regulatory, and procedural obstacles that must be addressed through the planning and permitting process. In the U.S., offshore wind energy is a critical part of our renewable energy portfolio and represents a new, large-scale industrial development in the ocean that can impact the marine ecosystem while posing challenging conflicts with existing ocean uses, such as navigation, commercial fishing, conservation, and military training and operations. Improving both the efficiency and the effectiveness of the planning, engagement, permitting, and monitoring framework will help mitigate or avoid negative consequences of wind infrastructure construction, and provide the increased certainty developers need to successfully deploy offshore wind at the scale and in the timeframe needed to meet clean energy goals.

This report outlines a series of recommendations that, if implemented, would significantly increase the effectiveness, efficiency, and regulatory certainty of the U.S. offshore wind planning and permitting system and, in so doing, maximize both the deployment of offshore wind and the overall health and sustainability of ocean ecosystems.

These recommendations are built on the foundation of lessons learned from working to permit offshore wind over the past decade. They also draw from the experience built through regional ocean planning, including the development of ocean plans and progress toward data collection and spatial use visualization. Recommendations also reflect experience with conflicts with other ocean uses that have already resulted in permitting challenges, development delays, and, in some cases, litigation.

In addition, discussions with experts in federal ocean policy, federal agency permitting staff, and ocean users, including those from the conservation, maritime, and fishing industries, informed recommendations of this report.



RECOMMENDATIONS FOR IMPROVING CURRENT MANAGEMENT, AGENCY POLICY, AND REGULATIONS

Barriers to advancing offshore wind include incomplete planning and the need to increase permitting certainty, out-of-date science, ocean use conflicts, legal hurdles, and stakeholder challenges. The specifics of the federal government's approach to planning and permitting offshore wind, including impacts to fisheries habitat and associated transmission and port infrastructure, are still evolving. As a result, there is significant opportunity to improve federal decision-making processes. Effective rules, guidelines, science, monitoring, and best practices are needed to ensure coordinated governance, robust stakeholder engagement, advancement toward environmental sustainability, including ensuring net gains for ocean conservation, and promotion of efficient project planning and review that will improve wind deployment and conservation in a complex regulatory environment.

The federal laws described herein are the principal authorities to authorize offshore wind power development on the Outer Continental Shelf (OCS) and regulate the impacts of offshore wind projects on marine and coastal resources. Efficient and predictable implementation of those authorities is a major challenge, particularly because the development of large-scale offshore wind projects requires government agencies to make decisions with incomplete information about reasonably foreseeable and significant effects. Permitting of these projects is rather new to the relevant federal management agencies. Under-resourced and under-staffed federal agencies are struggling to adapt in real time to successfully plan for and permit an entirely new industry, resulting in a significant amount of uncertainty in the permitting process. Our ability to advance offshore wind development thoughtfully depends significantly on our success in overcoming these obstacles.

As this new industry advances with much to learn about the impacts of these technologies operating in U.S. waters, we must design measures to comply with statutes such as the Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), and National Environmental Policy Act (NEPA) using strong monitoring and mitigation measures that must build trust in the first projects and allow adaptive management. As a result, the federal agencies that implement federal environmental laws, the project proponents that must comply with them, and the various interested parties that seek to advance the laws' underlying policy and conservation goals all will have strong incentives to engage in the environmental review and authorization processes.

The recommendations contained in this report can largely be implemented with a combination of administrative policy changes and regulatory updates. BOEM’s regulations governing the offshore wind development permitting process are essentially unchanged since they were finalized by BOEM’s predecessor agency, the Minerals Management Service, in early 2009. Since then, the Minerals Management Service was split into three agencies, the offshore wind industry has changed significantly, technology has advanced, and infrastructure permitting and ocean planning have gone through significant legal and policy developments. We recognize that updating offshore wind regulations will be a substantial undertaking while BOEM is also working to facilitate an expansion of offshore wind with limited capacity currently to do so. However, it is time for BOEM to update its regulations to correct flawed assumptions about how offshore wind projects would be developed based on past experience with offshore oil and gas development and to codify a strengthened approach to planning and permitting. In addition, there are potential statutory changes that would further facilitate a more effective and holistic approach to offshore wind development. Taken collectively, the recommendations made in this report would speed offshore wind energy towards fully realizing its climate mitigation benefits and to do so with significantly less conflict, litigation, time, and resources spent.

The first part of this report recommends measures federal agencies can take—individually or in partnership with others—to achieve the desired result of conserving living marine resources while executing on the timely development of the offshore wind industry in appropriate areas of the OCS. The recommendations set forth below address the following categories of wind energy development:

- ▶ **Planning for Wind Energy Areas (WEAs) and Project Siting** – including public engagement, government coordination, and site identification.
- ▶ **Transmission Planning** – including agency coordination and Federal Energy Regulatory Commission (FERC) rulemaking.
- ▶ **Leasing** – including multifactor bidding.
- ▶ **Permitting** – including pre-application, review procedures, and governmental coordination.
- ▶ **Construction and Operation** – including ongoing regulatory compliance, public input, and changing technology.

Recognizing that these recommendations are designed to work within the existing, imperfect statutory framework for offshore wind, the report outlines opportunities for more comprehensive action that policymakers should consider as part of an ambitious wind energy agenda.

Figure 1. Bureau of Ocean Energy Management Renewable Energy Leasing Process.

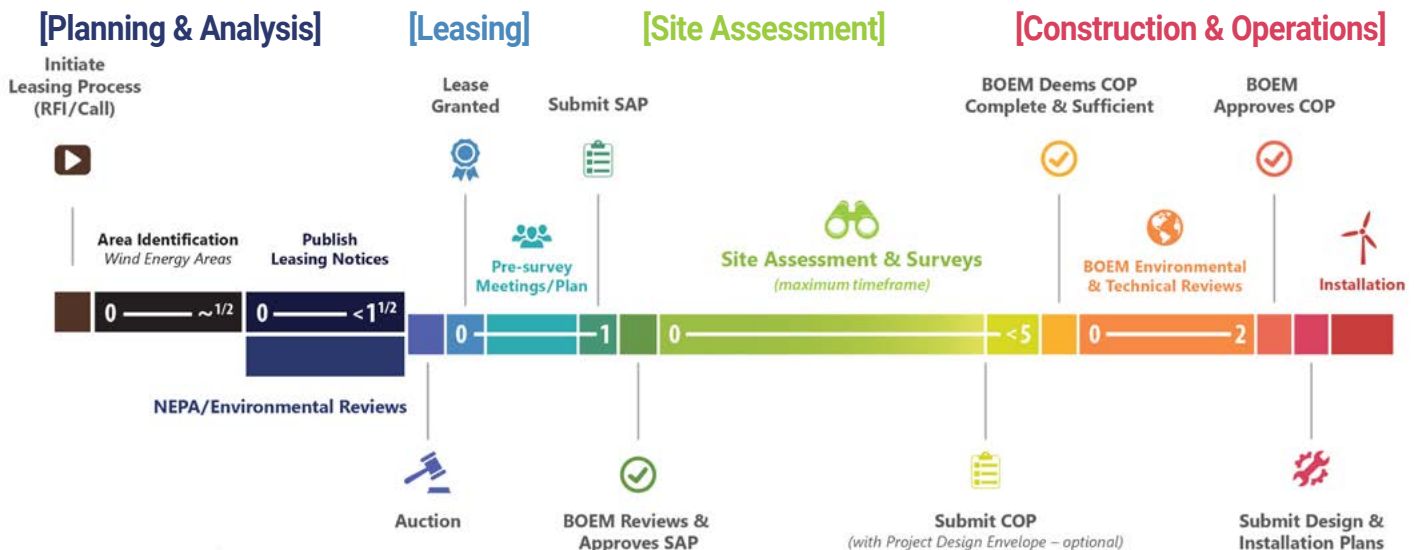


Figure credit: BOEM.

PLANNING FOR WIND ENERGY AREAS AND PROJECT SITING



If offshore wind is to be successful long term, in deciding which areas should be made available for lease sales BOEM should simultaneously develop a comprehensive planning approach, considering all resource uses and conservation needs on a regional basis, while continuing its environmental review and authorization of proposed offshore wind projects. Conflicts with fisheries, maritime interests, defense, and conservation can be greatly reduced ahead of future wind energy area and project site identification. Using this approach will be particularly important where no offshore wind leases have been issued, as well as where new areas have been identified in the vicinity of developed leases. To date, regional ocean planning efforts and planning for offshore wind development have largely advanced via separate processes. Over the past decade, BOEM and other agencies have sought to use partnerships and ocean planning resources like regional ocean data portals when selecting sites for leasing and eventual development. BOEM and cooperating agencies should use a regional ocean planning process to ensure informed siting decisions that balance the needs of states, stakeholders, Tribal governments, and the eight regional fishery management councils. A comprehensive approach based on effective stakeholder engagement could help determine the extent to which conflicts might arise with other resource management goals and uses.

Proper planning is not a one-time occurrence, and the WEAs that have been designated by BOEM are only as useful as the information upon which they were based. The designation of WEAs is not specifically provided for in the BOEM regulations or the Outer Continental Shelf Lands Act (OCSLA), so their designation serves only as a means to assist the leasing and authorization of wind power development on the OCS. In developing the current WEAs, BOEM assessed the marine environment and worked with Intergovernmental Renewable Energy Task Forces to avoid and manage known conflicts. Moving forward, BOEM has an opportunity to identify new WEAs based on a more collaborative approach that engages stakeholders and communities in ways that address substantive issues and stakeholder disaffection with what may be regarded by some as check-the-box public engagement.

Moreover, the data assessment and conflict identification work that went into the delineation of established WEAs is, as a practical matter, subject to reassessment in the permitting processes for review of Construction and Operation Plans (COPs). BOEM's active engagement of stakeholders and communities must address concerns that its decision-making process is pre-ordained to ratify the proposed action and will not make effective use of more recent information. While these WEAs were based on the best available information at the time and provided a basis for leasing decisions, they are based on the premise that BOEM's environmental review process for COPs would provide an up-to-date, detailed, and comprehensive basis for siting decisions that were made tentatively in the delineation of WEAs. Stakeholder and community engagement should reflect openness to question assumptions, consider alternatives, and mitigate conflicts that have not been effectively resolved prior to leasing.

Public Engagement

RECOMMENDATION // BOEM should develop a coordination framework to expand on its state-based task forces to engage federal leaders, states, Tribes, underserved communities, and ocean use stakeholders more effectively in advance of defining new WEAs.

BOEM leadership to guide government and public coordination prior to required public comment periods would create efficiencies that would benefit all participants in the environmental review and authorization processes. For each WEA, BOEM should identify the federal and state agencies, Tribal governments, underserved communities, scientists, ocean users, and other stakeholders that have a leading role to play in the permitting process. That list of recognized groups, including those from ports and maritime interests, commercial and recreational fishing, conservation groups, historic and cultural preservation groups, community leaders, and other non-governmental

organizations, can serve as the basis for the outreach by prospective bidders to develop an agreement for coordination of environmental review and authorization processes. The core of any list would be BOEM's Intergovernmental Renewable Energy Task Forces, which are made up of representatives from federal, state(s), and local agencies and Tribal governments. However, the list should be broadened to include ocean users, communities, and other interests that have a stake in the planning process and will play an important role in the siting, alternatives analysis, mitigation, and monitoring of offshore wind development in the area under consideration.

To some degree, the identification of key government and user groups is unique to each project. Nevertheless, the importance of some key ocean users, such as commercial fishermen and maritime interests, can be anticipated. Productive engagement with ocean users provides the basis for agreements between a developer and key users that will result in improved engagement throughout wind energy development.

At the pre-lease stage, prospective developers could use the BOEM identification of federal and state agencies, Tribal governments, underserved communities, and ocean users to establish relationships that they will need to navigate the planning processes for site assessment and construction and operations. At that early stage, state, local, and Tribal governments, underserved communities, and ocean users may be contacted by numerous prospective bidders and may not want to invest significant time and resources into vetting proposals that are a long way from development. A BOEM coordination framework can provide prospective developers and users with an efficient means of establishing a well-defined relationship that is recognized by BOEM, commits the parties to no more than efficient coordination in the event that the lease is awarded to the developer, and avoids the inefficiencies of identifying and negotiating with individual user groups. State, federal, Tribal, and local governments with jurisdiction over aspects of the proposed development should use a coordination agreement to identify terms and conditions for their authorization of the proposal, including applicable legal standards, information needs, and specific commitments for timely communications.

At the site assessment stage, this type of coordination framework established before the lease sale would provide value by helping solidify working relationships that will be needed in formal scoping for the COP Environmental Impact Statement (EIS). Early involvement in the data collection at the site assessment stage can ensure that information needed for the COP EIS and related authorization requirements have been addressed early and efficiently. These agreements can assist the information collection for federal agency authorizations necessary for a project to proceed, such as incidental-take authorizations under MMPA or ESA, interagency consultation, and "no jeopardy" and "adverse modification of critical habitat" findings. Agreements with stakeholders can also help create efficiencies for NEPA review by gaining the support of key commenting parties and providing helpful information on environmental impacts and mitigation measures to reduce the nature and degree of adverse impacts.

RECOMMENDATION // BOEM should designate staff to coordinate with fisheries interests during the early stages of project siting and throughout construction and operations.

Fisheries concerns are continually highlighted as an ocean use that needs additional upfront consultation and engagement to responsibly site offshore wind. It is critically important to engage those most knowledgeable about fisheries resources and with expertise in fisheries research protocols to help direct how potential impacts to fisheries resources should be addressed in pre-construction surveys, COPs, and post-construction monitoring plans. This recommendation is specific to the fishing industry given the focus of the report on the current challenges of the industry with advancing offshore wind. It should be noted, however, that each ocean-use sector, underserved community, and Tribe will benefit from direct engagement and consultation. BOEM should proactively consult and in so doing outline a clear articulation of what the offshore wind process means for that group; why that ocean user group should care and participate; what benefits the process offers; and how that group can contribute. Dedicated, regional BOEM staff would greatly improve the engagement process.

This cooperation should take the form of BOEM outreach to the fishing industry and regional fishery management councils in the early stages of project development and, in particular, before leasing decisions. As the lead federal agency for the environmental review process on leasing and any construction and operation plan, BOEM is ultimately responsible for establishing cooperative relationships in the assessment of effects on the ecosystems upon which sustainable fisheries are based. For undeveloped areas not yet subject to leasing, BOEM should designate staff to work with the industry to determine where fishing conflicts may exist and designate areas to be considered for avoidance in future leasing decisions or alternatives analysis for construction and operations planning.

BOEM should provide regulatory incentives for developers to engage in early cooperation with users of the areas being considered, including knowledge-holders for fisheries and other ocean users. If ocean use issues are resolved before the permitting phase, an efficient regulatory review resulting in faster development based on solid, upfront outreach work between developers and stakeholders should result.

The fishing industry often is quite diverse and, as a result, project developers are interacting with different factions of the industry separately, which is not only inefficient but likely also less effective. Encouraging a cohesive approach toward the fishing industry could allow the developer and the agencies to review all potential fishing issues in conjunction. In addition, agencies should work together to address potential impacts on fisheries. For example, the National Marine Fisheries Service (NMFS) within the National Oceanic and Atmospheric Administration (NOAA) partnered with BOEM to establish resources for the NMFS Northeast Fisheries Science Center to design and implement a Federal Survey Mitigation Program that would lead to a programmatic approach to effective fishery survey adaptations.



Photo Credit: Adam Webb / Getty Images

Government Coordination Before Project Siting

RECOMMENDATION // BOEM, NOAA, U.S. Coast Guard (USCG), and other agencies should partner with the Regional Ocean Partnerships (ROPs) from the earliest stages of the planning process.

Federal agencies and the offshore wind industry have a substantial base of ocean-planning spatial data, information, relationships, and interagency-coordination mechanisms from which they can work, thanks to ongoing regional coordination mechanisms and ocean planning resources advancing recommendations of the U.S. Commission on Ocean Policy, Pew Oceans Commission, the White House National Ocean Council, and the more recently established Ocean Policy Committee. Regions, comprised of multiple states and defined mostly by ecosystems, have worked toward ocean planning and management within federal waters (3–200 nautical miles)³ in response to and consistent with a national directive in the form of presidential executive orders. In 2016, the Northeast and Mid-Atlantic regions released regional ocean plans in coordination with federal and state agencies, Tribes, fishery management councils, communities, scientists, nongovernment organizations, and ocean users. These plans have since resulted in enhanced coordination across agencies, development of best practices for offshore development, and, importantly, geospatial data and information synthesized and displayed on the Regional Ocean Data Portals to inform pre-planning consultation and site assessment ahead of wind lease sales. ROPs, including the Northeast Regional Ocean Council, the Mid-Atlantic Committee on the Ocean, the Gulf of Mexico Alliance, and the West Coast Ocean Alliance, serve this regional coordination and management function and should play a central coordination and consultation role as offshore wind advances.

BOEM, NOAA, USCG, and other federal agencies should partner with these ROPs from the earliest stages of WEA and lease sale planning, and use their collection of stakeholders, geospatial data, and best management practices in the development of regional standards for more efficient and effective conservation of marine protected resources while balancing co-use. Federal agency regional staff are engaged in these ROPs and are familiar with the coordinating mechanisms. This engagement has not always translated to headquarters engagement. Coordination and early consultation with ROPs would greatly improve the offshore wind authorization process. BOEM has relied on these regional ocean plans, and the data collections upon which they are based, in ongoing environmental review of proposed COPs. There is a key opportunity to improve the process and deconflict future WEA development upfront with ROPs as central collaborators in this success.

RECOMMENDATION // The White House should use the Ocean Policy Committee to support the administration's goal of 30 gigawatts of offshore wind by 2030.

At the national level, the Ocean Policy Committee—an interagency, Cabinet-level committee dedicated to the coordination of ocean science, technology, and ocean management policy—was authorized by Congress in January 2021.⁴ The formalization of the Ocean Policy Committee presents an opportunity to augment the infrastructure permitting focus of the Federal Permitting Improvement Steering Council (Permitting Council) with the ocean research and resource management focus of an interagency policy committee that includes agencies not directly represented on the Permitting Council, including the U.S. Navy. Co-chaired by the White House Council on Environmental Quality (CEQ) and the Office of Science and Technology Policy (OSTP), the Ocean Policy Committee can help direct federal funding and policy support toward research, technology, and data needs that advance the administration's objective of 30 gigawatts of offshore wind by 2030. In particular, the Ocean Resource Management Subcommittee of the Ocean Policy Committee is constituted to address Department of Defense (DOD) interests

3 The Submerged Lands Act of 1953, 43 U.S.C. § 1301, et seq., granted coastal states ownership of offshore lands extending three nautical miles offshore, with the exception of Texas, Puerto Rico and the Gulf coast of Florida, where state submerged lands have been adjudicated to extend nine nautical miles offshore.

4 10 U.S.C. § 8932, as amended by Section 1055 of the National Defense Authorization Act for Fiscal Year 2021.

to engage and collaborate with ROPs and to address ocean-related matters that may require interagency or intergovernmental solutions. The Ocean Policy Committee offers an opportunity for BOEM to engage with key federal agencies, deconflict offshore wind, and maximize co-use to meet administration commitments. Interagency challenges can significantly delay the administration in reaching its current commitments of 30 gigawatts by 2030 and working within the Ocean Policy Committee to coordinate among agencies and to deconflict competing ocean uses that overlap agency jurisdictions will result in greater success long-term.

RECOMMENDATION // BOEM should create a formal role for the DOD Siting Clearinghouse in WEA identification.

The Military Aviation and Installation Assurance Siting Clearinghouse (Siting Clearinghouse) was born out of land-based wind development and works well for developers with enough siting flexibility to be responsive to DOD guidance through the informal review process ([see Appendix, Ports and Waterways Safety Act, for details on Siting Clearinghouse](#)). However, the Siting Clearinghouse did not address offshore wind development issues for DOD during BOEM's initial WEA decisions. In the BOEM framework, therefore, WEAs were set and leases auctioned, and the siting process lost flexibility for consideration of some DOD interests. The Siting Clearinghouse should effectively participate in the site identification process. Effective participation may require the DOD to participate in a programmatic approach to deconflicting sites as opposed to their current, applicant-specific approach.

RECOMMENDATION // The Permitting Council should fund positions dedicated to conflict resolution.

Use of a neutral third party could include assistance with government-to-government consultation between Tribes and federal agencies, interagency and interdepartmental collaborations, and conflict resolution on issues involving multiple levels of government and the public. The Permitting Council can help by funding positions dedicated to conflict resolution.⁵ BOEM should engage the Department of the Interior's (DOI's) Office of Collaborative Action and Dispute Resolution and the National Center for Environmental Conflict Resolution for assistance with multiparty high-conflict decisions where an impartial federal convener is needed to broker participation in a collaborative process or conflict resolution effort. The Permitting Council, BOEM, and other agencies can use their authorities to support effective participation by states and Tribes in these dispute resolution processes.

Site Identification

RECOMMENDATION // Agencies should credit developers that engage with ROPs and associated data portals and follow other ocean planning principles.

In addition to taking the measures necessary to identify and avoid sensitive habitat areas and other locations that are subject to significant conflicts, BOEM and other federal agencies involved in offshore wind development should guide project proponents to follow the same principles and select mitigation measures that reduce the potential for adverse impacts to wildlife and other resources and activities. Incentives can be provided through regulatory procedures, such as the use of expedited decision-making tools that incorporate regional plans and conservation measures, to provide assurances to lessees at the COP stage or other stages of project development where agency decisions are needed.

5 42 U.S.C. §4370m-8(d)(3) ("Executive Director, with the approval of the Director of the Office of Management and Budget, may transfer amounts in the [Environmental Review Improvement] Fund to other agencies to facilitate timely and efficient environmental reviews and authorizations for proposed covered projects.")

For example, the U.S. Fish and Wildlife Service (FWS) has a fast-track decision mechanism for habitat conservation plans (HCPs) and incidental-take permits under the ESA for so-called low effect proposals. When an applicant proposes a low-effect HCP—defined as an HCP “involving minor or negligible effects on federally listed, proposed, or candidate species and their habitats covered under the HCP and minor or negligible effects on other environmental values or resources”—FWS commits to using an Environmental Assessment (EA) subject to expedited review deadlines to provide for an expedited final decision.⁶ In the case of offshore wind impacts to wildlife, a similar approach could be used, for example, under BOEM regulations for COP approval or under the MMPA, for incidental-take authorization, when the lessee has taken steps to minimize harmful effects of the project on species through project siting, design, or agreed-upon conservation measures. Such an approach would need to be carefully designed to avoid misapplication and ensure sufficient oversight, given the rapidly evolving data and technology, while also providing the efficiencies sought.

RECOMMENDATION // BOEM should codify ocean planning procedures, including both existing regional best practices and the improved planning and permitting approaches recommended in this report.

BOEM’s regulations should be updated to include planning provisions that codify the recommendations in this report, particularly in regard to BOEM leadership in stakeholder involvement in the environmental review and authorization processes for lease sales and construction and operation planning. Codification of the strengthened planning and permitting approach would include a more comprehensive leasing and development program that incorporates support for stakeholder, ocean user, and community engagement as well as direct Tribal consultation and interagency coordination. BOEM should codify the practice of active project management with support from senior agency officials, as necessary, to resolve issues, direct resources, and maintain progress on environmental review and authorization decisions. Experience under the Fixing America’s Surface Transportation (FAST) Act indicates that commitment to administrative deadlines in the form of milestones in the permitting process fosters resolution of issues. The FAST-41 Coordinated Project Plan, 42 USC §4370m–2(c)(1), is an important tool for issue identification and interagency work on issue resolution. By providing a cohesive, regional decision-making framework BOEM can maintain consistency in environmental impact assessment, with agency management engagement to avoid ad hoc, inefficient, and disconnected project-specific approaches that vary by individual subject-matter experts.

⁶ Habitat Conservation Planning and Incidental Take Permit Processing Handbook, Fish & Wildlife Service and National Marine Fisheries Service at G-18 (December 21, 2016), available at https://www.fws.gov/endangered/esa-library/pdf/HCP_Handbook.pdf.



TRANSMISSION SYSTEM PLANNING

Achieving public policy targets for offshore wind capacity will require significant investment in electric transmission infrastructure. While there are proven technological solutions for interconnecting offshore power generation to the onshore grid, planning and executing on transmission strategies entails unique challenges compared to siting transmission lines onshore. Because transmission lines must cross local, state and federal boundaries, permitting a line involves a complex web of local governments, federal stakeholders, state governments, and utility commissions.

Transmission infrastructure will impact the ocean environment as well as the coastal environment where an interconnection line makes landfall and reaches the broader power grid. Determining where a project “plugs in” to the grid and the capacity of the grid to manage its load are key constraints in project siting. There will be limited locations where such interconnection is feasible, and what is feasible depends on environmental conditions as well as complex economic and engineering considerations mediated by state and federal regulators and grid operators.

Enhanced coordination and planning will improve opportunities for shared transmission infrastructure, reducing the number of shore connections and associated environmental impacts ultimately leading to maximizing our decarbonization potential. The recommendations below, if implemented, would enhance the transmission planning process for offshore wind with improved environmental outcomes at the siting stage.

Agency Coordination

RECOMMENDATION // The Federal Energy Regulatory Commission (FERC) and BOEM should enter into a Memorandum of Understanding (MOU) to strengthen coordination in the review of offshore wind projects and associated transmission planning needs.

There is precedent for a more cooperative arrangement between FERC and BOEM. For example, on April 9, 2009, FERC and the Department of Interior entered an MOU to clarify the agencies’ understanding of their respective jurisdictions over renewable energy projects in waters of the OCS. ([See Appendix, Electric Transmission Infrastructure – Planning, Permitting and Environmental Review for background.](#)) The MOU acknowledged Minerals Management Service as having exclusive jurisdiction to issue OCS leases for offshore wind projects and FERC as having exclusive jurisdiction to issue licenses and exemptions for OCS hydrokinetic projects. FERC and BOEM should coordinate their review of offshore wind projects and associated transmission planning needs and consider formalizing their respective roles using that earlier MOU as a guidepost.

FERC Rulemaking

RECOMMENDATION // FERC should open a rulemaking to propose targeted additional reforms to transmission planning processes of Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs).

These reforms would (1) require RTOs/ISOs to plan for the addition of offshore wind projects following the example of the Midcontinent ISO Multi-Value Project planning for integration of wind power, (2) require RTO/ISOs to allow states to individually or jointly pay for transmission expansion projects necessary to interconnection with offshore wind projects, similar to the PJM⁷ state-sponsored project construct, and (3) require greater coordination of the transmission expansion planning and generator interconnection processes.

7 PJM a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

RECOMMENDATION // FERC should open a rulemaking to propose targeted reforms to cost allocation and generator interconnection procedures of RTOs/ISOs.

The July 2021 FERC *Advanced Notice of Proposed Rulemaking* ([see Appendix, Electric Transmission Infrastructure – Planning, Permitting, and Environmental Review for proposed rulemaking background](#)) also lays the groundwork for reform to interconnection funding and the interconnection queue process. FERC should prioritize reform that would (1) enhance opportunities for regional interconnection facility cost-sharing, such as initiatives employed by the California Independent System Operator to spread costs of long generator tie-lines necessary to transmit remote solar generation to existing grid infrastructure; (2) permit “transmission first” interconnection collector-platform projects to enter the interconnection queue and receive interconnection access rights before any generators have signed up to use the project for interconnection purposes; and (3) better integrate generator interconnection planning with the transmission expansion planning process.

BOEM Rulemaking

RECOMMENDATION // In coordination with Department of Energy (DOE), FERC, and regional authorities, BOEM should incorporate transmission planning into its regulations.

As the pace of offshore wind power development has shown, a foundational problem not addressed by the current planning and permitting process has been the lack of any connection in the BOEM regulations to the transmission planning processes of the regional transmission organizations that manage the electric grid. BOEM should revise its planning processes to identify specific contributions from the DOE, FERC, and RTO/ISOs as an integral part of the planning and authorization process. Because offshore wind power will never be developed if it lacks a transmission system with the capacity to manage this new source of power generation, the managers of the nation’s electric grid cannot be included in environmental review and authorization processes as just another “agency with jurisdiction.”

Instead, BOEM must actively promote transmission planning in cooperation with the authorities that will ultimately determine what power sources are added to the grid and at what rate.⁸ Where development of a backbone transmission system encounters financing impediments, BOEM could provide for flexible terms, based on oil and gas leasing (“so long as producing in __ quantities”) to support financing, particularly transmission financing for High Voltage Direct Current lines that have planning/environmental benefits that project-specific transmission financing cannot capture. BOEM should also eliminate the distinction in its regulations between rights of way for generation transmission and rights of use and easement for other transmission lines, as they are environmentally indistinguishable, and both provide for construction of transmission lines.

⁸ One of the initiatives identified in DOE’s January 2022 Offshore Wind Strategies Report is to comprehensively plan staged development of integrated transmission infrastructure and reduce transmission congestion. To implement that initiative, DOE recommends “conven[ing] collaboration among FERC, DOE, RTOs/ISOs, utilities, BOEM, states, industry, and other participants to plan long-term grid upgrades inclusive of prospective future offshore wind projects, and to refine cost allocation to incentivize long-term coordinated transmission planning across multiple projects.” *Offshore Wind Strategies Report*, Dept. of Energy (Jan. 12, 2022).

LEASING



BOEM's leasing process is focused on competitive auctions unless BOEM confirms that there is no competitive interest. If there is competitive interest, BOEM will issue a Proposed Sale Notice (PSN) for public comment before publishing a Final Sale Notice (FSN) at least 30 days before the date of the auction. The PSN solicits public comments to develop the final sale terms and conditions announced in the FSN, including lease area, size, and term; site-specific lease stipulations; auction bidding procedures; and the criteria BOEM will use to evaluate competing bids. BOEM regulations allow BOEM to use "multifactor bidding" to determine the winner of auctions for OCS renewable energy leases. ([See Appendix, Leasing Process and Auction Formats for additional background.](#)) Factors that BOEM can consider may include technical merit, timeliness, financing and economics, environmental considerations, public and community benefits, and compatibility with state and local needs, among others. BOEM should explore additional multifactor bidding credits to advance community investment, support for domestic content, or investment in environmental research and monitoring that reduce critical uncertainties or advance conservation objectives.

Multifactor bidding has been used in previous lease sales to credit early engagement with communities that reduces the risk to project completion. It is BOEM policy to offer non-monetary credits in an auction only for factors that (1) can be simply and objectively identified and (2) reflect a true development advantage for the recipient. BOEM has credited legally binding agreements that increase the likelihood of project success, and meet local needs, among other factors.

Multifactor Bidding

RECOMMENDATION // To avoid conflicts and improve coordination in project approvals, BOEM should expand multifactor bidding to recognize the value of developers' engagement with stakeholders.

Multifactor bidding offers a mechanism for BOEM to recognize the value of state, local, Tribal government and ocean user engagement by allowing for credit toward specific agreements derived from stakeholder engagement prior to the award of a lease.⁹ BOEM has rarely taken the multifactor bidding approach and, in not doing so, has undervalued the time and effort necessary for a developer to cultivate the network of federal, state, and local agencies, Tribal governments, communities, and non-governmental stakeholders that are key to the success, failure, or speed with which a project is developed. After an offshore wind lease is sold, the momentum created through the investment narrows the range of options available to influence the process moving forward. A worst-case scenario is that stakeholders are left with one developer who has not taken community and stakeholder concerns into consideration. Formalizing a multifactor bidding process is one mechanism within the existing legal framework to solve concerns ahead of a lease sale.

Recognizing BOEM's obligation to ensure its leasing decisions result in a fair return to the public in exchange for the opportunity to lease a portion of the OCS, BOEM should not give credit based on vague indications that a bidder is engaged in stakeholder outreach. Instead, BOEM should clarify the bidder's stakeholder engagement program as

⁹ As described in Appendix Outer Continental Shelf Lands Act – Federal Offshore Wind Energy Leasing, to date, BOEM has made use of this authority only twice, to offer a 10% bidding credit for a community benefits agreement, which was successfully claimed by Vineyard Wind in its winning bid for Lease OCS A-0501 offshore Massachusetts, and to offer a 20% bidding credit for a joint development agreement, which was successfully claimed by Deepwater Wind in its winning bid for Lease OCS A-0586 offshore Rhode Island.]

demonstrated by binding agreements with key stakeholders and communities. Similar credit should be provided for projects that have achieved important state or local approvals that will expedite and ensure the viability of the proposed project. Prospective developers may expend significant resources to build understanding and support among government and the public. Bidders that do not build stakeholder relationships may not be prepared for the public processes required to obtain authorization for their COPs, may undervalue stakeholder and community participation, or may take advantage of the prior advocacy and education work conducted by their competitors. BOEM should revise its leasing process to provide a competitive advantage to those project proponents that demonstrate their commitment to collaboration and conflict resolution with governments and ocean-user groups early in the permitting process.

RECOMMENDATION // BOEM should credit bidder outreach efforts that have resulted in agreements with stakeholders.

BOEM should design auction formats and specifications to favor those bidders that have productively engaged with stakeholders and communities in advance of the lease sale. Early stakeholder engagement has been challenging for the industry in many contexts yet continues to be a request of stakeholder and community groups. Early stakeholder engagement is also an indicator of project viability in that it reduces the risk of costly litigation and supports the defensibility of agency decisions. BOEM could reward bidder outreach efforts, for example, that have resulted in agreements with key stakeholder groups, including other ocean users and underserved communities, that will help ensure the viability of a project. BOEM retains the discretion to award bidding credits for multiple types of agreements.

The ability to define qualifying government and ocean user-agreements with clear, objective factors is essential. In particular, such factors should ensure that agreements are enforceable and durable, especially with respect to loosely defined user groups or voluntary private associations (such as recreational and commercial fishermen's associations), and should ensure that the signatories involved are representative of the groups as a whole and can reasonably be expected to indicate the effectiveness of the agreement in addressing the interests of the group and, therefore, its ultimate support for a project.¹⁰ To exercise its discretion in a way that rewards effective stakeholder and community engagement, BOEM will need to examine the quality of that engagement rather than rely on simple quantitative measures of public engagement such as the number of meetings.

The elements of a credible pre-leasing coordination agreement would include specific commitments to develop and share information defined as necessary for the participation of the particular stakeholder parties. These agreements should include public engagement plans that include underrepresented groups and a clear commitment to take into consideration the obtained data and information, including information on users and their interests in offshore space and consideration of community impacts. Such an agreement would be non-exclusive and public so that government and the public, prospective bidders, and BOEM may assess the degree of support for a project proposal and the timing and resources that are necessary to conduct the environmental review and authorization process.

¹⁰ Castle Wind LLC signs Mutual Benefits Agreement with local Commercial Fishermen (Oct. 18, 2018), <http://castlewind.com/port-san-luis-fishermans-association/>

Multifactor bidding allows the use of cumulative credits, although BOEM has not used these to date. When BOEM has allowed credit for different types of agreements, the bidder's credit has been limited to the greater of the credit for a qualifying agreement.¹¹ Cumulative credits for different agreements would allow BOEM to reward bidders in proportion to the effectiveness of their outreach efforts with key government and ocean groups, up to a specified cap.¹² For example, BOEM could offer credits of 12.5% for each agreement with representative fishing groups or affected local governments, up to a total of 25%.¹³ To further ensure that such agreements are likely to secure the support of an affected local community, this definition could be refined to specify the type and magnitude of qualifying community benefits and to add factors, such as membership levels or years of incorporation, that ensure that the organization is well-established or representative of the community. In its exercise of discretion, BOEM should evaluate: that the credit approved is roughly proportional to the interests of the government, community, and ocean user groups; that there is reasonably foreseeable importance of the government, community, or group participation in the planning process for a COP; and the value of information the government, community, or group would bring to the environmental review process.

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- 11 See, e.g., Atlantic Wind Lease Sale 4 (ATLW4) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts – Final Sale Notice, 79 Fed. Reg. 70,545, 70,551 (November 26, 2014) (Massachusetts Final Notice of Sale) (“The bidder’s credit percentage is limited to the greater of 10% for a CBA or up to 25% for a PPA.”).
 - 12 See Ausubel, Lawrence M. and Peter Cramton (2011b) “Multiple-Factor Auction Design for Wind Rights,” Report to Bureau of Ocean Energy Management, at 17 n.5 (“Cumulative bidder discounts are fairly common. For example, in early FCC auctions, bidders who were both small business owners and woman or minority-owned received both discounts.”)
 - 13 See *id.* at 25; see also BOEM Carolina Long Bay Area Atlantic Wind Lease Sale 9 (ATLW-9) Final Sale Notice (FSN) Response to Comments (“BOEM has limited the bidding credit factors to no more than 25 percent of the bid.”).





PERMITTING

Under NEPA, BOEM and other federal agencies are required to obtain information on reasonably foreseeable significant adverse effects if the means of obtaining that information are known and the cost of obtaining it is not unreasonable.¹⁴ Environmental review and authorization processes for offshore wind projects are particularly affected by incomplete and unavailable information that is needed to assess and mitigate potentially significant adverse effects. (See *Appendix, National Environmental Policy Act*.) In the offshore wind context, developers have incurred high costs to perform extensive surveys. The costs of biological surveys are necessary to characterize the benthic habitat, other biological resources, and cultural resources that could be affected by implementation of a proposed COP and have been found reasonable, given the significant and long-term effects of these projects. Other geotechnical surveys, such as deep borings or cone penetration tests at every potential wind turbine location, are more necessary for engineering rather than environmental review. Tolerance for a reasonable degree of uncertainty may be justified where final design and micro-siting can avoid impacts, such as disturbance of a shipwreck, cultural resources, or essential fish habitat. We see room for improvement, however, in how agencies undergo their review procedures and collaborate amongst themselves and with ROPs and research institutions to formulate baseline data.

Pre-Application

RECOMMENDATION // BOEM should implement a pre-application approach to help frame a well-designed proposal before it is submitted for agency review.

Pre-application processes provide a common means for an authorizing agency to work with a prospective applicant to help frame a well-designed proposal before it is submitted for agency review. Pre-application processes can include the collection of information, coordination with stakeholders, and informally “scoping” the environmental review process that is formalized through a public notice of intent to prepare an environmental document.

The benefits of BOEM’s early stakeholder engagement through state Intergovernmental Renewable Energy Task Forces have not effectively carried project proposals through leasing and development of COPs. Part of the problem is the demands that collaboration places on stakeholders—in terms of both time and commitment. Other federal agencies require pre-application. For example, the Bureau of Land Management (BLM) requires all prospective applicants for solar and wind energy projects on public lands to complete at least two pre-application meetings with BLM before filing an application.¹⁵ This informal approach to avoid likely conflicts and problematic proposals is one that BLM has used to educate prospective developers and one that BOEM should implement.

Review Procedures

RECOMMENDATION // Agencies should coordinate and focus data and information requirements to ensure that site characterization surveys collect data and information that is useful both for project-specific decisions and the development of shared, publicly available databases.

To ensure that site characterization surveys collect an appropriate baseline of data and necessary information in an efficient manner, BOEM, NOAA, USCG, U.S. Army Corps of Engineers (USACE), FWS, the Advisory Council

¹⁴ CEQ regulations required the collection of information if the cost was not “exorbitant” but in 2020 CEQ changed that standard to “unreasonable” for environmental reviews begun after September 14, 2020. The change was described as a clarification rather than a material change.

¹⁵ See, e.g., BLM Instruction Memorandum for Wind and Solar Energy Projects, <https://www.blm.gov/policy/im-2011-061>; FERC for hydroelectric power, 18 C.F.R. § 5.6 - Pre-application document.

on Historic Preservation (AHP) and other cooperating agencies should reassess the requirements for site characterization surveys, particularly any requirements that BOEM has waived or deferred, in light of experience with the use of this information in environmental reviews. Considering the knowledge gained with completed and pending environmental reviews, federal agencies have developed a base of experience that should be assessed and used to ensure that future site characterization surveys collect data and information that is useful both for project-specific decisions and the development of shared, publicly available databases. As part of a programmatic reassessment of information collection for environmental review and authorization processes, agencies with jurisdiction over offshore wind projects should focus their data and information requirements, define a baseline data and information plan, assess the optimal timing and means of obtaining this information, and identify critical uncertainties that require coordinated data collection on a broader scale or timeframe than is provided for in site characterization. Future work should be advised by lessons learned and, as technologies advance, recognizing that ecosystems will likely have varying monitoring needs.

RECOMMENDATION // NOAA and BOEM should require all non-proprietary biological and oceanographic data collected to be made publicly available.

Offshore wind companies share some ocean data, but those data are far from comprehensive and not always in the public domain. NEPA provides for sharing monitoring data at the request of cooperating agencies, but data required in a regulatory context are often not posted to publicly accessible platforms. There is an opportunity to institutionalize a culture of data sharing with the offshore wind industry. As agencies balance confidentiality and discretionary disclosure interests under the Freedom of Information Act, they should recognize the importance of making ocean data, like the public trust resources they represent, available to the public in the interest of transparency and equity.

Offshore wind energy companies that have been granted leases are required to submit extensive survey data as part of site assessment and development of COPs. Regulations allow for BOEM to publish such data as long as it does not result in "substantial competitive harm or disclosure of trade secrets."¹⁶ For proprietary data, an embargo of three years is applicable, after which BOEM can publish such data if the harm no longer persists.¹⁷ Environmental data are also being submitted to federal agencies like NOAA under laws such as the MMPA and ESA. Models exist to balance privacy/confidentiality and open access of data by adapting approaches used, for example in the health care industry, to anonymize data while allowing it to be publicly accessed or allowing access under controlled conditions or for specific purposes.

Data sharing should be expanded through language in lease agreements requiring companies to share data throughout the time that they operate in a lease area. Protocols for data sharing should be established before survey and data collections efforts are initiated. This is important to ensure data collection and standards are aligned with appropriate public data systems. The cost of managing energy-sector data should be factored into a portion of OCS rental receipts or cost-recovery fees, with those funds set aside by BOEM for long-term data management in coordination with the Integrated Ocean Observing System (IOOS), ROPs, and the Regional Wildlife Science Collaborative for Offshore Wind.

¹⁶ 30 CFR 585.113(b).

¹⁷ *Id.*

RECOMMENDATION // BOEM environmental review and authorization procedures should allow adaptive management for mitigation, monitoring, and continual improvement.

In its development of records of decision and other decision documents, BOEM should seek more cost-effective approaches to mitigation and monitoring commitments that are coordinated as part of a broader mitigation and monitoring program geared toward the cumulative effects of offshore wind power projects. With baseline information and mitigation and monitoring provisions required for compliance with applicable legal standards, BOEM and cooperating agencies can provide for adaptive management to test assumptions and refine regulatory requirements in light of observations. Adaptive management is particularly appropriate where environmental review and mitigation requirements are based on impact assessments that are likely to overestimate impacts to allow for technological improvements during the permitting and construction processes. Offshore wind project technology is rapidly evolving, and, as a result, adaptive management is particularly relevant. Incorporating the “Rochdale envelope” approach from British planning processes for offshore wind projects, BOEM has allowed developers to describe their projects using general parameters of a project- design envelope to address technological uncertainties at the time of submittal of a COP. Left unchecked, the assumed cumulative effects of offshore wind development may require project proponents and regulators to assume impacts that could be better informed by a program of monitoring and adaptation of management actions.

RECOMMENDATION // BOEM should revise its regulations to allow for technological advances.

Experience has shown that the BOEM regulations focus too much on project design, including substantive requirements for actions that generally do not happen. Instead of prescriptive standards for research leases and meteorology towers, which have been overtaken by technological advances, the regulations should focus more on the process for evaluating proposals for offshore wind development. BOEM regulations should contain fewer technology-specific requirements for applications (recognizing that technology advances faster than regulatory revisions) and focus more on the process of how the applicant’s proposals will be reviewed by BOEM and other agencies with jurisdiction.

Programmatic and Cumulative Effects Review

RECOMMENDATION // BOEM should develop a programmatic program for permitting.

Because the Biden administration’s 30 gigawatt by 2030 offshore-wind development goal is so ambitious and covers so many projects in habitats and ecosystems for species that migrate through many, if not all, East Coast lease areas, a programmatic approach is desirable. For example, BOEM should seek to develop incidental-take regulations with the FWS and NMFS that would comprehensively cover the East Coast as a “specified geographic area” and would cover the habitat of as many listed species as would be feasible. The incidental-take regulations should require separate authorizations for the surveying, construction, and operation stages of development. Such an approach, done effectively and using appropriate precautionary goals, makes it possible to address cumulative effects and gain the benefit of a single authorization for all projects. This model could be expanded as BOEM pursues wind development in the Pacific, Gulf of Mexico, and Atlantic.

RECOMMENDATION // BOEM should develop a comprehensive analysis of cumulative effects for proposed and anticipated projects within a defined region using a programmatic approach to analyze cumulative impacts and comprehensively plan for offshore wind energy.

The ambitious targets for offshore wind development mean the consideration of cumulative effects are increasingly important. While cumulative effects were considered in the programmatic offshore wind EAs prepared by the Obama administration, that review was at a high level to support leasing, and it deferred detailed consideration of impacts to project-specific EISs. Vineyard Wind considered cumulative effects in its EIS, but that analysis was subject to criticism, and resulted in delay when NMFS and DOI under the Trump administration determined that the cumulative effects review for fishing was insufficient and required a supplemental draft EIS. Since then, under the Biden administration, several additional offshore wind projects have gone forward along the Atlantic Coast as reasonably foreseeable actions that may give rise to potential cumulative effects, especially on migratory marine wildlife species. A similar issue is arising on the Pacific Coast, where multiple projects are under consideration, again with cumulative effects likely to occur for the migratory species in that region. Additional projects are likely to become reasonably foreseeable while the current projects are going forward, adding to the potential for additional cumulative effects from the emerging network of offshore wind projects in the Atlantic and Pacific ocean and the Gulf of Mexico.

While the scope of review for cumulative effects varies from law to law, on the federal side, cumulative effects must be considered under NEPA, the ESA, and the MMPA. Thus, the approach used for cumulative effects analysis should be useful for multiple purposes. The current approach looks at cumulative effects for each project as it goes forward through permitting. Cumulative-effects analysis will be required for each project, and each site-specific review can seek to analyze those effects separately, possibly building off EISs for other projects. The question associated with the case-by-case review is whether a cumulative effects analysis is comprehensive enough as more projects are developed, giving rise to changed circumstances, new information, and greater need to conserve the remaining marine resources. The cumulative effects of offshore development are already changing in the Northeast Atlantic, where project development has been and is being authorized while opportunities for a broader approach remain elsewhere.

An alternative to the current approach would use regional ocean planning to develop a comprehensive, stand-alone analysis of cumulative effects for all the proposed and anticipated projects within a defined region. Such a review could take the form of a programmatic NEPA document, in support of specific program-level decisions to restore and protect healthy ecosystems, or even a stand-alone impact analysis that can be incorporated by reference in subsequent NEPA analyses but is not itself a decision document that must be analyzed in an EA or EIS. This approach would be particularly appropriate in areas that lack a substantial continental shelf, including the Pacific, where the deployment of floating wind power technology presents potential impacts and analysis alternatives that differ from previous experience. Preparing such a report would have the advantage of presenting a single source of information and analysis that looks at the ecosystem-wide effects of multiple projects occurring at essentially the same time within the same region. As needed, unique factors associated with individual projects could then be considered in each site-specific EIS. While preparing such a report would need to have a clear relationship to ongoing individual project reviews, it could save considerable time in subsequent environmental impact reviews for individual projects and provide improved information over what could be developed on a project-by-project basis. This trade-off of time investment upfront is worthwhile from the perspective of a national offshore wind program that seeks to authorize numerous projects while balancing environmental and biodiversity needs throughout a vast area of U.S. offshore waters. This programmatic approach would also identify areas with the least environmental impact while also providing greater transparency in the selection process.

Permitting Requirements

RECOMMENDATION // BOEM should replace the provisions requiring a Site Assessment Plan with site characterization guidelines.

BOEM should eliminate the outdated or unnecessary elements of its regulations, particularly the provisions for a Site Assessment Plan. Site Assessment Plan requirements are described in the BOEM regulations with a degree of specificity that has been overtaken by technological improvements, including data collection technologies that pose no reasonably foreseeable significant environmental impact. Instead, the focus of BOEM's regulations should be on "site characterization" and the collection of information that is necessary for construction and operations planning and environmental review but is not now reflected in the regulations. Currently, the site characterization process occurs informally with multiple project-specific elements coordinated by the project proponent and authorized by a variety of agencies. For example, NMFS authorization of low-level harassment of marine mammals may be an essential element of the collection of geophysical and geotechnical information in site characterization. Rather than leave this aspect of the authorization process to developers to negotiate, BOEM regulations should provide for coordination with NMFS. Ideally, BOEM and NMFS should be able to rely on an ESA/MMPA programmatic approach that advances species conservation interests and thoughtful development of COPs.

RECOMMENDATION // BOEM should update its regulations to resolve competing interpretations of the Outer Continental Shelf Lands Act (OCSLA) section 8(p)(4)(I).

An update to BOEM's regulations would also provide an opportunity to resolve competing interpretations of OCSLA section 8(p) by defining the agency's approach to determining reasonable uses of the U.S. Exclusive Economic Zone and the resolution of competing uses. (*See Appendix, Outer Continental Shelf Lands Act.*) An update could resolve conflicting interpretations of subsection 8(p)(4)(I) of OCSLA, which requires "prevention of interference with reasonable uses (as determined by the Secretary of the DOI) of the exclusive economic zone, the high seas, and the territorial seas" to codify the current opinion of the Solicitor's Office (M-37067)¹⁸ regarding the Secretary of the DOI's broad discretion in implementing this authority. In this respect, the BOEM regulations could support environmental collaboration and conflict resolution. Such an approach would not only respond to public comment on draft decision documents but also proactively manage known conflicts. Where warranted, the regulations should support use of mediation/conflict resolution including the use of third-party neutrals to balance competing ocean uses and promote the conservation of ecosystems and biodiversity. Environmental Collaboration and Conflict Resolution has been demonstrated to reduce the time and expense of decision-making processes, the likelihood of litigation, and the issues in litigation.¹⁹

18 U.S. Department of the Interior Solicitor's Opinion, Secretary's Duties under Subsection 8(p)(4) of the Outer Continental Shelf Lands Act When Authorizing Activities on the Outer Continental Shelf (Apr. 9, 2021), <https://doi.gov/sites/doi.gov/files/m-37067.pdf>.

19 See Federal Forum on Environmental Collaboration and Conflict Resolution, ECCR: Enhancing Agency Efficiency and Making Government Accountable to the People (May



Governmental Coordination in Environmental Review

RECOMMENDATION // The Ocean Policy Committee and the Permitting Council should establish a regional approach to permitting coordination through MOUs with jurisdictional states, Tribes, and local agencies under FAST-41.

Instead of a project-specific approach to interagency coordination, which only indirectly addresses the competition between projects for agency time and attention, a regional approach could directly manage the problems of agency resource limitations with coordinated schedules and provisions for coordination with regional authorities to address cross-cutting issues in fisheries, maritime, and wildlife management. The Ocean Policy Committee and the Permitting Council should set the stage for efficient, coordinated environmental review by organizing their environmental reviews on a regional basis through MOUs with the states, Tribes, and local agencies that have jurisdiction over aspects of an offshore wind project. Under FAST-41, the universe of cooperating agencies is the same as under NEPA with respect to federal agencies (those with jurisdiction or special expertise), but only includes states, Tribes, and local agencies that choose to participate in the FAST-41 process. BOEM should promote the use of a FAST-41 MOU²⁰ to better integrate non-federal cooperating agencies into an efficient review process that incorporates non-federal analyses and decisions into coordinated project decisions.

Designating agencies as “cooperating” for FAST-41 purposes assures that a state or local agency or Tribal government that chooses to participate has acknowledged and accepted its assigned authorities and responsibilities under the FAST-41 framework. Specifically, a FAST-41 “cooperating agency” has a concurrence role for the permitting timetable, a heightened role for modification of schedules and decisions to extend public comment periods, a participatory role in alternative analyses and selection of methodologies for environmental review of the covered project, and a concurrence role in decisions to develop the preferred alternative to a higher level of detail. A regional approach to organizing the shared work of environmental review would adapt the narrow jurisdictional focus of many agencies to the broader regional issues and coordination that BOEM must manage as lead agency.

RECOMMENDATION // BOEM should more actively integrate input from state, federal, and local agencies and Tribal governments into its environmental review.

BOEM should be free to work in concert with cooperating agencies on the development of EAs and impact statements designed for adoption by the cooperating agencies. Under the aegis of well-defined lead and cooperating agency relationships, the environmental review process should provide an arena in which conflicts can be addressed and alternative means of conflict resolution can be explored. With active engagement by senior agency leadership, issues can be worked on through a reasoning process designed to obtain resolution or, at least, well-informed decisions.

Given the significant effect of wind power development on navigation and access to fishing and anchoring areas, BOEM should engage at the leadership level in USCG Port Access Route Studies and regional fisheries management planning. Based on the Magnuson-Stevens Fishery Conservation and Management Act (MSA) requirements for

²⁰ 2, 2018) https://ceq.doe.gov/docs/nepa-practice/ECCR_Benefits_Recommendations_Report_%205-02-018.pdf. This report shows that ECCR has been used successfully in at least 3,800 cases since 2006. It also documents numerous measurable benefits associated with the use of ECCR to address such conflicts, including: saving time and money; strengthening relationships between the government and stakeholder; improving outcomes; and reducing litigation.

²⁰ 42 U.S.C. § 4370m-2(c)(3)(C).

consultation on the effect of offshore wind power development on essential fish habitat, BOEM should use this consultation as an opportunity to meaningfully engage with NMFS, fishing organizations and operators, and the regional fishery management councils on adaptive management, monitoring, and mitigation strategies for the short-term development and long-term operations of offshore wind facilities. To effectively address the implications of wind power development on the conservation of protected species, BOEM, NOAA, and FWS should be proactive and expand on NOAA Fisheries' Federal Survey Mitigation Program to support real-time monitoring of critically endangered species, avoidance of vessel interactions, and data sharing for recovery planning and long-term conservation of marine species.²¹ The Regional Wildlife Science Collaborative for Offshore Wind, jointly managed by the Northeast and Mid-Atlantic ROPs, is another venue where collaborating on research and monitoring for wildlife, coordinating funding, and defining appropriate data and standards will ensure offshore wind is successful long-term.

RECOMMENDATION // Agencies should coordinate with ROPs, Indigenous knowledge and local knowledge experts, and institutions to obtain data and information needed for environmental reviews.

BOEM and cooperating agencies should work with ROPs, the IOOS, the Regional Wildlife Science Collaborative for Offshore Wind, Indigenous knowledge and local knowledge experts, and research institutions to ensure collection of baseline environmental data and information against which the agencies can assess long-term environmental changes.²² The development of offshore wind along the Atlantic OCS, the Pacific coast, Hawaii, and other areas will cause or contribute to changes in the marine environment. NEPA requires federal agency decision-makers to evaluate the significance of these changes and can provide a basis for incremental assessment of a growing body of information about the significance of these changes and the effectiveness of the means chosen to avoid, minimize, or compensate for such changes. Without a robust, shared database of baseline information, the environmental review and authorization processes for future decisions will struggle to assess the significance of the changes in the environment observed during and after construction of offshore wind facilities. Data should be collected and shared with standard metadata conventions used by the Marine Cadastre, the IOOS, regional ocean data portals, or other long-term collaborative data-management efforts. Data utility and collection protocols should be established before data-collections efforts are initiated. This is important to ensure data collection and standards are aligned with appropriate systems for their utilization. Data should be provided in appropriate formats, regionally standardized and synthesized where applicable for distribution through public data systems.

For example, a particularly costly input (both in terms of direct costs and time-intensity) to the site characterization required for approval of a COP is detailed geophysical and geotechnical information which informs several impact analyses, including those of potential effects involving historic and cultural resources. BOEM should confer with the ACHP regarding the use of programmatic agreements and avoidance measures as an alternative to detailed site characterization to address potential impacts to historic and cultural resources. BOEM should focus data collection on essential baseline information that will serve as an irreplaceable resource for future impact assessment, such as the characterization of benthic habitat as it exists before development of a WEA.

21 See NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast U.S. Region. (Draft March 2022) https://media.fisheries.noaa.gov/2022-03/NOAA%20Fisheries-and-BOEM-Federal-Survey-Mitigation-Strategy_DRAFT_508.pdf.

22 See, e.g., Regional Wildlife Science Collaborative for Offshore Wind, established to create an effective, multi-sectoral, regional collaboration needed to successfully advance environmentally responsible offshore wind power development activities in U.S. waters. (<https://neocceanplanning.org/rwse/>).



CONSTRUCTION AND OPERATIONS

Ongoing Regulatory Compliance

RECOMMENDATION // BOEM and NMFS should develop guidelines outlining avoidance, minimization, and compensatory mitigation strategies for incidental take under the ESA and MMPA and conduct programmatic reviews.

All offshore projects in federal waters will need to address the potential for incidental take, which is prohibited by the MMPA and, for listed species, by the ESA. Authorization of incidental take of marine mammals, including endangered species, should undergo a more efficient and conservation-oriented approach to project-specific consultation. ([See Appendix, Endangered Species Act and Marine Mammal Protection Act for background.](#)) NMFS has developed a strong base of experience in issuing Incidental Harassment Authorizations (IHAs) by Level B harassment for marine mammals (i.e., acts that have the potential to disturb but not injure a marine mammal) during offshore wind marine-site characterization surveys at numerous lease areas. Agency guidance based on this experience with site characterization technologies would be particularly useful for avoidance measures involving marine mammals and designated ESA species during the site exploration, construction, and operation phases. In most cases, the primary issue is avoiding activities that would result in take by harassment under the ESA and MMPA and harm under the ESA. Much is known about how to prevent takes due to vessel traffic, noise and vibration, and NMFS and FWS, working with BOEM, must clearly set forth precautionary and protective actions that offshore project developers should follow to safeguard the potentially affected species and, in doing so, lessen their own liability risk while reducing the regulatory compliance needed to obtain project approvals.

Incidental take authorizations done well and in a precautionary manner also have potential for improvement. Under the MMPA, there are two mechanisms that are most suitable for incidental take authorization: (1) a one-year IHA or (2) regulations issued for a five-year period that can cover injury and death, as well as harassment, and can be used for individual projects under Letters of Authorization (LOAs). Neither mechanism is a perfect fit for offshore wind projects. In most cases, it is not expected that offshore wind projects will result in injury or mortality and would instead cause take by harassment. IHAs, however, can be issued for a one-year period only, and even if they are applied to individual project stages (e.g., site evaluation and exploration, construction, and operation), it will generally be the case that the potential for incidental take for each project stage will last more than one year.

Issuing multiple IHAs for a single project is inefficient and does not lend itself to the review of impacts of numerous projects at different stages of development on a regional basis. Legal issues with multiyear IHAs also have been raised by the Marine Mammal Commission and in litigation against the Vineyard Wind project. While it is acceptable in limited cases to reissue IHAs for an ongoing activity that lasts more than one year, using this form of authorization on a recurring basis for entire phases of project development and operation would go beyond the scope of an IHA. LOA regulations are more difficult and time-consuming to obtain because they require rulemaking, and they would be available to cover forms of take that are not expected to occur very often for offshore wind projects. Because these requirements are established by the MMPA itself, it is not possible to administratively develop other incidental-take authorities for offshore wind.

An alternative approach to seeking IHAs is to use LOA regulations on a programmatic basis for all projects located within a broad area. These regulations are especially appropriate for the current plan for offshore wind, where many projects will be reviewed and presumably approved in specific areas within essentially the same time frame. Thus, five-year regulations could cover projects for the same development stage, such as site identification, exploration, or construction, because several projects are likely to be experiencing the same phase of development simultaneously. LOA regulations must apply to a specified activity within a specified geographic region, and they have been used for offshore oil and gas activities to cover multiple projects and in broad geographic areas, such as the Arctic Ocean

and Gulf of Mexico. Thus, it is possible that offshore wind LOA regulations could be developed for some, or possibly even all, of the projects currently under consideration for areas such as the Northeast and Mid-Atlantic, and for certain phases of project development. Even if not used to cover multiple projects, LOA regulations could be used for individual projects to cover phases of development or operation that will last several years in order to avoid the need for multiple one-year IHAs. Thus far, only one offshore wind project has applied for a LOA incidental take authorization (Ørsted for its US Wind Project).

ESA incidental take authorizations be issued through Incidental-Take Statements included in biological opinions resulting from the Section 7 consultation that would be necessary for the issuance of the LOA regulations. The ESA authorization would cover not only the marine mammals affected under the LOA but also other ESA-listed species that the covered activities may affect. Using a region-wide approach that considers multiple projects would also be a good way to address the need for the comprehensive cumulative effects analysis described above, including under the NEPA review that would be needed for the LOA regulations. Because the MMPA incidental-take process is typically applicant-driven (occasionally BOEM will request an LOA regulation process), offshore wind developers could take on a significant role in information gathering and analysis, lessening the burden on BOEM, NMFS, and FWS, and making it possible to conduct the LOA regulation process efficiently and without excessive burden on the agencies.

An additional MMPA/ESA incidental-take approach could invoke both guidelines and IHAs. It may be possible to develop guidelines that would prevent any takes from occurring during a specific project stage (e.g., timing of activities to avoid species, vessel speed restrictions, noise mitigation, etc.). Project operation after construction would be a particularly good candidate for such avoidance strategies because there will be fewer activities underway that could result in harassment. If such guidance can be developed that would provide a reliable method to prevent takes of any kind, then it may be possible to rely on IHAs only for the preliminary stages of project development where the activities are short-term and would fit within the one-year time frame. Even under this scenario, however, the IHAs would probably need to be issued on a project-specific basis. A programmatic format such as LOA regulations could, therefore, still be desirable due to their applicability for a longer period but without the need for individual MMPA take authorizations for project operations as long as the projects comply with guidelines that would avoid take of all forms.



Photo Credit: Raifeed Hussain

BOEM and NMFS already appear to be moving in the direction of this recommendation. The agencies have taken steps for more comprehensive decision-making for offshore wind projects through an informal programmatic consultation under section 7 of the ESA concerning the effects of certain site assessment and site characterization activities (“data collection activities”) to be carried out to support projects off the U.S. Atlantic coast. BOEM’s request for consultation with NMFS included a Biological Assessment (BA) that was finalized in February 2021.²³ On June 29, 2021, NMFS issued a Letter of Concurrence (LOC) that covers those activities over a 10-year span (June 2021 – June 2031).²⁴ As a result, lessees must implement certain Project Design Criteria (PDCs)—mitigation and monitoring activities required to avoid or minimize effects to listed species—for activities that fall within the scope of the BA.²⁵ During the informal consultation process, NMFS considered the effects to ESA-listed species (including certain whale, turtle, and fish species) of data collection activities carried out in compliance with the PDCs and corresponding best management practices.²⁶ NMFS concurred with BOEM’s determination that the proposed action is not likely to adversely affect any listed species. In other words, NMFS and BOEM relied on the recommended mitigation in the PDCs and BMPs to reduce potential impacts to a level where formal consultation is not needed and MMPA incidental take authorization is not triggered.²⁷

NMFS also has encouraged BOEM to initiate a programmatic ESA consultation that would address all consequences of wind energy lease issuance in the New York Bight.²⁸ NMFS specifically noted that while the LOC issued on June 29, 2021, considers effects of certain site characterization and site assessment activities that may be carried out on the Atlantic OCS, it does not consider issuance of leases or all activities that may result from lease issuance (e.g., gillnet or trawl surveys carried out to characterize fisheries resources in a lease area).²⁹ NMFS proposed that the agencies undertake a consultation that would address not only site characterization and site assessment activities but also lease issuance. Any potential effects of construction, operation, or decommissioning of a future wind project would be considered in later consultations.

RECOMMENDATION // BOEM and NOAA should establish a collaborative process to issue IHAs and LOAs that protect North Atlantic right whales (NARW) and incentivize conservation initiatives by project developers.

A programmatic approach that encompasses species protection from the outset is needed to effectively advance recommendations from environmental organizations calling for a “North Atlantic Right Whale Whole-of-Government Initiative.”³⁰ The NARW is critically endangered, and advancing offshore wind in an environmentally protective manner will require BOEM and NOAA to take the lead in coordinating a program that engages other federal agencies

23 BOEM, Biological Assessment (Feb. 2021), available at <https://www.boem.gov/sites/default/files/documents/renewable-energy/OREP-Data-Collection-BA-Final.pdf>.

24 NMFS, Letter of Concurrence (June 29, 2021), available at <https://www.boem.gov/sites/default/files/documents/renewable-energy/OSW-surveys-NLAA-programmatic.pdf>.

25 After NMFS issued the LOC, BOEM issued answers to a set of “Frequently Asked Questions” about the LOC. Programmatic Endangered Species Consultation and Revised Conditions for Protected Species during Offshore Wind Data Collection Activities: Frequently Asked Questions, BOEM, available at <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Protected-Species-FAQ.pdf>. The FAQs include more information on the PDCs and other criteria that must be met to avoid the need for incidental take authorization for data collection. Importantly, they address whether current lessees with existing lease stipulations must comply with the new conditions.

26 BMPs are the detailed conditions necessary to implement each PDC. See Appendix B to the LOC for the list of PDCs and BMPs.

27 The offshore wind industry has expressed concern regarding the PDCs. As stated by the American Clean Power Association, the industry views the programmatic consultation as too limited in scope with respect to the data collection technologies considered in BOEM’s BA and NMFS’s LOC. The industry also recommends including a broader range of available technology for data collection. Comments on the Draft Environmental Assessment - New York Bight Commercial and Research Wind Lease and Grant Issuance, American Clean Power Association (Docket No. BOEM-2021-0054), <https://www.regulations.gov/comment/BOEM-2021-0054-0047>. These and other concerns highlight the importance of NMFS and BOEM consulting closely with the offshore wind industry, including individual project developers, and conservation organizations as they proceed with ESA and MMPA compliance measures.

28 Comments Re: Draft Environmental Assessment and Essential Fish Habitat; Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight, Nat’l Marine Fisheries Service (Sept. 9, 2021) (Docket No. BOEM-2021-0054-0045), <https://www.regulations.gov/comment/BOEM-2021-0054-0045>.

29 *Id.*

30 Letter to Secretary of the Interior Haaland, Secretary of Commerce Raimondo, CEQ Chair Mallory and National Climate Advisor McCarthy from NRDC, National Wildlife Federation, Defenders of Wildlife, Southern Environmental Law Center and Conservation Law Foundation (Oct. 7, 2021)

to address upfront the risks of vessel collisions and noise impacts to NARWs.³¹ Environmental organizations have specifically called for “monitoring and strong mitigation protocols for offshore wind energy site characterization, construction, operation, repowering/life extension, and decommissioning activities.”³² “Coordinated, regional baseline survey efforts are needed to adaptively manage and address noise and vessel speed impacts.”³³

These specific NARW recommendations are consistent with the themes and recommendations of this report, including science-based, proactive approaches to ensure environmentally protective measures on a comprehensive and regional basis, making use of advanced technology and science-based solutions, and developing approaches through collaborative processes that engage stakeholders, shape information needs with stakeholders, and incorporate comments and recommendations into decision-making. To build on and advance this work, a decision-making mechanism that can achieve the NARW recommendations must integrate BOEM, NOAA, and other federal agencies, while also adding the offshore wind industry into the problem-solving equation including incentivizing proactive measures and forward-looking compliance to undertake the desired baseline surveys, project development, monitoring and mitigation, and best management practices.

Under the MMPA, IHAs or LOAs also must specify requirements for monitoring and reporting. Moreover, incidental take authorizations are subject to stakeholder involvement and participation, at a minimum, through the requirement for the rulemaking for LOAs and notice and comment for IHAs,³⁴ thereby providing for a level of transparency. In the case of listed species, such as the NARW, biological opinions can specify conservation measures on other forms of mitigation that require surveys, monitoring, and protective steps to avoid jeopardy or reasonable and prudent measures for incidental take statements that achieve the same goals.

Thus, the MMPA and the ESA provide readily available and fully adequate mechanisms to address the points raised by environmental organizations for the NARW while also applying to other species. The same incidental take authorization procedures can be applied for other marine mammals and listed species. Greater transparency and collaboration could readily be offered by BOEM and NOAA by undertaking a voluntary, facilitated conversation with industry, environmental groups, commercial and recreational fishing, Tribes, and other affected parties before initiating a programmatic incidental take authorization review and permitting process. As experience demonstrates with some of the ESA administrative innovations like candidate conservation agreements with assurances and multispecies habitat conservation plans with no surprises, using regulatory incentives can be a strong tool for encouraging conservation measures to be undertaken by the development sector. These same principles should be used for offshore wind by allowing project developers to achieve long-term assurances on incidental take authorizations and the associated terms and conditions via upfront “buy-in” through commitments and funding for best management practices, research, mitigation and monitoring. For many project proponents, knowing what is expected of them at the front end of a regulatory proceeding, and being able to secure necessary authorizations in exchange for agreeing to undertake such measures, can be a compliance strategy which provides certainty that is well worth the investment. With leadership from the federal agencies and buy-in from industry, environmental organizations, and the key stakeholders, ensuring that the whole-of-government species conservation strategy is aligned from the start with the administration’s aggressive offshore development plan will result in improved outcomes for the industry and environment.

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Id.* §§ 1371(a)(5)(A)(i), (A)(i)(III), (5)(D)(iii).

RECOMMENDATION // The FWS should develop guidelines outlining risks associated with incidental take under the Migratory Bird Treaty Act (MBTA).

The MBTA is a critical tool to achieve conservation. In recent years, it has also been subjected to differing interpretations and changing regulations that have contributed to regulatory uncertainty.³⁵

On January 7, 2021, the FWS published a rule that purported to limit the scope of incidental take under the MBTA. Since that time, the FWS has revoked the January 7 rule³⁶ and returned to its traditional interpretation of the MBTA: that the Act prohibits incidental take and that the agency may use its discretion (guided by judicial precedent) to guide enforcement decisions.³⁷ The agency issued a Director's Order to provide additional guidance on its enforcement policies related to incidental take under the MBTA.³⁸ In addition, the agency has indicated it will start a new rulemaking process to consider regulations that will authorize the incidental take of migratory birds.³⁹

Although the FWS intends to clarify how it will apply and enforce the MBTA's prohibition on incidental take through regulations that establish an incidental-take permitting system, the issue is not settled and questions remain.⁴⁰ Additional litigation concerning the MBTA and offshore wind is likely. It will take time for the DOI and the courts to resolve the questions related to the MBTA's prohibition on take.

For the near term, offshore project developers must assume that incidental take caused by their activities will be subject to the law's strict liability criminal-take prohibition. In addition, projects are subject to possible injunction if it is known that take will occur, and a regulatory compliance mechanism is not in place. These considerations make it very important for the industry to seek guidance from the FWS regarding what steps need to be taken to avoid violations of the MBTA during project construction and operation.

As the FWS develops regulations to authorize incidental take, it should create a special category for offshore wind. As was expected at the end of the Obama administration, such regulations could include a generic form of permit, such as a general or regional permit, that would cover offshore wind projects that meet specified criteria. For projects that do not meet the general terms and conditions, an individual permit mechanism should be made available. The clarity gained by incidental take permits would help resolve the uncertainty in the offshore wind industry as to how to comply with the MBTA.

With considerable offshore wind project development likely to occur before regulations are in place, the agencies should develop a standard set of guidelines for projects to follow, such as the Avian Protection Plans that have been used for a variety of activities including onshore and offshore wind development. As part of such guidance, the FWS must be clear on how much data is needed as part of the project permit application and COP procedures.

35 See Regulations Governing Take of Migratory Birds; Proposed Rule, 86 Fed. Reg. 24573 (May 7, 2021) (proposal to revoke the recent FWS rule defining the scope of the MBTA as it applies to conduct resulting in the injury or death of migratory birds and return to implementing the MBTA as prohibiting incidental take).

36 U.S. Fish and Wildlife Service, Regulations Governing Take of Migratory Birds; Revocation of Provisions, 86 Fed. Reg. 54,642 (Oct. 4, 2021).

37 See generally, U.S. Fish and Wildlife Service, Governing the take of migratory birds under the Migratory Bird Treaty Act (undated), available at <https://www.fws.gov/regulations/mbta/>.

38 U.S. Fish and Wildlife Service, Director's Order No.: 225, Subject: Incidental Take of Migratory Birds (Oct. 5, 2021).

39 U.S. Fish and Wildlife Service, Migratory Bird Permits; Authorizing Incidental Take of Migratory Birds, 86 Fed. Reg. 54,667 (Oct. 4, 2021).

40 See *Public Employees for Environmental Responsibility v. Hopper*, 827 F.3d 1077 (2016) (noting that the court would "take [BOEM] at their word that the lease requires a migratory bird permit and that Cape Wind will apply for one."); see also Transcript of Oral Argument at 55–57, *Public Employees for Environmental Responsibility*, 827 F.3d 1077 (2016) (BOEM confirming that its "official position" is that Cape Wind is "obligated under federal law to get a [migratory bird] permit" and a failure to do so "will violate the lease.").

Ongoing Public Input

RECOMMENDATION // BOEM should establish regional offices for ongoing engagement with ocean users, states, communities, and Tribal governments.

Engagement should not be a once-and-done exercise. Offshore wind projects are relatively new to the U.S. and will require constant monitoring during their project life. Having a centralized organizational office in Virginia does not lend itself to ongoing monitoring and stakeholder and community engagement. Construction oversight also requires constant vigilance to make sure that the agency does not shirk its responsibility within a given area. There are regional offices in the Gulf of Mexico and Alaska for the purpose of managing offshore oil development. Dedicating regional offices for offshore wind where BOEM could collaborate with ocean users, states, communities, and Tribes as well as other regional federal agency staff would be extremely helpful in managing offshore renewable energy. Establishing these regional offices is long overdue.

Changing Technologies

RECOMMENDATION // Agencies should develop guidance that considers technological advancements in determining how best to protect wildlife.

Technology has a role to play in reducing offshore wind conflicts with whales, fishes, birds, bats, and other marine wildlife. For example, technological advancement in fisheries is needed to allow science surveys to continue within the footprint of wind energy facilities. As technologies advance, so should guidance that delineates the potential impacts to fisheries and the general practices for project design and construction that would minimize those impacts and reduce potential for conflict.

Passive acoustic monitoring and near real-time technologies are advancing on the Atlantic driven by critically endangered NARW declines coupled with the need to advance offshore wind energy for climate mitigation. Bird and bat collision-detection and curtailment technologies are being developed, tested, and verified but are not yet commercially available for integration into offshore wind turbines. Technological solutions like these are critical to ensure that we can protect wildlife and ecosystems as offshore wind advances. A whole-of-government approach to define and support wildlife technologies will be a critical component to the long-term success of wind energy to address the climate crisis. Incentivizing developers to invest in these technologies through tax credits as well as legal clarity is also essential. Project developers and the relevant agencies should look to the Avian Protection Plan Guidelines as an example.⁴¹ Those guidelines were jointly developed by the Avian Power Line Interaction Committee and the FWS to help utilities develop avian protection plans—a utility-specific document that outlines a program to reduce the operational and avian risks that result from avian interactions with power lines. The voluntary guidelines serve as a reference point from which utilities can draw to tailor their avian protection plans to increase conservation of avian species, decrease avian-caused outages, and reduce the risk of incidental take under the MBTA.

Developing similar guidelines to protect fish stocks, whales, and other marine wildlife would benefit developers through regulatory compliance and positive recognition from regulators and customers. Ideally, the guidelines would be updated jointly by offshore wind developers and the relevant agencies—NMFS, FWS, and BOEM—for purposes of siting, construction, and operation of projects to minimize impacts on marine wildlife. Consultation related to fish stocks with fishery management councils and commercial and recreational fisheries should be prioritized and ongoing. The guidelines could also extend to species protected under the ESA, MBTA, and MMPA.

41 Avian Protection Plan (APP) Guidelines (Apr. 2005), available at https://www.aplic.org/uploads/files/2634/APPguidelines_final-draft_April2005.pdf.



OPPORTUNITIES TO STRENGTHEN THE OVERARCHING AUTHORITIES FOR OFFSHORE WIND

The recommendations outlined above are based on a current system of applicable laws that are focused on individual agency action in the context of project development rather than a comprehensive approach to ocean planning, management, and decision-making. This current statutory system relies on site-specific reviews under an amalgamation of diverse laws serving different purposes and fails to provide an effective platform for making crucial policy choices about how to simultaneously advance both renewable energy development and conservation. *(See Appendix for a list and details on individual laws.)* Many of the recommendations made above would unquestionably be helpful in raising these types of “grand bargain” policy considerations. However, they are also constrained by the limitations of the existing statutory system. The reality is that to most effectively achieve integrated ocean management that facilitates multiple uses and conservation while advancing the multiple benefits promised by offshore wind, federal agencies need updated statutory authorities or much more far-reaching and expansive application of existing regulatory programs. There are several approaches that could be used, several of which are discussed in brief below.

OPPORTUNITY // Revise OCSLA to create a separate title for offshore wind to fully account for the different needs and opportunities it poses and to reflect best practices for integrated ocean management.

The 2005 Energy Policy Act for the first time in federal law set forth the legal authorities for issuing leases of offshore renewable energy in the OCSLA. These amendments were established as add-ons to OCSLA’s provisions on oil and gas leasing and resulted in wind permitting authorities that fail to fully account for the different needs and opportunities posed by offshore wind or to reflect best practices for integrated ocean management. If well-crafted, a separate title for offshore wind within OCSLA could provide an opportunity to proactively facilitate the same kinds of efficiency and sustainability outcomes the above recommendations seek to achieve by working within the existing statutory framework, but would allow for more ambitious approaches by improving the statutory framework itself.

A separate wind title within OCSLA could explicitly provide mechanisms to ensure conservation and wind development proceed in tandem. The 2005 amendments do contain some conservation provisions, such as prohibiting leasing by the Secretary of the DOI for offshore wind in conservation-system areas such as national parks, national wildlife refuges, and national marine sanctuaries (leaving open the question whether NOAA could permit such projects in sanctuaries), and generally requires consideration of the conservation of natural resources of the OCS, coordination with other federal agencies, and the prevention of interference with reasonable uses. But these amendments to Section 8(p) of the OCSLA do not expressly call for ecosystem-based management principles or the need for conservation or mitigation to proceed jointly with leasing. As a result, the primary statutory basis for offshore wind leasing does not adhere to the general recommendation of the two Ocean Commissions.⁴²

OPPORTUNITY // Establish a comprehensive ocean statute, comparable to those that exist for public lands, to provide the basis for landscape-scale conservation and renewable energy programs.

The most ambitious, but also most beneficial, ocean and coastal management regime would come from a new comprehensive federal law that deals with all aspects of ocean uses and conservation issues. This is not a new idea; there is a long history of expert recommendations, administrative actions, and legislative proposals seeking to advance this concept. But in the context of the twin climate and biodiversity crises, and the push for hugely expanded offshore wind and conservation stemming from them, the idea merits renewed attention.

In the public lands context, the Federal Land Policy and Management Act, National Forest Management Act, National Park System laws, and National Wildlife Refuge System laws set forth a central set of purposes for the management of those lands and waters and serve as an “organic act” set of directives. These planning authorities have provided the basis for landscape-scale conservation and renewable energy programs, such as the Greater Sage-grouse Comprehensive Conservation Strategy adopted by the BLM and the U.S. Forest Service in 2015.

No comparable law applies to ocean and coastal areas. Existing ocean management statutes, such as OCSLA, the National Marine Sanctuaries Act, the River and Harbors Act, and the MSA ([see Appendix for outline of detail](#)), take a sector-by-sector approach to management. By contrast, an ocean organic act could invoke the best principles and tools from laws covering entire land-based systems and do the same for coastal and marine areas, carving out a place for offshore wind permitting and operation and doing so under the aegis of overall integrated marine-ecosystem governance which ensures that authorized uses are balanced with offsetting protective measures.

Offshore wind can reach its potential for sustainable energy development only if projects are deployed on a wide-scale basis and in optimal locations that maximize efficient energy production without causing avoidable and unmitigated environmental impacts and conflicts with other user groups. Site-specific project approval on a first-come, first-served basis does not facilitate coordinated decision-making management. A better way to make decisions and deploy projects, while implementing effective conservation measures, is to establish a holistic system of ocean governance that covers all major uses of the marine environment. In this sense, offshore wind is not only the potential beneficiary of integrated ocean governance but also the impetus to make integrated ocean governance happen.

An ocean organic act could provide the basis for a coordinated conservation strategy for the endangered NARW with a baseline and long-term monitoring network for conservation of whales. Based on a coordinated conservation strategy, conservation organizations and wind power developers could develop new technologies for real-time monitoring of whales that improves upon the established regulatory requirement of speed restrictions for construction and service vessels.

⁴² U.S. Commission on Ocean Policy. *An Ocean Blueprint for the 21st Century. Final Report.* Washington, DC, 2004 ISBN#0-9759462-0-X; Pew Oceans Commission. 2003. *America’s Living Oceans: Charting a Course for Sea Change. A Report to the Nation.* May 2003. Pew Oceans Commission, Arlington, Virginia.

A new comprehensive ocean statute would seek to provide a sustainable ocean economy through the attainment and maintenance of healthy, productive, and resilient marine ecosystems. Offshore wind would be one of the many human activities that would take place within this ocean realm, side by side with other forms of renewable energy, transportation, food production, fishing, recreation, and conservation. The current management approach of trying to manage these various activities on a sector-by-sector basis would continue, but the new law would be based on the premise that sectional management needs a unified framework for governance, collaboration, engagement, technology, and research.

Finally, because achieving any set of actions that require federal legislative measures is difficult in a closely divided Congress, consideration should be given to using existing executive authorities to accomplish a more comprehensive ocean-governance program. In addition to integrating the recommendations we have outlined above to advance offshore wind, the Biden administration can leverage ROPs, interagency coordination through the White House Ocean Policy Committee, regional ocean data portals and Marine Cadastre products, and advancements in science and technology with the National Ocean Mapping and Characterization Council to advance integrated ocean governance. Doing so will help balance ocean uses and support conservation while advancing offshore renewable energy in a more effective, transparent, and comprehensive manner that will result in more successful projects.

While an extensive new framework within the executive branch is likely not realistic, more targeted administrative measures to coordinate existing resources (e.g., Coordinated Project Plans, 42 U.S.C. §4370m-2(c) and MOUs for scoping the evaluation of COPs) can be pursued. In addition, larger-picture ocean governance can be addressed via an ecosystem-based management method by using existing ocean and coastal laws—almost all of which have conservation underpinnings and legal authorities. With a streamlined and focused executive branch ocean-management structure, the Biden administration could implement policies, regulations, and agency actions to use the existing ocean and coastal laws ([see Appendix for detailed outline](#)) to achieve comprehensive, ecosystem-based decision-making for offshore wind programs and projects as well as for other areas of marine resource management.



A large offshore wind turbine is shown against a sunset sky. A stream of small, glowing particles flows from the left side of the frame towards the turbine. The turbine's tower and one of its blades are visible on the right side of the image. The sky transitions from a warm orange near the horizon to a cooler blue at the top.

CONCLUSION

Offshore wind is an ocean-climate mitigation tool that is critical to address the existential threat of climate change.

While the promising future and multiple benefits of offshore wind energy production, climate mitigation, and economic benefits are within reach, achieving these sweeping advantages is possible only if the current challenges facing the industry are addressed. The opportunity to act is now, and we believe that implementation of these policy recommendations described above and taking advantage of these listed opportunities would result in deployment of offshore wind that is both more efficient and more effective, producing rapid progress towards zero-carbon energy and responsible stewardship of our ocean's resources.

APPENDIX



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A OUTER CONTINENTAL SHELF LANDS ACT – FEDERAL OFFSHORE WIND ENERGY LEASING AUTHORITY

BOEM, part of the DOI, is responsible for authorizing development of the U.S.'s offshore wind energy resources through leases on the federal offshore lands of the OCS. BOEM exercises this authority under the OCSLA of 1953,⁴³ as amended by the Energy Policy Act of 2005.⁴⁴

Under current BOEM regulations implementing OCSLA, offshore wind development on the OCS proceeds through a planning and authorization process that includes identification of WEAs, the sale of leases for specific locations offshore, the Site Assessment of those lease areas for development potential, the review of a developer's proposed COP and whether or not the COP is approved, review and approval of a Facility Design Report and a Fabrication and Installation Report. The BOEM regulations include detailed processes for issuing leases and authorizing activities on those leases.⁴⁵ BOEM's leasing authority does not extend to offshore National Parks, National Wildlife Refuges, National Marine Sanctuaries, or National Monuments.⁴⁶

Leasing Process and Auction Formats

BOEM promulgated its offshore wind regulations in 2009. In 2010, the Secretary of the DOI launched an initiative dubbed "Smart from the Start" to identify the initial WEAs that would be offered for leasing.⁴⁷ BOEM worked closely with northeastern and mid-Atlantic states to identify areas with abundant wind energy and relatively low potential for environmental and use conflicts based on the participation of stakeholders and information available at the time. In 2011, this initiative resulted in BOEM's designation of the first WEAs offshore New Jersey, Delaware, Maryland, and Virginia.⁴⁸

In designating these WEAs, BOEM established the practice of preparing an EA under NEPA for the issuance of leases and site assessment activities within WEAs.⁴⁹ These EAs have found no significant impacts in leasing proposals because an offshore wind lease does not create a right to develop the lease area. Rather, the lease holder has only the right to study the sites for development of a COP proposal, which is subject to further NEPA analysis.⁵⁰

The designation of WEAs does not preclude developers from submitting unsolicited lease requests in areas that have not been scheduled for a lease sale.⁵¹ However, BOEM is required to issue leases on a competitive basis if competitive interest exists.⁵² BOEM uses auctions to award commercial leases competitively, unless

43 The Submerged Lands Act of 1953, 43 U.S.C. § 1301, et seq., granted coastal states ownership of offshore lands extending three nautical miles offshore, with the exception of Texas and the Gulf coast of Florida, where state submerged lands have been adjudicated to extend nine nautical miles offshore. Under the Outer Continental Shelf Lands Act, 43 U.S.C. § 1331, et seq., the submerged lands seaward of state offshore lands remain under federal control. Under international law, the right of coastal nations to exploit marine resources, including wind energy, generally extends to the limit of the 200-nautical mile Exclusive Economic Zone (EEZ). United Nations Convention on the Law of the Sea, Art. 56(1)(a) (sovereign rights of coastal States include "production of energy from the water, currents and winds"); 57 (200 nautical mile extent).

44 43 U.S.C. § 1337(p).

45 See generally, 30 C.F.R. Part 585 (Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf).

46 43 U.S.C. § 1337(p)(10).

47 Salazar Launches 'Smart from the Start' Initiative to Speed Offshore Wind Energy Development off the Atlantic Coast (Nov. 23, 2010), <https://www.doi.gov/news/pressreleases/Salazar-Launches-Smart-from-the-Start-Initiative-to-Speed-Offshore-Wind-Energy-Development-off-the-Atlantic-Coast>

48 See Notice, Commercial Wind Lease Issuance and Site Characterization Activities; Atlantic Outer Continental Shelf Offshore NJ, DE, MD, and VA, 76 Fed. Reg. 7226 (Feb. 9, 2011) (Notice of Intent to Prepare an Environmental Assessment for Mid-Atlantic Wind Energy Areas).

49 See, e.g., Notice, Commercial Wind Leasing and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts, 57 Fed. Reg. 5830 (Feb. 6, 2012) (Notice of Intent to Prepare an Environmental Assessment for leasing and site assessment activities for Call Area offshore Massachusetts); Notice, Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf (OCS) Offshore Massachusetts, 79 Fed. Reg. 34781 (June 18, 2014) (Notice of the Availability of a Revised Environmental Assessment (EA) and a Finding of No Significant Impact (FONSI)).

50 See, e.g., BOEM 2012:003. Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia Final Environmental Assessment, <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Mid-Atlantic-Final-EA-2012.pdf>

51 30 C.F.R. § 585.231(a).

52 43 U.S.C. § 1337(p)(3).

it determines, after public notice, that there is no competitive interest in an area proposed for leasing or an unsolicited lease request.⁵³ The leasing process starts with a Request for Interest (RFI) to determine whether there is competitive interest on a national or regional basis, followed by a Call for Information and Nominations (Call) requesting comments on specific areas that should be offered for leasing and other relevant information, including environmental conditions and uses of the area.⁵⁴ Based on comments received in response to the Call and consultation with appropriate federal agencies, states, local governments, affected Tribes, and other interested parties, BOEM will issue an Area Identification that identifies the areas BOEM has determined are appropriate for leasing, which may include areas nominated in response to the Call together with other areas that BOEM determines are appropriate.⁵⁵

BOEM may issue a noncompetitive lease without an auction if BOEM receives only one submission in response to an RFI or Call, or if BOEM receives an unsolicited lease request for an area that has not been scheduled for a lease sale and then confirms that there is no competitive interest in the area after publishing an RFI for the area of the unsolicited request.⁵⁶ If there is competitive interest, BOEM will issue a PSN for public comment before publishing a FSN at least 30 days before the date of the auction.⁵⁷ BOEM may also issue a second RFI before a FSN to confirm that competitive interest continues to exist.⁵⁸

The PSN solicits public comments to develop the final sale terms and conditions announced in the FSN, including lease area, size, and term; site-specific lease stipulations; auction bidding procedures; and the criteria BOEM will use to evaluate competing bids.⁵⁹ Auction formats and bidding systems use cash bonus and operating fee rates as bid variables or multifactor bidding.⁶⁰ BOEM regulations allow BOEM to use “multifactor bidding” as one of four types of auction formats available to determine the winner of auctions for OCS renewable energy leases.⁶¹ Factors that can be considered “may include, *but are not limited to*: technical merit, timeliness, financing and economics, environmental considerations, public benefits, compatibility with state and local needs” among others.⁶² If multifactor bidding is used, the winning bid is determined by a panel of members selected by BOEM.⁶³

BOEM therefore retains considerable discretion to define the factors that it will consider at the lease bidding stage. In promulgating its final rule, the DOI noted that “[m]ultiple factor bidding may be useful if [BOEM] identifies a market failure in a purely monetary auction format.”⁶⁴ In a 2011 study of multifactor auctions commissioned by BOEM, subject matter experts stated that the criteria for a multifactor auction “need to be transparent (documented ahead of time), objective (must not require subjective evaluation), simple (ideally, it should have a clear “yes” or “no” answer), and verifiable (BOEM can ask for evidence to support the answer).”⁶⁵ The experts were unable, however, to

53 30 C.F.R. § 585.201.

54 30 C.F.R. § 585.210-211(a). See, e.g., Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Massachusetts—Request for Interest (RFI), 75 Fed. Reg. 82055 (Dec. 29, 2010); Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts—Call for Information and Nominations, 77 Fed. Reg. 5820 (Feb. 6, 2012).

55 30 C.F.R. § 585.211(b). See, e.g., Announcement of Area Identification, Commercial Wind Energy Leasing on the Outer Continental Shelf Offshore Massachusetts (May 30, 2012), https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/MA_AreaID_Announcement_052412_Final.pdf.

56 30 C.F.R. § 585.231-.232. See, e.g., Potential Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore California—Request for Interest, 81 Fed. Reg. 55228 (Aug. 18, 2016) (unsolicited lease request offshore Morro Bay, California); Commercial Leasing for Wind Power Development on the Outer Continental Shelf (OCS) Offshore California—Call for Information and Nominations (Call), 83 Fed. Reg. 53096 (Oct. 19, 2018) (Call after one additional nomination of competitive interest in Morro Bay area in response to RFI).

57 30 C.F.R. § 585.211(c)-(d). See, e.g., Atlantic Wind Lease Sale 8 (ATLW-8) for Commercial Leasing for Wind Power on the Outer Continental Shelf in the New York Bight—Proposed Sale Notice, 86 Fed. Reg. 31524 (June 14, 2021); Atlantic Wind Lease Sale 8 (ATLW-8) for Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) in the New York (NY) Bight—Final Sale Notice (FSN), 87 Fed. Reg. 2446 (Jan. 14, 2022).

58 30 C.F.R. § 585.212.

59 30 C.F.R. § 585.216. See, e.g., Atlantic Wind Lease Sale 4 (ATLW4) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts—Proposed Sale Notice, 79 Fed. Reg. 34771 (June 18, 2014); Atlantic Wind Lease Sale 4 (ATLW4) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts—Final Sale Notice, 79 Fed. Reg. 70545 (Nov. 26, 2014).

60 30 C.F.R. § 585.216.220-.221.

61 The regulations also provide for sealed bidding, ascending bidding, and two-stage bidding (a combination of ascending and sealed bidding) as possible auction formats. 30 C.F.R. 585.220.

62 30 C.F.R. 585.220 (emphasis added).

63 30 C.F.R. § 585.222(d).

64 Final Rule, Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19637, 19667 (April 29, 2009).

65 Multiple Factor Auction Design for Wind Rights (Sept. 17, 2011) at p. 25 (https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/

make specific recommendations regarding technical factors for consideration.⁶⁶ A subsequent BOEM white paper summarizing potential auction designs under consideration made clear that credits for offshore wind lease auctions should be “clear, objective factors that tend to indicate a higher probability of success in developing an offshore wind project on the OCS.”⁶⁷

BOEM first employed a multifactor auction design in the 2013 lease sale offshore Rhode Island and Massachusetts where it offered bidding credits of up to 25% for a Power Purchase Agreement (PPA) or 20% for a joint development agreement (JDA) with a state agency.⁶⁸ As defined in the FSN, a PPA is “any legally enforceable long-term contract negotiated between an electricity generator (Generator) and a power purchaser (Buyer) that identifies, defines, and stipulates the rights and obligations of one party to produce, and the other party to purchase, energy from an offshore wind project to be located in the lease sale area. The PPA must have been approved by a public utility commission or similar legal authority.”⁶⁹

Deepwater Wind won the auction and was awarded 20% for its JDA with Rhode Island;⁷⁰ as no PPA had been executed, no credit was available. In the 2014 lease sale offshore Maryland, BOEM similarly proceeded with a multifactor auction and offered a bidding credit of 25% for either a Maryland Offshore Renewable Energy Credit (OREC) Order or any PPA. As with the earlier auction, no PPA or OREC had been executed, thus no credit was awarded.⁷¹ In the 2015 Massachusetts lease sale, BOEM offered for the first time a bidding credit of the greater of 10% for bidders with a community benefits agreement (CBA) or up to 25% for a PPA.⁷² BOEM defined a CBA to be an enforceable contract under which the bidder committed to provide specific community benefits and secured the active support in the regulatory process of a community-based organization. BOEM’s meaning of “community-based organization” was further defined as “[a] legally incorporated organization whose membership includes residents or property owners of a community within the potentially affected region, the local government of the community, or an entity created or managed by the local government(s) of the community or communities.”⁷³ The CBA between offshore wind developer Vineyard Wind and the local power cooperative, Vineyard Power Cooperative, obligated the power cooperative to provide advocacy, support, and guidance for the project in exchange for reimbursement of operation costs up to \$100,000. In addition, the CBA included mutual obligations to consult on the project and investigate opportunities for local job creation, opportunities for power purchase agreements, and opportunities for Vineyard Power to own up to 100 megawatts of the offshore wind capacity.⁷⁴ Vineyard Wind ultimately won the lease auction with a 10% credit awarded for the qualifying CBA.⁷⁵

In the lease sale offshore New Jersey, BOEM did not offer auction credits for environmental and public benefits and instead again offered a credit of up to 25% for a PPA or OREC issued by the New Jersey Board of Public Utilities.⁷⁶

[Regulatory_Information/AusubelCramtonPaper2.pdf](#));

66 *Id.* at p. 24; 30 C.F.R. 585.220

67 BOEM, Summary of Renewable Energy Auction Formats Under Consideration by BOEM (Dec. 7, 2011), at p. 28 (BOEM factors may include durable financial commitments, developments on a limited lease within the proposed lease sale area, successful participation in a competitive request for proposal process for offshore wind in an adjacent state, or completion of scientific investigations within the proposed lease area prior to the announcement of the lease sale.), https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/Regulatory_Information/Auction%20Format%20White%20Paper.pdf.

68 Atlantic Wind Lease Sale 2 (ATLW2) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Rhode Island and Massachusetts-Final Sale Notice, 78 Fed. Reg. 33897 (June 5, 2013).

69 *Id.* at 33905.

70 Bids Received for Lease Sale ATLW-2 Offshore Rhode Island & Massachusetts July 31, 2013, <https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/RI/RIMA-Results.pdf>.

71 Atlantic Wind Lease Sale 2 (ATLW3) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Maryland - Final Sale Notice, 79 Fed. Reg. 38,060 (July 3, 2014).

72 Atlantic Wind Lease Sale 4 (ATLW-4) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts - Final Sale Notice, 79 Fed. Reg. 70,545, 70,551 (Nov. 26, 2014).

73 *Id.*

74 See Vineyard Wind, Community Benefits Agreement Summary (Jan. 2015), <https://static1.squarespace.com/static/57797a98414fb50acf42515d/t/579b845229687f6ef779504/1469809746655/Community+Benefits+Agreement+Summary.pdf>.

75 Bids Received for Lease Sale ATLW-4 Offshore Massachusetts (Jan. 29, 2015), <https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/MA/Bids-Received-Lease-Sale-ATLW.pdf>. No credit was available as there was no qualifying PPA in place.

76 Atlantic Wind Lease Sale 5 (ATLW-5) for Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore New Jersey—Final Sale Notice, 80 Fed. Reg. 57862 (Sept. 25, 2015).

As with the previous sales, no credit was awarded. BOEM initially proposed using non-monetary credits for executed PPAs or ORECs in the 2016 New York lease sale but decided instead to offer a 10% non-monetary credit for qualified bidders who could meet the definition of a “Government Authority.”⁷⁷ No credit was awarded. In the subsequent 2017 lease auction offshore North Carolina, BOEM did not consider or offer auction credits; instead, BOEM held a cash-ascending auction.⁷⁸ In the 2018 lease sale offshore Massachusetts, BOEM considered offering 5% credit for a CBA for the first time since 2015⁷⁹ but ultimately, however, decided to proceed with a cash-ascending bidding auction format. BOEM based that decision on the advancements in the maturity of the market and the view that an ascending auction would lead to the highest return for the federal government. In the New York Bight auction held in February 2022, BOEM considered a multifactor auction with credits available to bidders for investments in “workforce training and development,” “contracting with and supporting the development of minority- and women-owned businesses,” “programs that promote and deliver environmental justice,” and a domestic supply chain. Instead of employing a multifactor auction to advance these policy goals, however, BOEM decided to hold a cash-ascending auction.⁸⁰ Finally, in the Carolina Long Bay auction to take place on May 11, 2022, BOEM yet again sought input in its PSN on utilizing a multifactor auction format, with 20% off their winning bid provided in exchange for financial commitments to a workforce training program or to development of a domestic supply chain.⁸¹ Unlike the Bight proposal and the early lease sales, however, BOEM would not require proof of these investments until the lessee submitted its first facility design report.⁸² After considering public comment, BOEM retained the multifactor format and proposed credits in its Final Sale Notice.

Authorization of Site Assessment Activities

BOEM authorizes site assessment activities (such as the placement of meteorological towers or buoys to characterize wind speeds and variability) through the approval of a Site Assessment Plan.⁸³ Commercial wind energy leases have a preliminary term of one year within which the lessee must submit a Site Assessment Plan or request an extension.⁸⁴ The Site Assessment Plan must demonstrate that the applicant has planned, and is prepared to, conduct proposed activities in a manner that: (a) conforms to all applicable laws, implementing regulations, lease provisions and stipulations; (b) is safe; (c) does not unreasonably interfere with other uses of the OCS, including those involved with national security or defense; (d) does not cause undue harm or damage to natural resources, life (including human and wildlife), property, the marine, coastal, or human environment, or sites, structures, or objects of historical or archaeological significance; (e) uses best available and safest technology; (f), uses best management practices; and (g) uses properly trained personnel.⁸⁵ The Site Assessment Plan must provide comprehensive information describing the location and nature of the proposed site assessment activities, potential hazards and environmental impacts, measures to avoid and minimize environmental impacts, and conformity with all applicable legal requirements.⁸⁶

In considering a Site Assessment Plan, BOEM will request additional information as necessary; prepare an environmental analysis under NEPA, as appropriate; coordinate with relevant federal and state agencies, local governments and affected Tribes; and will either approve, approve with modifications, or deny the Site Assessment

77 Atlantic Wind Lease Sale 6 (ATLW-6) for Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore New York—Final Sale Notice, 87 Fed. Reg. 75429, 75435 (Oct. 31, 2016).

78 Atlantic Wind Lease Sale 7 (ATLW-7) for Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Kitty Hawk, North Carolina—Final Sale Notice, 82 Fed. Reg. 5600 (Jan. 17, 2017)

79 Atlantic Wind Lease Sale 4A (ATLW-4A) Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts - Final Sale Notice, 83 Fed. Reg. 53089 (Oct. 19, 2018)

80 Atlantic Wind Lease Sale 8 (ATLW-8) for Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) in the New York (NY) Bight—Final Sale Notice (FSN), 87 Fed. Reg. 2446 (Jan. 14, 2022).

81 Atlantic Wind Lease Sale 9 (ATLW-9) for Commercial Leasing for Wind Power on the Outer Continental Shelf in the Carolina Long Bay Area— Proposed Sale Notice, 86 Fed. Ref. 60274 (Nov. 1, 2021)

82 *Id.* at 60276.

83 30 C.F.R. § 585.600(a). See, e.g., Approval of Site Assessment Plan for Vineyard Wind, LLC (May 10, 2018), <https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/MA/Vineyard-Wind-SAP-Approval-OCS-A-0501.pdf>.

84 30 C.F.R. § 585.235(a)(1), (b), -.600(a). The lessee may also submit a combined SAP and Construction and Operations Plan (COP).

85 30 C.F.R. § 585.606.

86 30 C.F.R. § 585.610-.612.

Plan.⁸⁷ In reviewing a Site Assessment Plan, BOEM determines if that analysis is sufficient for approval of the specific Site Assessment Plan under review or if it must be revised or supplemented.⁸⁸ The analytical requirements for site assessment have been criticized as excessive in light of the information required for site characterization in a subsequent EIS for a COP. For example, BOEM has required detailed analysis in a Site Assessment Plan of archeological resources that could be identified later during implementation of construction plans with less impact on marine mammals and more flexibility for site-specific avoidance measures.

Authorization of Construction and Commercial Operations

BOEM authorizes the construction and operation of a wind energy project through approval of a COP.⁸⁹ Site assessment activities must be completed within five years of Site Assessment Plan approval, and a COP must be submitted at least six months before the end of the site assessment term.⁹⁰ A COP must provide comprehensive information describing construction, operations, and conceptual decommissioning plans for all proposed project activities and planned facilities, including onshore and support facilities and all anticipated project easements.⁹¹ The applicant must demonstrate that it has planned and is prepared to conduct proposed activities that meet the same standards of a Site Assessment Plan.⁹² The COP must provide comprehensive information describing the location and nature of the proposed facilities, potential hazards and environmental impacts, measures to avoid and minimize environmental impacts, a list of all required federal, state, and local permits and authorizations required to conduct the proposed activities and detailed information to assist BOEM in complying with NEPA and other relevant laws, including the Coastal Zone Management Act (CZMA), ESA, and National Historic Preservation Act.⁹³

In considering a COP, BOEM will request additional information as necessary; prepare the appropriate environmental analysis under NEPA; coordinate with relevant federal and state agencies, local governments and affected Tribes; and will either approve, approve with modifications, or deny the COP.⁹⁴ BOEM's statutory leasing authority is broad, allowing it to grant leases on the OCS for the production of energy from sources other than oil and gas and requiring that such activities be carried out in a manner that provides for safety, conservation, and protection of the environment; public notice and comment on proposed activities; and coordination with relevant federal agencies and affected state and local governments.⁹⁵ In furtherance of these duties, BOEM prepares an EIS under NEPA for the approval of a COP.⁹⁶ BOEM recognizes the importance of coordination with other federal agencies, particularly CEQ and NOAA as well as state, local and Tribal authorities, regional ocean planning organizations, and other stakeholders.⁹⁷

Authorization of Transmission Lines

An OCS renewable energy lease confers on the lessee the right to one or more easements across the OCS for the purpose of installing gathering, transmission, and distribution cables as necessary for the use of the lease.⁹⁸ However, Rights-of-Way (ROW) grants and Rights-of-Use and Easement (RUE) grants are required for renewable energy activities that are not covered by a renewable energy lease.⁹⁹ A ROW grant authorizes the holder to install cables and associated facilities on the OCS that involve the transportation or transmission of electricity or other energy product from renewable energy projects. A RUE grant authorizes the holder to construct and maintain

87 30 C.F.R. § 585.613.

88 30 C.F.R. § 585.611.

89 30 C.F.R. § 585.600(b). See, e.g., Record of Decision, Vineyard Wind 1 Offshore Wind Energy Project Construction and Operations Plan (May 10, 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Final-Record-of-Decision-Vineyard-Wind-1.pdf>.

90 30 C.F.R. § 585.235(a)(2), -.600(b).

91 30 C.F.R. § 585.620.

92 30 C.F.R. § 585.621(a)-(g).

93 30 C.F.R. § 585.621, -.627.

94 30 C.F.R. § 585.628.

95 *Id.* § 1337(p)(1), (4), (7).

96 See, e.g., Notice of Intent to Prepare an Environmental Impact Statement for Vineyard Wind LLC's Proposed Wind Energy Facility Offshore Massachusetts, 83 Fed. Reg. 13777 (March 30, 2018).

97 Final Rule, Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19637, 19643 (April 29, 2009).

98 30 C.F.R. § 585.200(b).

99 30 C.F.R. § 585.300.

facilities or other installations on the OCS that support the production, transportation, or transmission of electricity or other energy product from any renewable energy resource. A ROW or RUE grant is necessary for the construction and operation of submerged transmission cables and offshore collector platforms that would serve multiple offshore wind leases.

BOEM regulations require ROW or RUE grant holders to submit a General Activities Plan that describes proposed construction, operational activities, and conceptual decommissioning plans for all planned facilities.¹⁰⁰ The applicant must demonstrate that it has planned and is prepared to conduct proposed activities that meet the same standards of a Site Assessment Plan and a COP.¹⁰¹ The General Activities Plan must provide comprehensive information describing the location and nature of the proposed facilities, potential hazards and environmental impacts, measures to avoid and minimize environmental impacts, a list of all required federal, state, and local permits and authorizations required to conduct the proposed activities, and detailed information to assist BOEM in complying with NEPA and other relevant laws, including the Coastal Zone Management Act (CZMA), ESA, and National Historic Preservation Act (NHPA).¹⁰²

B THE NATIONAL ENVIRONMENTAL POLICY ACT AND TITLE 41 OF THE FAST ACT

This section provides an overview of NEPA and the central role it plays in both the BOEM leasing process and the authorization of project-specific COPs. Whether referred to as “environmental impact assessment” in the international context, “environmental review” under authorities of the Federal Permitting Improvement Steering Council, or simply the “NEPA process,” NEPA ensures that all federal agencies consider the environmental effects of proposed federal actions before making final decisions on the proposal. Used as a framework for interagency coordination, environmental documents serve as the record-of-agency consideration of alternatives that could avoid a proposal’s effects on the human environment, of mitigation measures that can reduce environmental effects, or of measures to compensate for effects that cannot be avoided. They also establish the basis for the agency’s finding that a proposed activity would comply with applicable statutes and regulations. Used as a basis for negotiation and conflict resolution, the evaluation of reasonably foreseeable effects, alternatives, and mitigation measures that NEPA prescribes can minimize and sometimes eliminate conflicts over a proposal.

NEPA Background

NEPA requires federal agencies to evaluate the reasonably foreseeable environmental effects of proposals for actions they would carry out, fund, permit, or otherwise authorize.¹⁰³ Where a proposed federal action may significantly affect the quality of the human environment, the action agency must prepare a detailed EIS on the environmental impact of the proposed action, any adverse effects that cannot be avoided, and alternatives to the proposed action, among other topics.¹⁰⁴ For actions that are designed to avoid significant environmental impacts but are not categorically excluded from NEPA analysis, agencies will typically prepare a less-detailed EA(to document their analysis of the reasonably foreseeable effects of the actions, alternatives, and mitigation measures designed to ensure that the effects of the action are not significant.

100 30 C.F.R. § 585.640.

101 30 C.F.R. § 585.641(a)-(g).

102 30 C.F.R. § 585.641-.647.

103 42 U.S.C. § 4332(C). To ensure consistency with Title 41 of the FAST Act, the term “authorization” is defined by the 2020 CEQ NEPA regulations as “any license, permit, approval, finding, determination, or other administrative decision issued by an agency that is required or authorized under Federal law in order to implement a proposed action.” 42 C.F.R. 1508.1(c). See Title 41 of the FAST Act, 42 U.S.C. § 4730m(3) (“any license, permit, approval, finding, determination, or other administrative decision issued by an agency that is required or authorized under Federal law in order to site, construct, reconstruct, or commence operations of a covered project administered by a Federal agency or, in the case of a State that chooses to participate in the environmental review and authorization process in accordance with section 4370m-2(c) (3)(A) of this title, a State agency.”).

104 42 U.S.C. § 4332(2)(C).

Federal agencies have implemented NEPA for a half century, and the process continues to evolve. NEPA established the CEQ to advise agencies on the environmental decision-making process, review their NEPA implementation, and coordinate the development of federal environmental policy. CEQ has issued regulations defining the basic terms and steps in the NEPA process¹⁰⁵ which the courts have afforded “substantial deference.” In accordance with CEQ’s regulatory framework, all the federal agencies involved in the authorization of offshore wind development have also promulgated their own regulations or procedures for adapting the NEPA process to their decision-making authorities. BOEM has extensive experience with NEPA analysis for exploitation of offshore oil and gas resources, particularly in the Gulf of Mexico and Alaska.¹⁰⁶

In 2020, CEQ issued a comprehensive revision of its NEPA regulations. In 2021, CEQ began an equally comprehensive reconsideration of those revised regulations through a phased approach.¹⁰⁷ On April 20, 2022, CEQ issued its final Phase 1 rulemaking to amend the revised regulations.¹⁰⁸ In its final Phase 1 rule, CEQ clarifies that “agencies can and should continue to apply their existing NEPA procedures, consistent with the CEQ regulations in effect, while CEQ completes its review of and revisions to the 2020 regulations in its Phase 2 rulemaking.” *Id.* at 23461. Amongst other changes, the Phase 1 amendments restore the “purpose and need” regulation for an EIS back to the text that was in effect until the 2020 revisions. CEQ made clear that it had removed the requirement to consider an applicant’s goals and agency’s statutory authority from the purpose and need regulation, 40 CFR 1502.13, and the definition of reasonable alternatives, 40 CFR 1508.1(z), only because the language is “unnecessary and confusing.” 87 FR 23458. CEQ also finalized its definition of “effects” as including direct, indirect, and cumulative effects. The final rule revises the definition of “effects” and “impacts” as “changes to the human environment from the proposed action or alternatives that are reasonably foreseeable.”¹⁰⁹

No agency has yet to undertake a comprehensive revision of its NEPA procedures to incorporate the changes made in the 2020 CEQ regulations. In April 2021, the Secretary of the Interior ordered BOEM and the other bureaus of the Department to follow the 2020 CEQ regulations, the Department’s own NEPA regulations, and established policies and procedures.¹¹⁰ Where compliance with the 2020 CEQ regulations creates a conflict with the Department’s NEPA regulations, the Secretarial Order directs bureaus to refer the conflict to the Department for resolution with CEQ. The following discussion of NEPA in the context of offshore wind projects is based on this current patchwork of old, new, and evolving requirements. Recommendations for managing NEPA processes through this unsettled regulatory framework are addressed in the Permitting Section of this Report.

NEPA and Offshore Wind

Every stage of the BOEM offshore wind leasing and project-approval process includes environmental review under NEPA. BOEM’s wind energy program occurs in four distinct phases: (1) planning; (2) lease issuance; (3) approval of a site assessment plan; and (4) approval of a COP.

The first phase of planning is to identify suitable areas for wind energy leasing consideration through collaborative, consultative, and analytical processes. Under the “Smart from the Start” wind energy initiative described above, the DOI called for the identification of WEAs on the Atlantic OCS that appeared most suitable for commercial wind

105 40 C.F.R. Pts. 1500-1508.

106 <https://www.boem.gov/environment/environmental-assessment/nepa-activities-gulf-mexico>

107 National Environmental Policy Act Implementing Regulations Revisions, 86 Fed. Reg. 55757 (Oct. 7, 2021), <https://www.govinfo.gov/content/pkg/FR-2021-10-07/pdf/2021-21867.pdf>. CEQ’s proposed rulemaking addressed three modifications: (1) To eliminate language in the description of purpose and need for a proposed action when it is an agency’s statutory duty to review applications for authorization (see 40 C.F.R. § 1502.13) and make a conforming edit to the definition of “reasonable alternatives” (see 40 C.F.R. § 1508.1(z)); (2) To remove limitations on agency NEPA procedures for implementing CEQ’s NEPA regulations (see 40 C.F.R. § 1507.3); and (3) To return to the definition of “effects” in the prior longstanding NEPA regulations (see 40 C.F.R. § 1508.1(g)).

108 Council on Environmental Quality, National Environmental Policy Act Implementing Regulations Revisions, 87 FR 23453 (Apr. 20, 2022).

109 In response to comments, CEQ stated that agencies should treat cumulative effects under the final rule “in the same fashion as they treated cumulative impacts under the 1978 regulations.” *Id.* at 23466. CEQ noted that some commenters requested CEQ issue guidance on analysis of effects, and some indicated that guidance might be more efficient than updating the regulations further in a Phase 2 rule. *Id.* CEQ is considering these comments in the development of its Phase 2 rulemaking and its guidance on assessing greenhouse gas emissions and climate change in environmental reviews.

110 Secretarial Order 3399, Department-Wide Approach to the Climate Crisis and Restoring Transparency and Integrity to the Decision-Making Process (April 6, 2021), https://www.doi.gov/sites/doi.gov/files/elips/documents/so-3399-508_0.pdf.

energy activities while presenting the fewest apparent environmental and user conflicts.¹¹¹ In consultation with other federal agencies and BOEM's Intergovernmental Renewable Energy Task Forces, BOEM initially identified WEAs offshore New Jersey, Delaware, Maryland, and Virginia.¹¹² As a result of comments received on the Notice of Intent to Prepare an EA, RFIs, and Calls for Information and Nominations, these WEAs were further refined to arrive at the areas that were considered for leasing in an EA. BOEM has utilized similar processes for subsequent WEA designations and identification of areas to be considered in a lease sale.¹¹³

A WEA EA analyzes the reasonably foreseeable consequences associated with the following two distinct BOEM actions in the WEAs: (1) Lease issuance (including reasonably foreseeable consequences associated with shallow hazards, geological, geotechnical, and archaeological resource surveys); and (2) Site Assessment Plan approval (including reasonably foreseeable consequences associated with the installation and operation of a meteorological tower and/or meteorological buoys). Additional analysis under NEPA is required before any further decision is made regarding construction or operation of any wind energy facility on leases that may be issued within the WEA.

BOEM also typically prepares an EA in support of lease issuance and site assessment activities.¹¹⁴ Then, following a lessee's submission of its COP, BOEM will prepare a site-specific environmental review that most likely takes the form of an EIS. Like many agencies, BOEM may be assisted by a third-party contractor in preparing its NEPA document.

To date, BOEM has conducted nine offshore wind lease sales with attendant NEPA review.¹¹⁵ Before 2021, however, BOEM had prepared only a handful of site-specific NEPA analyses, as it had initiated environmental reviews only for the Vineyard Wind and South Fork projects. In the first year of the Biden administration, however, BOEM accelerated its review of pending projects. BOEM completed its environmental review of the Vineyard Wind project in March 2021 and, two months later, issued its Record of Decision approving the project.¹¹⁶ In March 2021, BOEM also announced its Notice of Intent to prepare an EIS for the Ocean Wind project.¹¹⁷ BOEM completed its environmental review of the South Fork project in August 2021 and issued its Record of Decision approving the project in November 2021.¹¹⁸ In the meantime, BOEM initiated its environmental review of additional projects. Nine COPs are currently under review, with eight Draft EISs expected to be published in 2022.¹¹⁹

The completion of the first two Records of Decision for major offshore wind projects presents an opportunity for BOEM to reassess the effectiveness of its environmental review and authorization processes, including its approach to NEPA compliance. BOEM has been challenged to explain the adequacy of its EAs for the early stages of WEA identification and leasing. While those issues are not ripe for judicial review at early planning stages, the need for a hard look at the cumulative effects of wind- power project development was used to justify a supplement to the Vineyard Wind Draft EIS. In every subsequent project's EIS, BOEM will have to update and reexamine its analysis of

111 See *supra* fn 5 and accompanying text.

112 See Notice, Commercial Wind Lease Issuance and Site Characterization Activities; Atlantic Outer Continental Shelf Offshore NJ, DE, MD, and VA, 76 Fed. Reg. 7226 (Feb. 9, 2011) (Notice of Intent to Prepare an Environmental Assessment for Mid-Atlantic Wind Energy Areas).

113 BOEM identified Wind Energy Areas off Massachusetts, Rhode Island, and New York in 2012 and 2016, North Carolina in 2014 and 2021, and the New York Bight in 2021. The same process is underway in California and the Central Atlantic. Note, however, that BOEM is undertaking a different approach in the Gulf of Mexico, where it has issued a Notice of Intent to prepare a draft environmental assessment for the entire 30 million areas included in its Call for Information and Nominations. <https://www.boem.gov/renewable-energy/state-activities/gulf-mexico-activities>.

114 BOEM 2012:003. Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia Final Environmental Assessment, <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Mid-Atlantic-Final-EA-2012.pdf>

115 In October 2021, BOEM published a roadmap for future lease sales, with three auctions planned for this year. According to this roadmap, BOEM will hold lease auctions for Carolina Long Bay in May 2022, California in September 2022, the Gulf of Mexico in late 2022). BOEM Offshore Wind Leasing Path Forward, 2021-2025, <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/OSW-Proposed-Leasing-Schedule.pdf>.

116 Record of Decision: Vineyard Wind 1 Offshore Wind Energy Project Construction and Operations Plan, Dept. of Interior 97 (May 10, 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Final-Record-of-Decision-Vineyard-Wind-1.pdf>.

117 Fact Sheet: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs (March 29, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/>

118 Record of Decision: South Fork Wind Farm and South Fork Export Cable Project Construction and Operations Plan, (Nov. 24, 2021), https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Record%20of%20Decision%20South%20Fork_0.pdf

119 The list of offshore wind projects can be found on the Federal Infrastructure Project Permitting Dashboard. https://www.permits.performance.gov/projects?term_node_tid_depth_1=2406.

the cumulative effect of offshore wind projects with particular focus on the conservation of the NARW and other marine mammals, impacts to birds, and socioeconomic impacts (particularly to the fishing industry and maritime safety). A look back over the environmental review and authorization processes also would provide an opportunity to reexamine BOEM's approach to the assessment of more site-specific effects such as the means by which BOEM displays visual impacts and the data needs for assessing potential impacts to cultural resources.

NEPA's Lead and Cooperating Agency Framework

NEPA review for offshore wind projects serves as the means for BOEM's coordination of permitting under numerous other federal and state laws and provides the analytical basis for decisions by cooperating agencies. Compliance with these federal laws may also occur in conjunction with reviews required under state "mini-NEPA" statutes such as the Massachusetts Environmental Policy Act, the New York State Environmental Quality Review Act, and the California Environmental Quality Act. The federal and state agencies involved in implementing these authorities will typically participate in BOEM's NEPA review as cooperating agencies; for instance, BOEM's Vineyard Wind review included the Bureau of Safety and Environmental Enforcement, U.S. EPA, NMFS, U.S. Army Corps of Engineers, USCG, Massachusetts Office of Coastal Zone Management, Rhode Island Department of Environmental Management, Rhode Island Coastal Resource Management Council, and the Narragansett Tribe.

The decision-making framework of coordinated lead or co-lead and cooperating agencies was established in CEQ's NEPA regulations as a means of ensuring that environmental analysis and documentation is developed efficiently (avoiding redundancy and delay) and consistently (providing a common base of facts and analysis).¹²⁰ CEQ guidance has continually encouraged the participation of non-federal cooperating agencies through an EIS-specific MOU that spells out agency roles and responsibilities.¹²¹ In the 2020 update to CEQ's NEPA regulations, these provisions for interagency coordination were expanded to provide for early involvement of states, Tribes, and local agencies in the scoping and development of EISs that can serve as a common basis for decision-making by the federal government, states, Tribes, and local agencies.¹²² CEQ also required development of and adherence to a schedule for the environmental review of—and any authorizations required for—a proposed action and resolution of disputes and other issues that may cause delays in the coordinated schedule for analysis and decision-making.¹²³ CEQ explained these regulatory modifications as intended to "improve the efficiency and outcomes of the NEPA process—including cost reduction, improved relationships, and better outcomes that avoid litigation—by promoting environmental collaboration."¹²⁴

Title 41 of the Fixing America's Surface Transportation (FAST) Act

Any major offshore wind project under BOEM jurisdiction will qualify for coverage under Title 41 of the FAST Act,¹²⁵ a program designed to facilitate the environmental review and authorization processes for large infrastructure projects. The environmental review and authorization processes of the majority of the pending offshore wind projects are tracked on the Permitting Dashboard, either at the initiative of the project proponent or by direction of Executive Order.¹²⁶ This section briefly discusses what Title 41 (FAST-41)¹²⁷ changed about permitting a large infrastructure project such as an offshore wind farm, what it did not change, and the expected effect of FAST-41 on the offshore wind permitting process.

120 40 C.F.R. 1500.4, 1500.5.

121 See Council on Environmental Quality (CEQ) Memorandum on Designation of Non-Federal Agencies as Cooperating Agencies (8/23/99) ([doe.gov](#)).

122 40 C.F.R. 1501.9, 1506.2.

123 40 C.F.R. 1501.7(i), (j); 40 C.F.R. 1501.8(b)(6), (7).

124 85 Fed. Reg. at 43325 (citing Federal Forum on [Environmental Collaboration and Conflict Resolution \(ECCR\): Enhancing Agency Efficiency and Making Government Accountable to the People \(doe.gov\)](#) (May 2, 2018)).

125 Fixing America's Surface Transportation Act, Pub. Law. No. 114-94, 129 Stat. 1312 (2015); FAST Act, Title XLI ("Title 41"), Federal Permitting Improvement, §§ 41001 - 41014).

126 Federal Infrastructure Project Permitting Dashboard (offshore wind projects), https://www.permits.performance.gov/projects?term_node_tid_depth_1=2406.

127 42 U.S.C. § 4370m et seq.

FAST-41 is a voluntary program designed to enhance coordination among federal agencies to ensure more timely and efficient project environmental reviews and authorizations. Only a “covered” project can elect to take advantage of the environmental coordination provisions in FAST-41. A FAST-41 “covered” project is any infrastructure project involving a total investment of over \$200 million that is subject to NEPA analysis, authorization by more than one agency, and in one of several infrastructure categories that include renewable energy production. Most offshore wind projects currently under federal permitting jurisdiction have initiated FAST-41 procedures as “covered” projects, and future projects should continue to qualify, assuming they exceed the \$200 million threshold.

The FAST-41 environmental review framework is intended to provide better coordination, specific deadlines, increased transparency, and more effective means for resolving interagency disputes. The statutory framework was further defined in a detailed joint guidance document to federal agencies issued by the Office of Management and Budget (OMB) and CEQ on January 13, 2017.¹²⁸ Importantly, FAST-41 did not substantively amend NEPA or any other federal environmental review law; the existing procedural and substantive requirements of those laws remain in effect.¹²⁹ Nor did FAST-41 assume or guarantee project approval. Unless the authorities of FAST-41 are used by agency leadership, the environmental review process for major infrastructure projects remains as complex after passage of the FAST Act as it was before. Key elements of the FAST-41 framework include-

- ▶ **Federal Permitting Improvement Steering Council (FPISC or Permitting Council).** The FPISC is an interagency council of Deputy Secretaries with responsibility for overseeing federal agencies’ implementation of the FAST-41 process. The FPISC Executive Director is appointed by the President to serve as chair of the council and given specific responsibilities for maintaining project timelines and assisting in the resolution of interagency disputes. The Director of OMB and Chair of CEQ are also members of the council and are authorized to provide guidance and resolve interagency disputes.
- ▶ **Chief Environmental Review and Permitting Officers.** Each federal agency with a role in approving infrastructure projects is required to designate one or more Chief Environmental Review and Permitting Officers (CERPOs). CERPOs report directly to the Deputy Secretary on all matters related to environmental reviews and authorizations, providing accountability for agency performance by giving a specific individual responsibility for overseeing an agency’s compliance with FAST-41.
- ▶ **Permitting Dashboard.** The Permitting Dashboard is an online database to track the status of federal environmental reviews and authorizations for any covered project. The executive director must maintain an entry of all federal infrastructure projects that are subject to FAST-41 requirements and are actively undergoing an environmental review process.
- ▶ **Coordinated Project Plan.** Within 60 days of a covered project’s entry on the Dashboard, the lead agency must establish a concise plan for coordinating public and agency participation in, and completion of, any required federal environmental review and authorization for the project. The plan must include a permitting timetable that includes intermediate and final completion dates for action by each participating agency on any federal environmental review or authorization required for the project. The lead agency is charged with developing the permitting timetable in consultation with each cooperating and participating agency, the project sponsor, and any state in which the project is located, and with the concurrence of each cooperating agency (subject to dispute resolution by OMB and CEQ). Subsequent modifications of the permitting timetable are allowed by agreement with affected cooperating agencies and, if the modification would extend the final completion date by more than 30 days, by the FPISC executive director.

128 See OMB/CEQ Memorandum (M-17-14 (whitehouse.gov)).

129 42 U.S.C. §§ 4370m-6(d), 4370m-11.

- ▶ **Memorandum of Understanding (MOU).** To the maximum extent practicable, the lead federal agency must coordinate the federal environmental review and authorization processes with any state, local, or Tribal agency responsible for conducting any separate review or authorization of the covered project and post on the Dashboard its coordination plan with the state, local, and Tribal agencies in the form of a MOU.
- ▶ **Limitation on Claims.** Any claim for judicial review of an authorization issued by a federal agency for a covered project must be brought within two years after the publication of a notice of the final record of decision. NEPA claims must be filed by a party that submitted a comment during the environmental review, and the comments must have been “sufficiently detailed comment[s] so as to put the lead agency on notice of the issue on which the party seeks judicial review, or the lead agency did not provide a reasonable opportunity for such a comment on that issue.”

The Infrastructure Investment and Jobs Act (IIJA), which became law in November 2021, made FAST-41 permanent law. This has important implications for the offshore wind industry as all of the offshore projects currently under review by BOEM have opted into the FAST-41 process and, consequently, all of the pending NEPA analyses of proposed COPs are subject to FAST-41 oversight.¹³⁰

Meeting the permitting milestones has been challenging for projects involving complex environmental issues or strong disagreements among agencies. However, the IIJA envisions even more aggressive timelines, as follows. Under the IIJA amendments, the Permitting Council must develop performance schedules that do not exceed two years “to the maximum extent practicable, and consistent with applicable federal law.”¹³¹ The relevant agencies and Permitting Council must provide an explanation if a recommended performance schedule exceeds two years.

Federal agencies must, “to the maximum extent practicable,” issue a record of decision within 90 days of issuance of a final environmental impact statement.

Previously, the lead or facilitating agency had 45 days (after the deadline for posting a project on the Permitting Dashboard) to identify all federal and non-federal agencies likely to have financing, environmental review, authorization, or other responsibilities with respect to the proposed project and to identify and invite federal agencies to become participating or cooperating agencies. Under the IIJA, this timeframe is shortened to 21 days, and potential participating and cooperating agencies will be required to respond within 14 days of receiving the invitation.

One Federal Decision policy is codified to require preparation of a single, joint, interagency environmental impact statement unless the lead agency provides justification in the coordinated project plan that multiple environmental documents are more efficient.

Lastly, the IIJA amendments make the process of amending a permitting timetable more onerous. A permitting timetable may be modified only after the lead agency consults with the executive director of the Permitting Council, which must occur at least 15 days before the lead or facilitating agency and affected cooperating agencies engage in consultation with the participating agencies and the project sponsor to agree upon a different completion date.

¹³⁰ See *supra* at fn 82 and accompanying text. The proponents of the Vineyard Wind project did not use the FAST-41 process, so the interagency coordination, dispute resolution, and statute of limitations provisions of FAST-41 did not apply to that environmental review and authorization process.

¹³¹ 42 U.S.C. 4370m-1(c)(1)(C)(ii)(I)(aa).

C NATIONAL HISTORIC PRESERVATION ACT

The National Historic Preservation Act of 1966 (NHPA)¹³² recognizes the national interest in the preservation of historic properties and directs federal agencies to assume responsibility for the preservation of historic properties owned or controlled by the agency or that are potentially affected by agency actions. The NHPA established the National Register of Historic Places, which is maintained by the DOI and includes districts, sites, buildings, structures, and objects that are noteworthy in American history, architecture, archeology, and culture of national, state, or local significance.¹³³ The NHPA also provides funding for states and Tribes to establish historic preservation programs.

Under NHPA Section 106, federal agencies must consider the effects of their undertakings on historic properties and resources, including on the OCS.¹³⁴ The Section 106 process is detailed in regulations established by the ACHP, an independent federal agency established under the NHPA.¹³⁵ Section 106 requires federal agencies to identify and assess the effects of their actions on historic properties that are listed, or eligible for listing, in the National Register of Historic Places.

In determining whether there are adverse effects on historic resources, agencies must consult with the relevant State Historic Preservation Officer, Tribal Historic Preservation Officer or the Tribe itself, Native Hawaiian organizations, and other parties, including the ACHP, local governments, and members of the public.¹³⁶ In particular, agencies must acknowledge that Tribes and Native Hawaiian organizations possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them.¹³⁷ Adverse effects can include physical disturbance and noise or visual impacts. The Section 106 process can be coordinated with other required reviews, and an agency can substitute review under NEPA for the Section 106 process through procedures specified in the ACHP regulations.¹³⁸

If a federal agency determines that an undertaking will have adverse effects on historic properties, the agency must then attempt to resolve the adverse effects through additional consultation with the relevant parties.¹³⁹ If agreement between the consulting parties is reached, a Memorandum of Agreement or Programmatic Agreement establishes binding terms and conditions on the federal undertaking that will avoid, minimize, or mitigate the adverse effects on historic properties.¹⁴⁰ Essential elements may include a commitment by the parties to compliance with Section 106 and related authorities, identification of specific individuals tasked with reviewing and acting on information defined as necessary for consultation, and an indicative schedule based on an expected date of the relevant decision that would serve as a guide to the resources and timing necessary to conduct consultation throughout the permitting process. Such agreements are non-exclusive and public, allowing government agencies and stakeholders to assess the degree of support for a project proposal and the timing and resources necessary to conduct the environmental review and authorization process. If no agreement can be reached, the federal agency must consider the comments of the ACHP in making a final decision regarding the undertaking.¹⁴¹

132 54 U.S.C. § 300101 et seq.

133 54 U.S.C. § 306108.

134 54 U.S.C. § 306108.

135 36 C.F.R. Part 800.

136 36 C.F.R. § 800.2-5.

137 36 C.F.R. 800.4(c)(1).

138 36 C.F.R. § 800.3(b), -8.

139 36 C.F.R. § 800.6.

140 36 C.F.R. § 800.6(c), -14(b).

141 36 C.F.R. § 800.7.

On the OCS, historic resources that are potentially significant and subject to the Section 106 process include shipwrecks, sunken aircraft and the debris fields of both. They also include lighthouses, submerged prehistoric archeological sites, submerged ancient landforms, and Tribal traditional cultural properties.¹⁴² BOEM requires developers to conduct surveys to locate, identify, and if necessary, investigate historic properties that may be affected by BOEM-authorized activities, and has issued guidance for collecting archeological and historic property information using high-resolution geophysical survey techniques and geotechnical testing as part of the site characterization surveys required under BOEM's regulations for site assessment plans and COPs.¹⁴³

As noted above, the expense of conducting detailed surveys before submitting a COP has been criticized as excessive to the needs of the environmental review process. Physical impacts to submerged historic properties can typically be avoided by adjusting the locations of project facilities in the final engineering design for the project prior to construction. To that end, appropriate avoidance protocols can be incorporated into Programmatic Agreements governing project authorizations. For example, State Historic Preservation Officer- and Tribal Historic Preservation Officer-participation may take the form of a Programmatic Agreement. At the pre-leasing stage, the essential elements would include a commitment by the parties to compliance with the NHPA and related authorities, identification of specific individuals tasked with reviewing and acting on information defined as necessary for consultation, and an indicative schedule based on an expected date of BOEM's lease decision that would serve as a guide to the resources and timing necessary to conduct consultation throughout the permitting process.

D CONSULTATION WITH FEDERALLY RECOGNIZED TRIBES

Various authorities require federal agencies to consult with affected Tribes in the development of offshore wind energy. BOEM's regulations require consultation with affected Tribes at various stages of the regulatory process, including in the identification of areas suitable for leasing and in the review of site assessment plans and construction and operations plans and their related impacts.¹⁴⁴ Federal agencies must also consult with Tribes regarding impacts to cultural resources and other historic properties under the NHPA, as mentioned above.¹⁴⁵ More generally, Executive Order 13175 directs all federal agencies to consult with Tribes regarding actions and policies that affect Tribal interests.¹⁴⁶

Consultation by BOEM is also subject to the DOI's policies on Tribal consultation.¹⁴⁷ Secretarial Order No. 3317 requires DOI agencies to develop and participate in meaningful consultation with federally recognized Tribes where a Tribal implication may arise. A June 29, 2018, memorandum outlines BOEM's current Tribal consultation policy. This memorandum states that "consultation is a deliberative process that aims to create effective collaboration and informed federal decision-making" and is in keeping with the spirit and intent of the NHPA and NEPA, Executive and Secretarial Orders, and DOI policy. More than simply the opportunity to participate in public comment periods, Tribal consultation is carried out on a government-to-government basis and is intended to be a meaningful dialogue.¹⁴⁸ BOEM implements Tribal consultation policies through formal government-to-government consultation, informal dialogue, collaboration, and other engagement. These consultation requirements afford affected Tribes the opportunity to ensure that Tribal views are fully considered and incorporated into decision-making processes.

142 Under the Abandoned Shipwreck Act, the United States claims ownership over abandoned shipwrecks in state waters that are embedded in the submerged lands or coralline formations of a state, or that are found on submerged lands of a state and are listed or eligible for listing on the National Register of Historic Places. 43 U.S.C. § 2101 et seq.

143 BOEM, Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 C.F.R. Part 585 (May 27, 2020), <https://www.boem.gov/sites/default/files/documents/about-boem/Archaeology%20and%20Historic%20Property%20Guidelines.pdf>.

144 30 C.F.R. §§ 585.211(b), -613, -628.

145 54 U.S.C. § 306108.

146 Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, 65 Fed. Reg. 67249 (Nov. 9, 2000).

147 Departmental Manual, 512 DM 5, Procedures for Consultation with Indian Tribes (Nov. 9, 2015), <https://www.doi.gov/sites/doi.gov/files/512-dm-5-procedures-for-consultation-with-indian-tribes.pdf>.

148 512 DM 5.4.

E COASTAL ZONE MANAGEMENT ACT

The federal CZMA creates a unique framework in which state and local agencies have a voice in the management of waters beyond their state jurisdictions. In essence, the CZMA is a “limited waiver of federal supremacy and authority” regarding control over activities beyond a state’s coastal zone.¹⁴⁹ Any federal activity, including authorized uses of the OCS, that may affect the uses or resources of a state’s coastal zone must be consistent with that state’s enforceable coastal management policies. Federally permitted activities must be fully consistent with the enforceable policies, while direct federal agency actions must be consistent with enforceable state coastal policies to the maximum extent practicable.

Congress enacted the CZMA in 1972 with the goal to “preserve, protect, develop, and where possible, to restore or enhance the resources of the nation’s coastal zone.”¹⁵⁰ The CZMA is important in the context of offshore wind because it facilitates coordination on issues affecting both federal and state waters and helps resolve conflicts between competing federal, state, and local interests. The three key provisions of the CZMA relevant to offshore wind are: (1) supporting state development of coastal zone policies and programs,¹⁵¹ (2) requiring federal agencies to assess the consistency of their actions impacting the coastal zone with state coastal policies;¹⁵² and (3) encouraging states to adopt Special Area Management Plans.

Coastal Management Programs

A state’s coastal management program can influence how BOEM conducts its offshore wind leasing activities and how developers implement specific projects. The CZMA facilitates the development of coastal management programs which are voluntary programs developed by states in partnership with the federal government to manage competing uses of the coastal zone. All coastal and Great Lakes states and territories participate in the program except for Alaska. Because states administer their own coastal management programs, the approval and permitting process for projects in the coastal zone can vary significantly.

States have three options for managing uses within their coastal zones: (1) establishing “criteria and standards for local implementation, subject to administrative review and enforcement;” (2) directing “land and water use planning;” and (3) conducting administrative reviews of “all development plans, projects, or land and water use regulations.”¹⁵³ Because states may adopt any method or combination of methods, a wide variety of regulatory bodies and schemes that administer coastal management programs exists at the state level. Some states have consolidated review of coastal activities under one agency, while most states operate their coastal programs through multiple agencies tasked with ensuring consistency with the state’s coastal management program.¹⁵⁴ States may also define their own organizational structure and assign management duties to local, regional, and interstate agencies.¹⁵⁵

Coastal management programs delineate the state’s coastal zone and define permissible uses “which have a direct and significant impact on the coastal waters.”¹⁵⁶ Enforceable policies adopted by states with offshore wind include policies to preserve beaches, limit impact on submerged aquatic resources, protect marine animals, and restrict the allowable time periods and areas for the dredging and disposal of dredged material.¹⁵⁷ Policies protecting fishing

149 Coastal Zone Management Act Federal Consistency Regulations, 71 Fed. Reg 787, 789 (Jan. 5, 2006).

150 16 U.S.C. § 1452.

151 16 U.S.C. §§ 1454–55.

152 16 U.S.C. § 1456(c)(1)(A).

153 16 U.S.C. § 1455b (11).

154 Adam Vann, U.S. Congressional Research Service, R40175, Wind Energy: Offshore Permitting 3 (2021). For example, in California, the California Coastal Commission administers the state’s CMP and issues coastal development permits for projects.

155 16 U.S.C. § 1455(d)(2)(F).

156 16 U.S.C. § 1455(d)(2)(B).

157 Env’tl Law Inst., A Guide to State Management of Offshore Wind Energy in the Mid-Atlantic Region 13 (Apr. 2013), <https://www.midatlanticocean.org/wp-content/uploads/2014/03/A-Guide-to-State-Management-of-Offshore-Wind-Energy-in-the-Mid-Atlantic-Region.pdf> [hereinafter “MARCO Guide”].

and shipping interests are also common.¹⁵⁸ In addition to outlining use policies, the coastal management program must also identify areas of particular concern and create a planning process for energy facilities likely to be located in the coastal zone or that significantly affect the coastal zone, which might include offshore wind projects in federal waters.¹⁵⁹ States that consider offshore wind in their coastal management programs include New York,¹⁶⁰ Rhode Island,¹⁶¹ and California, through the Morro Bay Local Coastal Program.¹⁶²

Federal Consistency Review

For states with approved coastal management programs, federal agencies, including BOEM, must follow the consistency provisions of the CZMA.¹⁶³ The federal consistency provisions require that any “Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone” must be consistent “to the maximum extent practicable” with the “enforceable policies” of a state’s coastal management program.¹⁶⁴ A federal agency will document compliance with this consistency requirement by issuing a consistency determination, including a detailed description of the federal activity, any associated facilities, and the coastal effects.¹⁶⁵ This includes transmission cables that run to shore and impacts caused by construction activities.¹⁶⁶ In the past, BOEM has both documented its consistency review of proposed leasing activities concurrent with its environmental analysis of leasing activities under NEPA or has done it separately.¹⁶⁷

After completing a consistency determination, BOEM must allow the affected state to review the determination prior to BOEM’s approval of the federal action. If the state concludes the activity is consistent, or consistent to the “maximum extent practicable,” the activity can proceed.¹⁶⁸ If the state disagrees with BOEM’s analysis, it must describe how the activity is inconsistent and provide any alternative measures or conditions that would allow it to be consistent with the coastal management program.¹⁶⁹ BOEM will attempt to resolve any issues with the state, but the CZMA allows it to proceed with the lease sale without state approval if it concludes there are legal impediments to full consistency or that its proposed action is fully consistent with the state’s enforceable policies notwithstanding the state’s objection.¹⁷⁰

There is a similar process by which a private party seeking a federal license or permit to operate off coastal waters must also assess the consistency of its project with the state coastal policies.¹⁷¹ The developer’s project-specific assessment is referred to as a consistency *certification*.¹⁷² The federal agency may issue a permit with the state’s concurrence to a developer’s consistency certification; the state may object, however, leaving the federal agency either to amend its permit to following the state guidelines or appeal the state’s determination to the Secretary of the Department of Commerce (DOC) who may override the state’s determination on a finding that the activity is consistent with the CZMA or is in the interest of national security.¹⁷³ Review is similar for parties seeking

158 *Id.* at 25–26, 28–29.

159 16 U.S.C. § 1455(d)(2).

160 New York Dep’t of State, New York State Coastal Management Program and Environmental Impact Statement II-5 (2020), https://dos.ny.gov/system/files/documents/2021/04/ny_cmp_dec2020_w-bookmarks_working_topost.pdf.

161 Jennifer McCann, et al, Rhode Island Ocean Special Area Management Plan ES 2 (Oct. 19, 2010), <https://seagrant.gso.uri.edu/oceansamp/index.html> [hereinafter RI SAMP].

162 Plan Morro Bay 4-37 (May 2021), <https://www.morrobayca.gov/DocumentCenter/View/15424/Plan-Morro-Bay-GP-LCP-Final>.

163 15 C.F.R. Part 930.

164 16 U.S.C. § 1456(c)(1)(A); 15 C.F.R. §§ 930.30–930.46.

165 15 C.F.R. §§ 930.36.

166 15 C.F.R. § 930.1 (“any coastal use or resource” covers construction, undersea cables, and transmission lines).

167 In New York, BOEM issued its consistency determination along with the environmental assessment for leasing activities. Dep’t of Interior, Coastal Zone Management Act, Consistency Determination, New York Bight Wind Energy Areas Offshore the States of New York and New Jersey (2021), <https://www.nj.gov/dep/offshorewind/docs/njdep-ny-bight-consistency-determination.pdf>. In California, BOEM released its consistency determination for the Humboldt lease area prior to the leasing process. Dep’t of Interior, Consistency Determination for Leasing Wind Energy Areas Offshore Humboldt County, California (Jan. 24, 2022), <https://documents.coastal.ca.gov/assets/upcoming-projects/offshore-wind/Humboldt-CD.pdf>.

168 15 C.F.R. §§ 930.32, 930.35.

169 15 C.F.R. § 930.43(a).

170 15 C.F.R. § 930.43(d).

171 15 C.F.R. §§ 930.50–930.66.

172 15 C.F.R. § 930.57.

173 15 C.F.R. § 930.63; 15 C.F.R. §§ 930.120–930.131.

approval for OCS energy exploration, development, and production plans.¹⁷⁴ Some state agencies have a list of federal licenses or permit activities that typically require a consistency certification under their respective coastal management programs.¹⁷⁵

A BOEM lease sale is a “federal agency activity” subject to the consistency provisions of the CZMA. Prior to the issuance of an offshore wind lease or the approval of a site assessment plan, BOEM must make a consistency determination under the CZMA and submit it to the affected state. To meet coastal management program requirements, BOEM may include measures such as fisheries agreements and habitat protection policies.¹⁷⁶ For example, the Vineyard Wind consistency determinations for Massachusetts and Rhode Island were conditioned on the developer’s implementation of a fisheries plan.¹⁷⁷ The consistency determination for Empire Wind’s Site Assessment Plan in waters off of New York and New Jersey calls for a Fisheries Mitigation Plan and a Fisheries Communication Plan.¹⁷⁸ The mitigation measures in the Empire Fisheries Mitigation Plans were developed through stakeholder feedback and engagement.

After obtaining the lease, the developer will then be required to submit a consistency certification alongside its COP stating that the project will be consistent with the state’s coastal management program within the leased area.¹⁷⁹ Developers will also have to include mitigation policies to meet state consistency requirements such as measures to protect commercial and recreational fisheries.¹⁸⁰ For example, the consistency certification for the South Fork Deepwater Wind project involved an assessment of commercial and recreational fisheries and a fisheries communication plan to comply with the Rhode Island Special Area Management Plan.¹⁸¹

Special Area Management Plans

Special Area Management Plans are tools for states to develop more detailed offshore wind policies in addition to their coastal management programs. The CZMA encourages states to adopt the plans, “which provide for increased specificity in protecting significant natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas ... and improved predictability in governmental decision-making.”¹⁸² Local coastal agencies use Special Area Management Plans to facilitate the coastal area planning process while considering input from federal and state agencies and the public. Much like coastal management programs, federal permits must undergo consistency review with the Special Area Management Plan prior to approval.¹⁸³

While several coastal areas have developed Special Area Management Plans, only Rhode Island has adopted one for the purpose of planning for offshore wind development. The Rhode Island Ocean Special Area Management Plan, adopted in 2010, helped determine the siting of the Block Island Wind Farm, which went into operation in 2016.¹⁸⁴ The Rhode Island Coastal Resources Management Council developed the plan in response to Rhode Island’s Renewable Energy Mandate, which included a requirement that 15% of the state’s power come from offshore wind by 2020. The plan aimed to streamline permitting, balance development and the protection of ocean resources, complete necessary studies for the permitting process, and foster an informed public constituency.¹⁸⁵ The plan was the result of a stakeholder-driven planning process that involved over a hundred meetings and

174 15 C.F.R. §§ 930.70–930.85.

175 15 C.F.R. § 930.53 (e.g., Army Corps of Engineers 404 permits and USCG bridge permits).

176 See Vineyard Wind, Draft Construction and Operations Plan, Vol. III, Appendix III-D, III-E, III-F (June 3, 2020), <https://www.boem.gov/renewable-energy/state-activities/vineyard-wind-construction-and-operations-plan-volume-iii> [hereinafter Vineyard COP]; MARCO Guide, *supra* note 112, at 20.

177 See Vineyard COP, *supra* note 131, at Appendix II-P 1–2.

178 Empire Wind, Empire Wind Project Construction and Operations Plan: Appendix A: Coastal Zone Management Consistency Statements A-23 (Apr. 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/Appendix-A-CZM-Consistency-Cert.pdf>.

179 30 C.F.R. § 585.626. For unsolicited leases, the consistency certification must be submitted after BOEM determines that there is no competitive interest in the lease.

180 See South Fork Wind Farm, Coastal Zone Management Consistency Statements (New York, Rhode Island, and Massachusetts) A-2-2 (Jan. 2019), https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/NY/App-A_SF WF_CZM-Rvw-2019-01-09.pdf.

181 *Id.*

182 16 U.S.C. § 1452(3).

183 16 U.S.C. § 1456.

184 RI SAMP, *supra* note 116.

185 *Id.* at 11

thousands of public comments on local and regional issues.¹⁸⁶ It covers topics such as recreation, commercial fishing, transportation, renewable energy, and future uses. It also includes detailed analyses covering transmission components of offshore wind facilities including cables and substations.¹⁸⁷

On a broader scale, the goals of conflict avoidance and adverse environmental impact minimization were fundamental to President Obama's National Ocean Policy (NOP). The same principles carried over into the voluntary plans developed for the Northeast Ocean Plan and the Mid-Atlantic Regional Ocean Action Plan, developed as an outgrowth of the Obama NOP. Both plans, developed through a consensus process with input from myriad stakeholders and ocean users, identify locations for offshore renewable energy development that avoid conflicts among resource-user groups and conservation concerns. The concept of selective project siting to avoid conflicts has been embraced in comprehensive ocean planning efforts by ocean planning partnerships. Sometimes referred to as coastal and marine spatial planning or ecosystem-based management, this tool has been used effectively in some areas to locate offshore wind projects, such as off the coast of Rhode Island where the location of the Block Island Project in state waters was the result of the state's multiyear Special Area Management Plan process. At the federal level, the late Senator Ted Kennedy (D-MA) and former U.S. Representative Bill Delahunt (D-MA) advocated for regional planning to site offshore wind projects in 2009 when they wrote to then-President Barack Obama trying to avoid the conflict associated with Cape Wind. Ocean planning as a mechanism to reduce conflicts continues to be requested by various stakeholder groups looking for solutions to advance offshore wind, deconflict competing uses, and support ocean co-use with specific recommendations dating back to the Stratton Commission Report in 1969. Recognition of the need for coordination in ocean governance became the primary theme of the next two broad-based policy-level reviews of ocean management: the Pew Commission Report in 2003, *America's Living Oceans: Charting a Course for Sea Change*, and the 2004 Report of the U.S. Commission on Ocean Policy, *An Ocean Blueprint for the 21st Century*.¹⁸⁸

F ENDANGERED SPECIES ACT

Before an offshore wind project is approved, BOEM must work with the NMFS and/or the U.S. FWS (collectively, the Services) to determine whether the project will comply with the ESA¹⁸⁹ at all phases—leasing, construction, operation, maintenance, and decommissioning.¹⁹⁰ Past examples make clear that no two projects are alike, and the extent of review and mitigation required under the ESA depends on the potential harm a project may cause to threatened and endangered species or critical habitat within the action area.

Background

The ESA was enacted in 1973 to protect and conserve endangered and threatened fish, wildlife, and plant species and their habitats. NMFS administers Section 7 consultations for marine and anadromous species, while FWS administers consultations for select pelagic, terrestrial, and freshwater species.¹⁹¹ For most offshore wind projects, BOEM would need to consult with both agencies. Although FWS has issued guidance for land-based wind energy development,¹⁹² neither agency has policies in place for offshore wind development.

The sections of the ESA relevant to offshore wind development include Sections 7 and 9. Section 7—Interagency

186 Jennifer McCann and Sarah Schumann, The Rhode Island Special Area Management Plan: Managing Ocean Resources through Coastal and Marine Spatial Planning: A Practitioner's Guide 8 (2013), https://seagrant.gso.uri.edu/oceansamp/pdf/Practitioner_Guide.pdf.

187 RI SAMP, supra note 116, at 820.3.

188 U.S. Commission on Marine Science, Engineering and Resources. Our Nation and the Sea: A Plan for National Action: Report of the Commission on Marine Science, Engineering and Resources. U.S. Commission on Marine Science, Engineering and Resources, 1969. U.S. Commission on Ocean Policy. An Ocean Blueprint for the 21st Century. Final Report. Washington, DC, 2004 ISBN#0-9759462-0-X Pew Oceans Commission. 2003. America's Living Oceans: Charting a Course for Sea Change. A Report to the Nation. May 2003. Pew Oceans Commission, Arlington, Virginia.

189 16 U.S.C. 1531 et seq.

190 This summary focuses on the first four phases of an offshore wind development and assumes the ESA implications of decommissioning would not arise for years after project development.

191 50 C.F.R. § 402.01(b).

192 U.S. Fish and Wildlife Service, Land-Based Wind Energy Guidelines OMB, March 23, 2012, https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf.

Cooperation—requires federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.¹⁹³ Section 9—Prohibited Acts—prohibits the taking of endangered species.¹⁹⁴ However, under Section 7(o)(2), the action agency and project proponents are exempt from the Section 9 taking prohibition as long as they demonstrate clear compliance with the implementing terms and conditions of the Services’ incidental-take statement.

Section 7 Consultation

The ESA process starts with informal consultation between the lead agency—in the context of offshore wind, BOEM—and the Services to determine whether formal consultation or a conference is required.¹⁹⁵ This process can occur both during the identification and assessment of wind areas, and once a lease has been issued and the lessee submits a COP to BOEM for approval, at which point BOEM would initiate project-specific consultation with the Services. The purpose of informal consultation is to allow the agencies to discuss modifications to the project that might eliminate the need for formal consultation by avoiding, minimizing, or offsetting the potential negative impacts of the project. The result of informal consultation is a BA which evaluates the proposed project and potential effects on listed species and critical habitat. The project developer may be required to conduct additional studies prior to completion of the BA, which can be both time- and cost-intensive. Project applicants often play a direct role during informal consultation when assigned the status of a designated nonfederal representative. If BOEM determines in the BA that its project “may affect but is not likely to adversely affect” any listed species or critical habitat, and the Services concurs with that determination, the consultation is terminated, and no further action is required under section 7. The Services will issue a Letter of Concurrence (LOC), which includes any conditions to which BOEM agreed are necessary to avoid adverse effects. Any action that qualifies for a “not likely to adversely affect” determination is consistent with the ESA duty to avoid jeopardy to listed species and adverse modification of critical habitat.

If the BA concludes that the proposed action may adversely affect a listed species or critical habitat, formal consultation is required.¹⁹⁶ In the BAs produced for Vineyard Wind, NMFS found that a number of ESA-listed species could be affected by the project, including the NARW, one of the most endangered large whale species.¹⁹⁷ Effects of offshore wind development on right whales has been a primary concern for conservationists as other wind developments are contemplated off the New England coast. Formal consultation results in a Biological Opinion (BO) that states whether the proposed action will jeopardize the continued existence of listed species or adversely modify critical habitat.¹⁹⁸

Incidental Take Statement

BOs typically include an incidental take statement (ITS).¹⁹⁹ The ITS expresses the amount or extent of anticipated “take”²⁰⁰ (e.g., death, injury, harm or harassment) of listed species caused by the proposed action and provides an exemption from the Section 9 prohibitions on such take. The ITS’s terms and conditions are non-discretionary. Thus, if incidental take is anticipated, the action agency and project proponent must comply with the reasonable and prudent measures and implementing terms and conditions in the ITS to avoid potential liability for incidental take.

193 16 U.S.C. § 1536.

194 16 U.S.C. § 1538(a)(1)(B)–(C).

195 50 C.F.R. § 402.13(a).

196 50 C.F.R. § 402.14(a).

197 See NMFS, Vineyard Wind Offshore Wind Energy Project Biological Assessment at 64-90 (March 2019), <https://www.boem.gov/sites/default/files/documents/renewable-energy/NMFS-BA-Supplemental-info.pdf>; see also NMFS, Vineyard Wind Offshore Wind Energy Project Biological Assessment Supplement at 8-11 (May 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-NOAA-BA-Supplement.pdf>.

198 50 C.F.R. §§ 402.14(h).

199 ITSs are not issued for ESA-listed plant species.

200 “Take” means “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. § 1532(19).

Once the Services issue a BO and ITS, the action agency is required to determine “whether and in what manner to proceed with the action in light of its Section 7 obligations and the Services’ biological opinion.” 50 C.F.R. § 402.15. Although the BO is not binding on the action agency, it is afforded substantial deference by any reviewing court. Failure to explain in the administrative record how the agency addressed the BO could expose the agencies to a judicial challenge under both the ESA and the Administrative Procedure Act. Further, the protective coverage of Section 7(o)(2) lapses if the action agency and project proponent fail to implement the terms and conditions of the ITS.

Applicability of the ESA to Offshore Wind Development

Leasing, construction, and operation of an offshore wind project could cause the take of listed species or adverse modification of critical habitat. Site characterization work—namely geophysical, geotechnical, and biological surveys—could adversely affect species due to noise levels and disturbance.

In February 2021, BOEM addressed the effects of such site characterization and site assessment activities work to be carried out to support projects off the U.S. Atlantic coast in an updated Data Collection and Site Survey Activities BA and added new Project Design Criteria.²⁰¹ In June 2021, NMFS issued a programmatic informal section 7 consultation on the BA.²⁰² Subsequently, BOEM revised the mitigation, monitoring, and reporting conditions for threatened and endangered species associated with the activities covered in the consultation.²⁰³

During construction, the primary activities of concern include pile driving, geophysical surveys, and vessel traffic. For the Cape Wind offshore wind project, NMFS determined that both pile driving and high-resolution geophysical surveys could directly affect sea turtle species due to potentially harassing levels of sound.²⁰⁴ And for the Vineyard Wind project, NMFS concluded in its BO that the only construction activity likely to have adverse effects on ESA-listed species was pile driving, which would lead to underwater noise that could affect whale and turtle species, including the NARW.²⁰⁵

The ESA-related complexity of a particular site (i.e., the number and type of species involved and the extent of adverse effects), public opposition, and availability of scientific data all impact how long the consultation process will take. For the Cape Wind project, FWS and NMFS completed separate BOs for different species, which took roughly three years from initiation of informal consultation in 2005 through issuance of the BOs in 2008. NMFS then reinitiated consultation in 2010 due to increased sightings of NARWs. In 2014, the D.C. District Court held that FWS and NMFS failed to meet ESA requirements in approving the Cape Wind Project.²⁰⁶ The proposed Cape Wind Project would have constructed as many as 130 wind turbine generators and a 10-story tall electrical service platform in an approximately 25-square-mile area on Horseshoe Shoal in Nantucket Sound, which continues to see aggregations of endangered NARWs. The court found that NMFS failed to meet ESA requirements in its review of the Cape Wind Project’s impacts to endangered right whales. Specifically, NMFS had failed to issue an ITS regarding endangered right whales even though, as the court found, incidental “take” (or harm to the whales) could have occurred as a result of the Project. In light of this, and what it found to be ESA violations for other species, the court remanded ESA review to FWS and NMFS for further decision-making. Ultimately, after years of litigation and public opposition, the Cape Wind lease was relinquished. In contrast, the Block Island project—a much smaller, five-turbine project compared to the 130-turbine Cape Wind project—underwent consultation, including re-initiation due to changes in the project plan, within three years with relatively minimal opposition.

201 Data Collection and Site Survey Activities for Renewable Energy on the Atlantic Outer Continental Shelf Biological Assessment (Feb. 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/OREP-Data-Collection-BA-Final.pdf>.

202 NMFS, Letter of Concurrence (June 29, 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/OSW-surveys-NLAA-programmatic.pdf>.

203 BOEM Office of Renewable Energy Programs, Atlantic OCS Region, Project Design Criteria and Best Management Practices for Protected Species Associated with Offshore Wind Data Collection (Nov. 22, 2021), <https://www.boem.gov/sites/default/files/documents/PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf>.

204 National Marine Fisheries Service, Cape Wind Energy Project: Biological Assessment, December 2010, <https://www.epa.gov/sites/production/files/2015-08/documents/cape-wind-biological-opinion-2010dec30.pdf>.

205 Due to mitigation measures including avoidance of peak seasons for pile driving activities, NMFS concluded that pile-driving impacts may affect, but are not likely to adversely affect North Atlantic Right Whales. National Marine Fisheries Service, Vineyard Wind Offshore Energy Project: Biological Opinion, September 2020, <https://www.boem.gov/sites/default/files/documents/renewable-energy/Final%20Biological%20Opinion%20from%20NOAA%20Fisheries.pdf>.

206 Pub. Emps. For Env’t Responsibility v. Beaudreau, 25 F. Supp. 3d 67 (D.D.C. 2014).

G MARINE MAMMAL PROTECTION ACT

Offshore wind developments have the potential to impact a wide range of marine mammals. Where a project area intersects with the habitat of marine mammals, BOEM must be prepared to work with NMFS and FWS to ensure compliance with the Marine Mammal Protection Act²⁰⁷ (MMPA) before approving the project. If a proposed project would likely lead to “take” of any marine mammals, the wind energy developer must obtain a permit for take before the project can move forward.

Background

The MMPA prohibits the “take” of any marine mammal without prior authorization. Take is defined as “harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal.”²⁰⁸ “Harassment” is further defined in two levels.²⁰⁹ Level A harassment is any act of pursuit, torment, or annoyance that “has the potential to injure a marine mammal or marine mammal stock in the wild.”²¹⁰ Level B harassment refers to acts that have “the potential to disturb [but not injure] a marine mammal or marine mammal stock in the wild by disrupting behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.”²¹¹ Although “take” is generally prohibited under the MMPA, Sections 101(a)(5)(A) and (D) authorize the Services to allow, upon request, the incidental, but not intentional, take of small numbers of certain marine mammal species²¹² by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region.²¹³

Incidental Take Authorizations

Before the FWS or NMFS can issue an incidental take authorization of any kind, it must determine that the take would be small in number and have no more than a negligible impact on marine mammals.²¹⁴ As part of the authorization process, NMFS must prescribe the permissible methods of take as well as the mitigation and monitoring measures that would affect the least practicable adverse impact on the species or stocks of marine mammals and their habitat, paying particular attention to rookeries, mating grounds, and other areas of significance.²¹⁵ All authorizations include requirements pertaining to the monitoring and reporting of such takings, and the agency must provide an opportunity for public review and comment before issuing the authorization.²¹⁶

To determine which authorization suits the proposed project activity, the project proponent should consider the impact and duration of the proposed activity. For activities that would result only in take by harassment, the lead agency can issue an IHA which authorizes harassment to marine mammals during a time period of up to one year.²¹⁷ After receiving an application for an IHA, FWS or NMFS is required to publish a proposed authorization in the Federal Register and open a 30-day public comment period.²¹⁸ Once the public comment period closes, the agency will issue an authorization if the agency determines the incidental take by harassment would be by a U.S. citizen, occur within a specific geographic region, involve only a small number of marine mammals within that

207 16 U.S.C. 1361 et seq.

208 Activities that qualify as “take” include but are not limited to the following: restraint of a marine mammal for any period of time; tagging a marine mammal; negligent or intentional acts (e.g., negligent operation of a vessel) that result in disturbing or molesting a marine mammal. 50 C.F.R. § 216.3.

209 It is important to note that the MMPA and ESA define harassment differently.

210 16 U.S.C. § 1362(18)(A)(i), (C).

211 *Id.* § 1362(18)(A)(ii), (D).

212 FWS is responsible for the protection of manatees, dugongs, sea otters, walrus, and polar bears, while NMFS is responsible for whales, dolphins, porpoise, seals, and sea lions.

213 See 16 U.S.C. § 1371(a)(5)(A), (D).

214 *Id.* § 1371(a)(5)(A)(i)(II)(aa), (D)(ii)(I).

215 *Id.* § 1371(a)(5)(A)(i)(II)(aa), (D)(ii)(I).

216 *Id.* § 1371(a)(5)(A)(i), (D)(iii).

217 *Id.* § 1371(a)(5)(D).

218 *Id.* § 1371(a)(5)(D)(iii).

region, and have a negligible impact on such species or stock.²¹⁹ While the MMPA limits the duration of an incidental harassment authorization to one year, in practice, the Services reissue authorizations for the duration of the covered activities even after that year has expired.²²⁰

Alternatively, the project proponent could seek an LOA, which can be issued for periods up to five years and can cover all forms of incidental take, not just harassment.²²¹ For an LOA, FWS or NMFS must first issue incidental-take regulations.²²² A range of actions by multiple citizens may be covered under such regulations, as long as the actions are similar or associated and occur within a specified geographic area. Once NMFS or FWS promulgates the regulations, U.S. citizens can request a LOA to carry out activities that would fall under the analysis within the issued regulations. Like IHAs, LOAs can be issued only if the incidental take would occur by a U.S. citizen within a specific geographic region, involve only a small number of marine mammals within that region, and have a negligible impact on such species or stock.²²³

The MMPA does not mandate a timeline for issuance of incidental-take regulations, but the rulemaking process generally requires publication of both a proposed and final rule.²²⁴ This process can take a year or more before issuance of LOAs under the regulations can be considered.

NMFS Regulations

NMFS has also released guidelines on the auditory impact of sound exposure on marine mammals. NMFS's Revised Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing²²⁵ was completed in collaboration with the National Ocean Service, Office of National Marine Sanctuaries to provide NMFS' analysts/managers and other relevant action proponents/stakeholders with scientific guidance to determine whether and how their activities are expected to result in potential impacts to marine mammal hearing via acoustic exposure. Specifically, the Guidance identifies the thresholds at which individual marine mammals are predicted to experience changes in their hearing sensitivity (either temporary or permanent) for acute, incidental exposure to underwater anthropogenic sound sources. These guidelines, however, are not authorized to evaluate take under the MMPA.

Interaction of the ESA and MMPA

Many marine mammal species that would occur in an offshore wind development area are listed as endangered or threatened under the ESA, in which case the requirements of both the ESA and the MMPA would apply. The MMPA is more restrictive than the ESA, and when the two statutes conflict, Section 17 of the ESA mandates that the relevant MMPA provision apply.²²⁶ When an action will result in incidental take of ESA-listed marine mammals, Section 7 requires that (1) such taking first be authorized under MMPA section 101(a)(5) before the Secretary issues the ITS,²²⁷ and (2) the ITS specifies those mitigation measures that are necessary to comply with Section 101(a)(5) of the MMPA.²²⁸ This means that the terms of an ITS and the exemption from Section 9 of the ESA become effective only upon the issuance of MMPA authorization to take the marine mammals.

²¹⁹ *Id.* § 1371(a)(5)(D)(i).

²²⁰ In its notice of a proposed IHA authorizing harassment during construction activities for the Vineyard Wind project, NMFS requested comment on its proposal that, on a case-by-case basis, the agency would issue a one-year IHA renewal with an expedited 15-day public comment period when (1) another year of identical or nearly identical activities is planned, or (2) the activities would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities. 84 Fed. Reg. 18346, 18381 (Apr. 30, 2019).

²²¹ 16 U.S.C. § 1371(a)(5)(A).

²²² *Id.* § 1371(a)(5)(A)(i)(II).

²²³ *Id.* § 1371(a)(5)(D)(i).

²²⁴ *Id.* § 1371(a)(5)(D)(i)(II). On March 7, 2022, NMFS announced the receipt of the first offshore wind letter of authorization regulation request, submitted by Ocean Wind LLC for the construction phase of the Ocean Wind 1 project off the coast of New Jersey. 87 Fed. Reg. 12,666-67.

²²⁵ 2018 Revision to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (April 2018), https://media.fisheries.noaa.gov/dam-migration/tech_memo_acoustic_guidance_%2820%29_%28pdf%29_508.pdf.

²²⁶ 16 U.S.C. § 1543

²²⁷ See *id.* § 1536(b)(4)(C); see also 50 C.F.R. § 18.27, 228, 402.14.

²²⁸ *Id.* § 402.14(i)(1)(iii).

Applicability of the MMPA to Offshore Wind Development

Offshore wind developments include numerous activities that can affect marine mammals, and the science on aspects like marine mammal behavior and reproduction are actively being researched. Impacts on marine mammals occur during both the development and operation of a facility with harassment being the most likely form of take. As a result, take authorizations for offshore wind energy projects typically include a suite of mitigation, monitoring, and reporting measures with which operators must comply to prevent or reduce the adverse effects of those activities on marine mammals.²²⁹

Mitigation measures often are required to reduce the potential impacts to marine mammals from noise, whether that noise is associated with site assessment activities (e.g., geophysical surveys), construction (e.g., pile driving, vessel operations, cable laying, placement of scour protection, dredging), or operation (e.g., wind turbine operation, vessel and aircraft operations, and maintenance activities).²³⁰ Measures to reduce potential noise impacts caused by geophysical surveys include establishing site-specific exclusion and harassment zones and gradually increasing the sound source to alert marine mammals that may be in the area (referred to as “soft-start”). For pile driving, mitigation measures may similarly include implementing soft-start as well as reducing pile driving power, delaying pile driving when a marine mammal gets too close, and prohibiting pile driving during nighttime, low visibility conditions, or certain seasons associated with higher densities of marine mammals in the area. Sound attenuation devices (e.g., bubble curtains, cofferdams, double-walled shields/piles) may also be implemented to mitigate noise from a number of sources. Support vessels operating during construction and maintenance activities represent an increased risk of vessel strikes and may be subject to speed limits and other mitigation measures in certain areas or within set distances from marine mammals.

Offshore Wind IHAs and LOAs in Practice

NMFS, FWS, and BOEM have all produced useful guidance on the application for an incidental take authorization and other requirements under the MMPA. To assist in the Incidental Take Application authorization process, NMFS has provided application instructions²³¹ for the Incidental Take Application, instructions²³² on applying for IHA renewals, and guidance²³³ on the meaning of “adequate and complete” for Incidental Take Applications. As outlined by NMFS, to prepare an application, applicants must submit 14 specific pieces of information that adequately describe the action that can be expected to result in incidental taking of marine mammals, the nature of the action’s anticipated effects on marine mammals and their habitats, the availability of marine mammals for subsistence uses (not relevant outside of Alaska), and the methods of mitigating, monitoring, and reporting on the effects of the action.²³⁴ NMFS requires that the application specify the dates, duration, and geographic region of the activity; the species and numbers of marine mammals likely to be found in the activity area; the affected species status and distribution; and take estimates for marine mammals by age, sex, and reproductive condition. The applicant must make a case as for why the predicted future impacts constitute a negligible impact²³⁵ to the relevant species or stocks. NMFS also requests that the applicant briefly discuss how activities and monitoring will be coordinated, and how the applicant plans to share information with other organizations to minimize incidental take and increase knowledge of marine mammal. Due to the tight deadlines in the MMPA for IHA issuance, NMFS is very cautious in ensuring that an application is sufficient and complete for processing. This puts a strong burden on applicants to work closely with

229 See, e.g., Draft Incidental Harassment Authorization for Vineyard Wind, https://media.fisheries.noaa.gov/dam-migration/vineyardwind_2019iha_draftiha_opr1.pdf.

230 For examples of mitigation measures, see, e.g., BOEM, Record of Decision: South Fork Wind Farm and South Fork Export Cable Project Construction and Operations Plan at Appendix A (Nov. 24, 2021), https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Record%20of%20Decision%20South%20Fork_0.pdf; see also BOEM Office of Renewable Energy Programs, Atlantic OCS Region, Project Design Criteria and Best Management Practices for Protected Species Associated with Offshore Wind Data Collection (Nov. 22, 2021), <https://www.boem.gov/sites/default/files/documents/PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf>.

231 NOAA, Apply for an Incidental Take Authorization, <https://www.fisheries.noaa.gov/national/marine-mammal-protection/apply-incident-take-authorization>.

232 NOAA, Incidental Harassment Authorization Renewals, <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-harassment-authorization-renewals>.

233 NOAA, Adequacy and Completeness for MMPA Incidental Take Applications, <https://www.fisheries.noaa.gov/national/marine-mammal-protection/adequacy-and-completeness-mmpa-incident-take-applications>.

234 50 C.F.R. § 216.104(a).

235 16 U.S.C. § 1371(a)(5)(A), (D).

NMFS to ensure a sufficient application. Further, IHAs are subject to NEPA, and an EA is usually required. NMFS maintains an updated list²³⁶ online of IHAs granted for renewable energy activities, including authorizations in process, active authorizations, expired authorizations, and withdrawn and inactive authorizations. NMFS tracks both active and expired incidental take authorizations for offshore wind energy projects.²³⁷ Currently, all active incidental take authorizations for offshore wind energy projects are IHAs. Notably, there have never been LOA regulations for offshore wind development.²³⁸ However, NOAA may be contemplating the use of LOAs for future projects.²³⁹

For applicants looking to gain a better understanding of its review process, FWS has published documentation²⁴⁰ on its internal review process for authorizing harassment under the MMPA. The process provides general guidance on its processing of incidental take authorizations and includes a list of the information that will be required for the Services to consider in processing an IHA.

Finally, BOEM has published guidelines for providing information on marine mammals and sea turtles for applications related to renewable energy development on the Atlantic OCS.²⁴¹ The guidelines are “meant to clarify and provide a general understanding of the information which BOEM, in consultation with FWS and NMFS, requires to adequately address impacts of offshore renewable energy projects on biological, social, and economic resources” and include recommendations related to the MMPA and for early coordination with BOEM and NMFS.

H MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Background

Passed in 1976, the Magnuson-Stevens Fishery Conservation and Management Act²⁴² (MSA) was adopted to create a U.S. fishery conservation zone off the U.S. coast, prevent overfishing, allow recovery of overfished stocks, and conserve and manage fishery resources. The MSA governs marine fisheries management with the goal of fostering long-term biological and economic sustainability of federal fisheries. Fishery Management Plans developed under the MSA must prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry. The MSA requires federal agencies to consult on the impact of their proposed actions on essential fish habitats (EFHs)—areas such as coral reefs, kelp forests, bays, wetlands, and rivers necessary for fish reproduction, growth, feeding, and shelter.

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- 236 NOAA, Incidental Take Authorizations for Other Energy Activities (Renewable/LNG), <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable>.
- 237 See NOAA Fisheries Incidental Take Authorizations for Other Energy Activities (Renewable/LNG), <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable>.
- 238 By contrast, offshore oil and gas MMPA incidental take is often authorized under LOA regulations covering wide geographic areas. For five-year periods, the regulations are based on an industry-wide organization request with individual LOAs issued to specific companies developing on their own leases. To cite two recent examples, on June 1, 2021, FWS published proposed regulations in response to a request from the Alaska Oil and Gas Association to authorize through LOAs the incidental take of polar bears in all aspects of oil and gas activity (exploration, development, production and transportation) in the Beaufort Sea in Alaska, 86 Fed. Reg. 29,3645-429, and on April 19, 2021, NMFS published final LOA regulations in response to an application from BOEM to authorize the incidental take of marine mammals during oil and gas geophysical surveys in the Gulf of Mexico, 86 Fed. Reg. 5322– 5450, and on August 19, 2021, issued an individual LOA under those regulations to Telesis Geophysical Services, Inc. for a specified number of takes of specified marine mammals during archaeological and geohazards surveys in the Eugene Island and Ewing Bank Areas of the Gulf. 86 Fed. Reg. 46,683.
- 239 National Oceanic Atmospheric and Oceanic Administration Comments on Draft Environmental Assessment and Essential Fish Habitat: Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight, (Docket No. BOEM-2021-0054), <https://www.regulations.gov/comment/BOEM-2021-0054-0045>.
- 240 FWS, Internal Review Process for Authorizing Harassment under Section 101(a)(5)(D) of the Marine Mammal Protection Act (June 2016), <https://www.fws.gov/policy/InternalReviewMM.pdf>.
- 241 Guidelines for Providing Information on Marine Mammals and Sea Turtles for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 C.F.R. Part 585 (June 2019), <https://www.boem.gov/sites/default/files/renewable-energy-program/Regulatory-Information/BOEM-Marine-Mammals-and-Sea-Turtles-Guidelines.pdf>.
- 242 16 U.S.C. 1801 et seq.

Applicability of the MSA to Offshore Wind Development

Potential conflicts with recreational and commercial fishery stakeholders and adverse effects on fisheries surveys that provide the basis for population-based fishery management regulations present a major concern in the development of offshore wind energy projects. Offshore wind projects have the potential to significantly impact fisheries because the fishing industry would experience unavoidable disruptions due to lost fishing ground, construction, navigational hazards, and lost fishing gear. There is the evidence of a substantial artificial reef effect associated with turbine underwater structure which could create benefits for fisheries. Further, offshore wind projects have been proposed within survey areas and have the potential to significantly disrupt long-term data collections, introducing uncertainty into fishery management data that would further restrict fishing activities to compensate for increased uncertainty regarding the status of fish stocks.

Fisheries already are subject to pressure from ongoing activities, including existing fishery management efforts and climate change. Management efforts may include limited fishing seasons, quotas, and closed areas, which constrain how the fisheries are able to operate and adapt to change. Additionally, climate change will increasingly affect fish species which will impact fisheries differently. Changing environmental and ocean conditions (currents, water temperature), increasing storm magnitude or frequency, and developing shoreline changes can impact fish distribution, populations, and availability to fisheries.

Offshore wind development stands to further influence fishery management measures necessary to maintain maximum sustainable yield under the MSA in two identifiable ways: (1) by changing fishing behavior to such an extent that overall harvest levels are not as predicted, and (2) by impacting fisheries' scientific surveys on which management measures are based. If scientific survey methodologies are not adapted to sample within wind energy facilities, then there could be increased uncertainty in scientific survey results, which would increase uncertainty in fisheries stock assessments and quota setting processes. Future spatial management measures may change in response to changes in fishing behavior due to the presence of structures. Impacts on management processes would in turn have short-term or long-term impacts on commercial and for-hire recreational fisheries operations. The regional fishery management councils have requested updated cumulative impacts analyses to assess the effect of increased offshore wind development activity, and have recommended that BOEM establish, to the extent possible, standardized turbine layouts, consistent survey methodologies, and shared cable routes.

It is critically important to engage, at an early stage of development, those most knowledgeable about fisheries resources and with expertise in fisheries research protocols to specify scoping studies and potential models to evaluate outcomes likely needed and to help direct how potential impacts to fisheries resources should be addressed in pre-construction surveys, construction and operations plans, and post-construction monitoring plans. During the environmental review process for the Vineyard Wind offshore wind project, which would be in the region of the New England Fishery Management Council where the fishing industry is a source of hundreds of millions of dollars of revenue, BOEM determined that impacts on the fisheries could include reduction in catch or loss of access to fishing areas, reduction of fishing revenues and abandonment of fishing locations. To address these impacts and others on NMFS's trust responsibilities, NMFS, in partnership with BOEM, is creating a mitigation program to establish resources for the NMFS Northeast Fisheries Science Center to design and implement effective survey adaptations.²⁴³ The intent of the program would be to minimize adverse consequences from the wind project, and, if successful, the program could be applied to future offshore wind projects.

243 See Bureau of Ocean Energy Management, Vineyard Wind 1 Offshore Wind Energy Project: Final Environmental Impact Statement, Volume I at 3-271-273 (March 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-1.pdf>. NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast U.S. Region. (Draft March 2022) https://media.fisheries.noaa.gov/2022-03/NOAA%20Fisheries-and-BOEM-Federal-Survey-Mitigation-Strategy_DRAFT_508.pdf

Essential Fish Habitat

The MSA was amended by the 1996 Sustainable Fisheries Act to require regional fishery management councils to identify as EFH areas necessary for spawning, breeding, feeding, or growth to maturity of their managed species.²⁴⁴ Pursuant to Section 305(b) of the MSA, federal agencies are required to consult with NMFS on any action that may result in adverse effects on EFH. BOEM has accepted designation as the lead agency for the purposes of fulfilling EFH consultation obligations under Section 305(b) of the MSA.²⁴⁵ Certain OCS activities authorized by BOEM—like offshore wind leases—may result in adverse effects on EFH and, therefore, require consultation with NMFS.²⁴⁶

If a proposed action may impact EFH, an EFH assessment must be completed by BOEM to identify the effects of the proposed action on EFH and any required mitigation efforts. NMFS then reviews the completed EFH assessment and provides EFH conservation recommendations that would avoid, minimize, or offset the adverse effect(s). BOEM has an opportunity to respond to NMFS, describing the measures that the agency plans to implement to address impacts or explain why NMFS's recommendations will not be followed. Any EFH that may be impacted by the proposed action must also be discussed in the NEPA EA/EIS associated with BOEM permitting documentation. Any conservation recommendations adopted by BOEM to avoid or minimize adverse effects on EFH will be incorporated as terms and conditions in the lease, and BOEM may require additional surveys to define boundaries and avoidance distances.

MIGRATORY BIRD TREATY ACT

In addition to having a potential impact on marine wildlife, offshore wind may impact birds that migrate through or live in coastal habitats. When siting and scoping turbine locations, developers should consider the risks surrounding the Migratory Bird Treaty Act (MBTA)²⁴⁷ and the current state of the regulations surrounding it.

Congress enacted the MBTA in 1918 to implement the 1916 Convention between the U.S. and Great Britain (for Canada) for the protection of migratory birds. Later amendments implemented treaties between the U.S. and Mexico, the U.S. and Japan, and the U.S. and the Soviet Union (now Russia).²⁴⁸ The MBTA prohibits the taking or killing of over 1,000 species of migratory birds or any action that causes death to a protected bird species.²⁴⁹ Specifically, the MBTA makes it a crime to “pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess ... any migratory bird ... or any part, nest, or egg of any such bird.”²⁵⁰ The MBTA primarily protects the bird species and families listed in the treaties that it implements.²⁵¹

Unlike the ESA, which explicitly prohibits the intentional and incidental taking of listed species, neither the MBTA nor its legislative history directly addresses whether it was intended to prohibit the incidental take of migratory birds in addition to intentional take of those birds (e.g., hunting). FWS regulations establish permits for various purposes such as import and export, and scientific collection, but there is no permit that authorizes the unintentional taking of birds by a wind turbine or other industrial activity.²⁵²

244 MSA Sec. 305(b).

245 50 C.F.R. § 600.920(b).

246 30 C.F.R. § 585.803.

247 16 U.S.C. §§ 703-712.

248 The MBTA implemented four treaties between the U.S. and Canada in 1916; Mexico in 1936, Japan in 1972; and Russia in 1976 to ensure the sustainability of and protection of migratory bird species.

249 16 U.S.C. §§ 703-712.

250 16 U.S.C. § 703.

251 See 50 C.F.R. § 10.13 (includes a list of bird species covered under the MBTA).

252 See 50 C.F.R. § 21.

The scope of “Incidentally” taking migratory birds

In recent years, the MBTA has been subject to changing regulations regarding its applicability to incidental take by industrial sources including offshore wind. Federal courts have been split on this issue, and regulations promulgated by FWS have been in flux.

In January 2017, during the final days of the Obama administration, the DOI issued a memorandum concluding that the MBTA applied to both intentional and incidental take.²⁵³ In December 2017, the DOI issued another memorandum stating that the MBTA excluded criminal penalties against companies and individuals who incidentally take migratory birds through fossil fuel production and renewable energy generation.²⁵⁴ The December 2017 memorandum was codified in a final rule published on January 7, 2021.²⁵⁵

On October 4, 2021, FWS published a final rule, revoking the January 2021 final rule, which again states that the MBTA applies to the incidental take of birds by industrial sources.²⁵⁶ FWS based its reasoning on past agency decisions and a recent federal court decision that reversed the December 2017 legal interpretation, prompting further review of the scope of the MBTA and incidental takings of migratory birds.²⁵⁷ Also on October 4, FWS published an advance notice of proposed rulemaking and notice of intent to propose regulations to authorize the incidental take of migratory birds under prescribed conditions and prepare a draft environmental review pursuant to NEPA.²⁵⁸

Developers are advised to review the latest guidance throughout the permitting process. FWS has developed several guidelines pertaining to the take of birds, but compliance does not shield a developer from liability under the MBTA.

The Land-Based Wind Energy Guidelines were developed by FWS, in conjunction with the Wind Turbine Guidelines Advisory Committee, to provide a process for wind energy developers and federal, state, and local agencies to address wildlife conservation concerns at all stages of land-based wind energy development. The Guidelines use a “tiered approach” that involves “an iterative decision-making process for collecting information in increasing detail; quantifying the possible risks of proposed wind energy projects to species of concern and their habitats; and evaluating those risks to make siting, construction, and operation decisions.”²⁵⁹

The Avian Protection Plan Guidelines were jointly developed by the Avian Power Line Interaction Committee and FWS to help utilities develop avian protection plans—a utility-specific document that outlines a program to reduce the operational and avian risks that result from avian interactions with power lines. The voluntary guidelines serve as a reference point from which utilities can pull to tailor their avian protection plans to increase conservation of avian species, decrease avian-caused outages, and reduce the risk of enforcement under the MBTA.

When bringing enforcement actions, the government will typically consider whether companies have made “good faith efforts” to avoid impacts on migratory birds.²⁶⁰ FWS’s current policy is to work with developers and state and Tribal governments to better understand offshore wind’s impacts on migratory birds.²⁶¹ FWS has not given any indication that it intends to implement an incidental-take system similar to the one under the Endangered Species Act.²⁶²

253 U.S. Department of the Interior Office of the Solicitor, Memorandum M-37041 (Jan. 10, 2017).

254 U.S. Department of the Interior Office of the Solicitor, Memorandum M-37050 (Dec. 22, 2017).

255 Regulations Governing Take of Migratory Birds, 86 Fed. Reg. 1134 (Jan. 7, 2021).

256 Regulations Governing Take of Migratory Birds; Revocation of Provisions, 86 Fed. Reg. 54642 (Oct. 4, 2021).

257 See *Natural Res. Def. Council v. U.S. Dep’t of the Interior*, 478 F. Supp. 3d 469 (S.D.N.Y. 2020) (holding that the MBTA’s plain language encompasses the incidental killing of migratory birds).

258 Migratory Bird Permits; Authorizing the Incidental Take of Migratory Birds, 86 Fed. Reg. 54667 (Oct. 4, 2021).

259 U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines (Mar. 23, 2012), p. vi, <https://www.fws.gov/sites/default/files/documents/land-based-wind-energy-guidelines.pdf>

260 Adam Vann, U.S. Congressional Research Service, R40175, Wind Energy: Offshore Permitting at 11 (2021).

261 NYSERDA, Stakeholder Workshop: Scientific Research Framework to Understand the Effects of Offshore Wind Energy Development on Birds and Bats in the Eastern United States (Sept. 2020), https://www.nyetwg.com/files/ugd/78f0c4_201120060f394e9f967cfab207fb1d59.pdf

262 Bird law complicates Biden’s offshore wind push, E&E News (June 22, 2021), <https://www.eenews.net/energywire/stories/1063735349/search?keyword=migratory>

BOEM's Approach to the MBTA and Offshore Wind Projects

BOEM's approach to the MBTA during offshore wind permitting follows a 2009 MOU with FWS, which focuses on the management of migratory birds and their habitats and ways to strengthen conservation efforts.²⁶³ Under this MOU, BOEM funds studies and partners with FWS to evaluate how bird species travel and the imminent risks bird species encounter during the construction and operation of wind projects. These studies help determine leasing areas and the potential impact of offshore wind on birds.²⁶⁴ BOEM must also consult with FWS on activities that may impact covered birds.

BOEM's recent Vineyard Wind I Project EIS detailed BOEM's MBTA review process for offshore wind.²⁶⁵ In the EIS, BOEM considered factors such as noise, light, air traffic, and onshore and offshore construction when examining the potential effects of the proposed alternatives on migratory and protected birds. BOEM also evaluated risks associated with seasonal changes, weather conditions, the height of wind turbines, and the flow of bird traffic through the Atlantic Flyway to inform its analysis on how a proposed project will increase adverse impacts on bird species or affect migratory birds. In addition, the EIS referenced several other studies and reviews for the greater Atlantic area, including Chapter 4 of the Atlantic Final Programmatic EIS and standard operating conditions, which were analyzed under EAs and consultations for site assessment activities.²⁶⁶

The Vineyard Wind I EIS concluded that the project alone would likely have negligible to minor impacts on birds and may include minor beneficial impacts, but the project would likely have moderate impacts on birds in the context of all reasonably foreseeable environmental trends.²⁶⁷ The main source of project impacts to migratory birds is from the presence of structures which could increase collisions or behavioral modifications and habitat loss.²⁶⁸ However, the area where the project is sited has low collision sensitivity, and most bird species in the area tend to avoid moving turbines. Mitigation measures include the installation of bird deterrent devices, the use of Aircraft Detection Light Systems to minimize light exposure, a post-construction bird monitoring plan, and annual mortality reporting.²⁶⁹ The turbines will also be equipped with high frequency telemetry receivers to track the behavior of avian species around the turbines.²⁷⁰ In the context of all reasonably foreseeable environmental trends in the area, the project's impact on birds would be moderate, even with the mitigation measures described.²⁷¹ The moderate impact rating was not due to the presence of turbines, however, because the no-action alternative was also considered to have a moderate impact due to other foreseeable development in the area, climate change, and decreasing trends in bird populations.²⁷²

Offshore wind developers have also been proactive about minimizing bird impacts during the construction planning phase by deploying bird monitoring devices in proposed siting areas. For example, Atlantic Shores Offshore Wind has begun tracking birds off the coast of Atlantic City, New Jersey, and U.S. Wind has deployed buoys off the coast of Ocean City, Maryland, to track the movement of birds, bats, and marine mammals.²⁷³

263 Memorandum of Understanding Between the Department of the Interior U.S. Minerals Management Service and the Department of the Interior U.S. Fish and Wildlife Service Regarding Implementation of Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds," https://www.boem.gov/sites/default/files/renewable-energy-program/MMS-FWS_MBTA_MOU_6-4-09.pdf

264 BOEM, Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement Volume II at A-92 (Mar. 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-2.pdf>.

265 *Id.*

266 BOEM, Atlantic OCS Proposed Geological and Geophysical Activities, Mid-Atlantic and South Atlantic Planning Areas Final Programmatic Environmental Impact Statement Volume I at § 4.2.4.1.4, <https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/GOMR/BOEM-2014-001-v1.pdf>

267 BOEM, Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement Volume II at § A.8.3.5 (Mar. 2021), .

268 *Id.* at § A.8.3.2.

269 *Id.* at § A.8.3.2.

270 *Id.* at § A.8.3.6.

271 *Id.* at § A.8.3.5

272 *Id.* at § A.8.3.1.2

273 Atlantic Shores Announces Second Phase of Red Knot Migration Study with New Jersey Audubon Society, Wildlife Restoration Partnerships and U.S. Fish and Wildlife Service (May 17, 2021), <https://www.atlanticshoreswind.com/atlantic-shores-announces-second-phase-of-red-knot-migration-study-with-new-jersey-audubon-society-wildlife-restoration-partnerships-and-u-s-fish-and-wildlife-service/>; US Wind Deploys Floating LiDAR Buoy In Maryland Lease Area (May 25, 2021), <https://uswindinc.com/us-wind-deploys-floating-lidar-buoy-in-maryland-lease-area/>

J THE CLEAN WATER ACT AND RIVERS AND HARBORS ACT

The U.S. Army Corps of Engineers (the Corps) issues permits under Section 404 of the Clean Water Act (CWA) authorizing the discharge of dredged or fill material into waters of the United States.²⁷⁴ The Corps also regulates potential obstructions to or alterations of navigable waters of the U.S. pursuant to Section 10 of the Rivers and Harbors Act.²⁷⁵ Based on these approvals, the Corps participates as a cooperating agency in BOEM's NEPA review of project-specific COPs.

The U.S. Environmental Protection Agency (EPA) has authority over proposed Corps permits under Section 404 and has other authorities under the CWA, including section 402, which is also known as the National Pollutant Discharge Elimination System (NPDES).²⁷⁶ States also have CWA permitting authority under section 401..

State Water Quality Certifications Section 401

Prior to obtaining a CWA Section 404 or Rivers and Harbors Act Section 10 permit for an offshore wind farm, the developer must first obtain a water quality certification under CWA Section 401 for any activities that may result in a discharge to waters of the U.S.²⁷⁷ The State or Tribe from where the discharge would originate has the primary responsibility for verifying compliance with water quality requirements.²⁷⁸ The agency approving the project must provide public notice and the opportunity for comment and may add conditions to the certification that must be incorporated into the final federal license.²⁷⁹

Offshore wind projects have required section 401 certifications for discharges associated with cable installation, localized dredging, and vessel anchoring.²⁸⁰ Applications for state water quality permits are often processed at the same time as the 401 certification, since projects that are approved under state standards are also often sufficient to meet 401 water quality standards.²⁸¹ Because 401 permit applications are approved by states and Tribes, evaluation criteria are state-specific and waterbody-specific.

CWA Section 404 and Rivers and Harbors Act Section 10

Prior to the Energy Policy Act of 2005, section 10 of the Rivers and Harbors Act granted the Corps primary jurisdiction for the issuance of offshore wind permits in waters of the U.S.²⁸² Section 10 requires a permit for any activities that involve construction in or over any waters of the U.S.²⁸³ It also prohibits the unlawful excavation, modification, or filling of waters of the U.S..²⁸⁴ Although BOEM is now the primary agency for the leasing and permitting on the OCS, the Corps retains broad permitting authority under section 10, including over the construction, maintenance, and eventual decommissioning of the project facilities.

274 33 U.S.C. § 1344; The term "waters of the United States" refers to waters that are navigable in fact or waters with a "significant nexus" to navigable waters. See "About Waters of the United States," Evtl. Protection Agency, <https://www.epa.gov/nwpr/about-waters-united-states> (last accessed Apr. 21, 2021).

275 33 U.S.C. § 403.

276 33 U.S.C. § 1342.

277 33 U.S.C. § 1341; Overview of CWA Section 401 Certification, Evt'l Prot. Agency, <https://www.epa.gov/cwa-401/basic-information-cwa-section-401-certification>.

278 Overview of CWA Section 401 Certification, Evt'l Prot. Agency, <https://www.epa.gov/cwa-401/basic-information-cwa-section-401-certification>.

279 33 U.S.C. § 1341(1)–(2).

280 See Vineyard Wind Connector: Joint Application for Chapter 91 License/Permit and Section 401 Water Quality Certification 3-10 (Jan. 18, 2019), <https://www.yarmouth.ma.us/DocumentCenter/View/11955/Att-A--Joint-Chapter-91-and-Section-401-Application-to-DEP-01-18-19>.

281 Jeff Thaler, Permitting and Leasing for Main Offshore Wind Energy Projects: Offshore Wind Energy Project Roadmap 2013 17 (Jan. 2013), https://e2tech.org/Resources/Documents/MOWII_Offshore_Wind_Roadmap_JAN2013.pdf; see also Vineyard Wind Draft Construction and Operations Plan: Volume I Vineyard Wind Project (Sept. 30, 2020), https://www.boem.gov/sites/default/files/documents/renewable-energy/Vineyard%20Wind%20COP%20Volume%20I_Section%205.pdf (state approval processed at same time as 401 approval).

282 33 U.S.C. § 403.

283 33 U.S.C. § 403.

284 *Id.*

The Corps will typically adjudicate a Section 10 permit simultaneously with a developer's permit under Section 404 of the CWA. A CWA section 404 permit is required for any activities that involve the "discharge of dredged or fill material" into waters of the United States.²⁸⁵ The Corps has primary permitting authority, but jointly runs the section 404 permitting program with EPA. The Corps administers the permits and enforces permit provisions, while EPA interprets policies, determines the scope of exemptions, and comments on individual applications.²⁸⁶

The Rivers and Harbors Act and Clean Water Act have different geographical reaches, and only one permit may apply depending on where the project is sited. CWA jurisdiction extends to waters of the U.S. plus "territorial seas."²⁸⁷ The Corps jurisdiction ends three miles offshore and does not extend onto the outer continental shelf for the purposes of Section 404.²⁸⁸ The Corps jurisdiction under the Rivers and Harbors Act is generally limited to navigable waters of the U.S. up to three miles off the coast,²⁸⁹ but the Outer Continental Shelf Lands Act extends Section 10 permitting authority to the Outer Continental Shelf for the regulation of artificial islands and other installations permanently or temporarily attached to the sea floor.²⁹⁰

In the context of offshore wind, Section 404 and Section 10 permit cover activities including the construction of turbines anchored on the sea floor and the burying of transmission cables and associated infrastructure. It appears likely that floating offshore wind projects will also require these permits because they will likely involve construction over covered waters and the burying of transmission cables.

The Corps follows its general policies for evaluating permit applications when conducting review for both Section 404 and Section 10 permits.²⁹¹ During its public interest review, the Corps considers the "probable impacts, including the cumulative impacts" of the activity on the public interest.²⁹² The general criteria considered for every application are: (i) the relative extent of the public and private needs for the proposed structure or work; (ii) where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and (iii) the extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.²⁹³

In addition, the Corps will evaluate project-specific impacts on factors including conservation, economics, and aesthetics.²⁹⁴ The Corps will also account for where the applicant has implemented mitigation measures to minimize adverse project impacts and whether the applicant has complied with other related laws.²⁹⁵

When evaluating Section 404 permits, under Section 404(b)(1) guidelines, the Corps must determine that the proposed discharge is the least environmentally damaging practicable alternative, will not violate any state or federal laws, and will not result in a "significant degradation of the waters of the United States."²⁹⁶ In addition, no discharge of dredge or fill material is permitted unless all "appropriate and practicable steps" have been taken to minimize the impact of the project.²⁹⁷ The Corps also investigates the project's potential impacts on the aquatic ecosystem, special aquatic sites, and human use characteristics.²⁹⁸ With respect to aquatic ecosystems, the Corps

285 33 U.S.C. § 1344.

286 Permit Program under CWA Section 404, Env't'l Prot. Agency, <https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404>.

287 33 U.S.C. § 1362(8).

288 Jurisdiction, Army Corps. of Eng'rs, <https://www.nwp.usace.army.mil/Missions/Regulatory/Jurisdiction/>.

289 33 C.F.R. § 329.12(a).

290 43 U.S.C. § 1333(e).

291 33 C.F.R. § 320.4.

292 33 C.F.R. § 320.4(a)(1)

293 33 C.F.R. § 320.4(a)(2)

294 33 C.F.R. § 320.4; see Vineyard Wind ROD at 40–41.

295 33 C.F.R. §§ 320.4(j), (r)

296 40 C.F.R. § 230.10.

297 40 C.F.R. § 230.10.

298 40 C.F.R. § Part 230

evaluates the project's impact on the physical, chemical, and biological characteristics of the disturbed area.²⁹⁹ This includes evaluating the impacts of installing cable or turbines on bottom substrate, water quality, and aquatic organisms.³⁰⁰ The Corps also accounts for the project's impact on fisheries, recreation, and aesthetics.³⁰¹ Although the Corps has the authority to issue individual and general Section 404 and Section 10 permits, the Corps has only issued individual permits for offshore wind farms.³⁰²

State Permitting Approval

States may also seek federal approval to issue their own section 404 permits under the CWA. In order to administer its own individual and general permit program, the governor of the state must submit a description of the program and a statement from the state's attorney general stating that it has the authority to issue permits under state law.³⁰³ Once approved, the state can administer individual permits evaluated under CWA guidance.³⁰⁴ For example, New Jersey operates its State Freshwater Wetland Protection Act program in place of the federal 404 program for any discharges to wetlands or covered waters within its jurisdiction.³⁰⁵ Unless operating in non-delegable waters, such as rivers used for interstate commerce, applicants need only to obtain approval under the state program. Currently, only Michigan, New Jersey, and Florida have assumed section 404 permitting authority.³⁰⁶

States and localities can also develop their own regional general permits for activities within their coastal zones.³⁰⁷ Although the Corps suggested the development of regional general permits authorizing offshore wind in its latest reissuance of Nationwide Permits, we did not identify any authorizing offshore wind activities.³⁰⁸

National Pollution Discharge Elimination System Permits Section 402

Offshore wind projects have been required to obtain a National Pollution Discharge Elimination System (NPDES) permit under section 402 of the CWA from EPA or the applicable state for discharges associated with construction and operations. The NPDES permit program regulates the discharge of pollutants from a point source to waters of the United States.³⁰⁹ NPDES permits specify the acceptable amount of pollutants a polluter may discharge and the "best management practices" for achieving those levels.³¹⁰ Under the CWA, the definition of "pollutants" covered by NPDES is very broad and includes "any type of industrial, municipal, and agricultural waste discharged into water."³¹¹ All discharges to ocean waters must meet water quality guidelines under section 403 of the CWA.³¹²

299 40 C.F.R. §§ 230.20–230.30.

300 See Vineyard Wind ROD at 34–36.

301 See Vineyard Wind ROD at 36–37; See also U.S. Army Corps of Engineers Permitting Process Information, <https://www.lrl.usace.army.mil/Portals/64/docs/regulatory/Permitting/PermittingProcessInformation.pdf>.

302 Jeff Thaler, Permitting and Leasing for Maine Offshore Wind Energy Projects: Offshore Wind Energy Project Roadmap 2013 11 (Jan. 2013), ; https://e2tech.org/Resources/Documents/MOWII_Offshore_Wind_Roadmap_JAN2013.pdf. Individual permits include standard permits and letters of permission and are typically reserved for projects that will have a potentially significant impact. Applications for individual permits are reviewed by the Corps, which evaluates permits based on guidelines under CWA Section 404(b)(1) and regulations established by EPA. This review also includes consultations with other federal and state agencies and interagency review. Prior to issuing a decision, USACE will provide the public with notice and the opportunity to comment on the permit. General permits, such as nationwide permits and regional permits, are issued for projects that will only have minimal adverse impacts. These permits can be issued with little evaluation or delay and will be valid as long as certain conditions outlined in the permit are met. General permits are typically issued for a period of five years but can be renewed.

303 33 U.S.C. § 1344(g)(1)

304 33 U.S.C. § 1344(h)

305 The United States Environmental Protection Agency and its relationship with the New Jersey Department of Environmental Protection & The Division of Land Use Regulation, https://www.nj.gov/dep/landuse/lu_epa.html#:~:text=1251%20et%20seq,%2C%20passed.in%20place%20of%20the%20Federal

306 U.S. Interactive Map of State and Tribal Assumption under CWA Section 404, Env't Prot. Agency, <https://www.epa.gov/cwa404g/us-interactive-map-state-and-tribal-assumption-under-cwa-section-404>.

307 Obtain a Permit, Army Corps of Engin'rs, <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit/>.

308 Reissuance and Modification of Nationwide Permits, 86 Fed. Reg. 2744 (Jan. 13, 2021), <https://www.federalregister.gov/documents/2021/01/13/2021-00102/reissuance-and-modification-of-nationwide-permits> ("District engineers can develop regional general permits to authorized permanent water-based renewable energy generation facilities.")

309 33 U.S.C. § 1342.

310 NPDES Permit Basics, Env't Prot. Agency, <https://www.epa.gov/npdes/npdes-permit-basics>.

311 NPDES Permit Basics, Env't Prot. Agency, <https://www.epa.gov/npdes/npdes-permit-basics>.

312 33 U.S.C. 1343.

Similar to other CWA permits, there are individual and general permits available, and the public is invited to participate in the permitting process. Individual permits are issued to a single discharger after the evaluation of site-specific conditions. General permits are issued to a group of dischargers with similar operations and types of discharges.³¹³ Although EPA has the primary permitting authority for NPDES, all coastal states except for New Hampshire and Massachusetts have obtained authorization from EPA to issue their own NPDES permits for discharges into state waters.³¹⁴ The application form and approval process will differ depending on the proper permitting authority for the project. Regardless, Section 402 requires that the public be notified of any applications and provided the opportunity to comment.³¹⁵

A NPDES permit will be required prior to the start of the construction of an offshore wind facility. Most recently, Vineyard Wind has scheduled a NPDES permit to be filed with EPA immediately before the start of construction.³¹⁶ Potential “pollutants” associated with offshore wind construction include dredged soil, solid waste, rock, and sand.³¹⁷ Unlike section 404 permits, which are limited only to three miles offshore, EPA may issue NPDES permits for discharges in federal waters up to 200 miles offshore.³¹⁸

K PORTS AND WATERWAYS SAFETY ACT

The USCG is the lead federal agency tasked to ensure the safety of navigation and shipping within the navigable waters of the U.S. Under the Ports and Waterways Safety Act of 1972 (PWSA), the USCG is authorized to conduct necessary studies and implement measures for supervising vessel traffic or to protect navigation and the marine environment, including vessel traffic separation schemes (TSS) for ports, harbors, and other waters subject to congested vessel traffic within the 12-nautical mile territorial sea.³¹⁹ The TSS apply to commercial vessels, other than fishing vessels, of 300 gross tons or more and are listed in the USCG’s regulations.³²⁰

The USCG is authorized to restrict activities around offshore wind energy projects if necessary to ensure the safety of navigation and requires Private Aids to Navigation for offshore wind energy structures, including marking and lighting requirements.³²¹

The USCG plays a key role in BOEM’s evaluation of navigational risks and conflicts with other user groups, including commercial fishermen and the shipping industry. The USCG collaborates closely with BOEM and developers to review the Navigation Safety Risk Assessment (NSRA) that BOEM requires developers to prepare to evaluate the effects of specific offshore wind energy projects on navigational safety.³²² The USCG reviews the NSRA and provides recommendations to BOEM and the developer regarding measures to avoid or mitigate navigational risks and conflicts.³²³ The USCG also serves as a cooperating agency in BOEM’s NEPA reviews to identify the potential impacts of offshore wind energy development activities and to provide related recommendations regarding safety of navigation, traditional uses of particular waterways, and other USCG missions, including search and rescue, marine environmental protection, and national security.³²⁴

313 NPDES Permit Basics, Env’t Prot. Agency, <https://www.epa.gov/npdes/npdes-permit-basics>.

314 40 C.F.R. Part 123; NPDES Program Authorizations, Env’t Prot. Agency (July 2019), https://www.epa.gov/sites/production/files/2021-02/documents/authorized_states_2021.pdf.

315 NPDES Permit Basics, Env’t Prot. Agency, <https://www.epa.gov/npdes/npdes-permit-basics>.

316 Vineyard Wind 1 Offshore Wind Energy Project: Final Environmental Impact Statement Volume II B-1 (Mar. 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-2.pdf>.

317 NPDES Permit Basics, Env’t Prot. Agency, <https://www.epa.gov/npdes/npdes-permit-basics>.

318 33 U.S.C. §1362.

319 46 U.S.C. § 70001 et seq.

320 33 C.F.R. Parts 166-167.

321 33 C.F.R. Part 66.

322 USCG Navigation and Vessel Inspection Circular No. 01-19 (Aug. 1, 2019), <https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/NVIC/2019/NVIC%2001-19-COMDTPUB-P16700-4-dtd-01-Aug-2019-Signed.pdf?ver=2019-08-08-160540-483>.

323 *Id.* §§ 5-7.

324 *Id.* §§ 2.a., 5-7.

L DEPARTMENT OF DEFENSE AND FEDERAL AVIATION ADMINISTRATION INVOLVEMENT

The Department of Defense (DOD) and Federal Aviation Administration (FAA) are not permitting agencies but nonetheless play a key role in the offshore wind siting process. Through the Obstruction Evaluation/Airport Airspace Analysis program and Military Aviation and Installation Assurance Siting Clearinghouse, FAA and DOD assess the compatibility of individual offshore wind projects with military assets and aviation activities. DOD also participates in the BOEM-led renewable energy task force processes which precede BOEM leasing and are key forums for identifying ocean areas suitable for wind energy development.

Offshore Wind Mission Compatibility Assessments

To assist the BOEM task force processes, DOD has undertaken several mission-compatibility assessments for both Atlantic and Pacific OCS areas. In its analysis, DOD assesses individual lease blocks to determine potential conflicts between wind energy construction and operation and DOD activities. The lease blocks are assigned to one of four categories: “No Restrictions,” meaning no significant conflicts were identified; “Site Specific Stipulations,” meaning potential conflicts exist and may require site-specific mitigation measures; “Recommended Wind Exclusion,” which means significant conflicts were identified; and “Not Assessed.” The compatibility assessments reflect the requirements of DOD missions conducted in the air, on the surface, and below the surface of studied waters. The result is a visual representation of compatibility between offshore wind and military assets and activities.

FAA Air Hazard Determination

The FAA is required to assess all structures, including offshore wind, that “may result in an obstruction of the navigable airspace” or interfere with navigation equipment or military operations. This review is conducted under the Obstruction Evaluation/Airport Airspace Analysis program, which requires FAA notification for all projects higher than 200 feet above ground regardless of location and structures near airport runways or approach paths.³²⁵ Structures higher than 499 feet above ground level, structures that interfere with radar, or lower structures near airports are presumed to be hazards to air navigation.³²⁶ If the project is likely to present a hazard, the project proponent or FAA may initiate an aeronautical study to assess whether the project will have an adverse impact on aviation.³²⁷ Applications must be submitted to FAA at least 45 days prior to construction.³²⁸

Although FAA Air Hazard Determinations have “no enforceable legal effect,” the DOI has assigned FAA a “significant role in its decision-making process.”³²⁹ Courts have also found that an FAA Determination can be a prerequisite to the issuance of a construction permit even though these decisions may be “advisory in nature.”³³⁰

FAA’s jurisdiction is limited to 12 nautical miles from shore, and structures that are outside these boundaries are not statutorily required to undergo formal FAA review. BOEM, however, assumes that offshore wind developers will conduct aeronautical studies as part of project due diligence and coordinate with aviation interests throughout the planning process regardless of whether the project is within or outside of the 12 mile zone.³³¹ The Vineyard Wind project filed FAA clearance applications during the planning process for turbines located within 12 nautical miles from shore and plans to refile before construction and undergo another aeronautical review.³³² It also planned to conduct aeronautical studies and mark all structures according to FAA marking requirements as part of its mitigation plan.³³³

325 14 C.F.R. 77.9.

326 14 C.F.R. 77.17; See *Town of Barnstable, Mass. v. F.A.A.*, 740 F.3d 681, 689 (D.C. Cir. 2014).

327 14 C.F.R. 77.29.

328 14 C.F.R. 77.7.

329 *Town of Barnstable*, 659 F.3d at 32.

330 *Id.*

331 Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement Volume 1, Dept. of Interior 3-257 (Mar. 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-1.pdf>.

332 *Id.* at 3-263.

333 *Id.* at 3-260.

Military Aviation and Installation Assurance Siting Clearinghouse

DOD requires developers to seek review of all offshore wind farms because they could impact areas or technologies utilized by DOD, such as radar, installation boundaries, military training routes, special use airspace, and other uses. These reviews are required as part of the FAA's Air Navigation Hazard Assessment process and are handled by the DOD Siting Clearinghouse. The Clearinghouse review process applies to all energy projects submitted for FAA review including offshore wind projects.³³⁴ BOEM also works with the Clearinghouse to review all proposed offshore wind projects on an individual basis to resolve any potential conflicts.³³⁵ BOEM BMPs state that project proponents should conduct independent radar analysis and coordinate with the military regardless of whether the project is within the 12-mile zone.³³⁶

Congress wrote the Clearinghouse review process into law as part of the 2011 National Defense Authorization Act with the goal to promote renewable energy and preserve national security.³³⁷ The Clearinghouse must determine whether the project poses "an unacceptable risk to the national security of the United States,"³³⁸ which is defined as proposed or actual construction, alteration, expansion, or establishment of a structure that would endanger air safety, interfere with the use of navigable airspace, or significantly impair or degrade virtually any domestic military activity.³³⁹ DOD is also responsible for identifying any mitigation options that either the developer or the military may take to lessen the impact of the proposed project.³⁴⁰

The regulations provide for both formal and informal review of projects. Formal project review begins when FAA sends the Clearinghouse a properly filed Obstruction Evaluation/Airport Airspace Analysis application. Some states such as Texas also have state-level notification requirements.³⁴¹ Proponents of activities anticipated to interfere with radar surveillance or a military training route must file a preliminary project layout at least one year prior to planned construction.³⁴² The Clearinghouse will distribute the application to other DOD entities that may have an interest in its contents. After receiving comments, the Clearinghouse will then evaluate comments and make a determination on the project. If it determines that the project may have an adverse impact on DOD operations, the Clearinghouse must notify the applicant and initiate mitigation discussions.³⁴³ If a mitigation agreement cannot be reached, the Clearinghouse must request that a senior DOD official make a determination of whether the project poses "an unacceptable risk to the national security of the United States."³⁴⁴ However, FAA has the final decision on whether the project poses a hazard, and the Clearinghouse's determination is only one of the factors it considers.³⁴⁵

Unlike the FAA, DOD has a process for conducting informal reviews of projects when requested and, in fact, encourages developers to seek such review by submitting project information directly to the Clearinghouse.³⁴⁶ Similar to the formal review process, the Clearinghouse solicits comments and recommendations from interested agencies during the informal review. Determinations of no impact during an informal review do not equate to a binding determination, but DOD will enter into mitigation discussions with the applicant if the project is expected to have an adverse impact. DOD will also keep any proprietary information confidential during the review process, and any information provided will be used only for determining the project's potential impact on military activities.³⁴⁷

334 Military Aviation and Installation Assurance Siting Clearinghouse Reviews, Mil. Aviation and Installation Assurance Siting Clearinghouse, <https://www.acq.osd.mil/dodsc/contact/dod-review-process.html>; Frequently Asked Questions, Mil. Aviation and Installation Assurance Siting Clearinghouse, <https://www.acq.osd.mil/dodsc/about/faq.html>.

335 Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement Volume 1, Dept. of Interior 3-258 (Mar. 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-1.pdf>.

336 *Id.*

337 32 C.F.R. 211.1; 10 U.S.C. § 183a.

338 32 U.S.C. 211.1(a).

339 32 U.S.C. 211.3(l).

340 32 U.S.C. 211.9.

341 Military Aviation and Installation Assurance Siting Clearinghouse Reviews, Mil. Aviation and Installation Assurance Siting Clearinghouse, <https://www.acq.osd.mil/dodsc/contact/dod-review-process.html>.

342 10 U.S.C. 183a(c)(6).

343 32 U.S.C. 211.6.

344 32 U.S.C. 211.6(b)(2).

345 Michael Casillo, Impacts of Wind Energy, JAG Reporter (Jan. 28, 2021), <https://www.jagreporter.af.mil/Post/Article-View-Post/Article/2552548/impacts-of-wind-energy/>.

346 32 C.F.R. 211.7(b).

347 Military Aviation and Installation Assurance Siting Clearinghouse Reviews, Mil. Aviation and Installation Assurance Siting Clearinghouse, <https://www.acq.osd.mil/dodsc/contact/dod-review-process.html>.

Most onshore wind projects submitted for review by the Clearinghouse have been approved without the need for mitigation measures. Between 2012 and 2015 only 39 out of about 2,000 wind energy projects entered into mitigation discussions and only 11 resulted in formal mitigation agreements.³⁴⁸ Over 40 mitigation agreements have been published since 2014, and none of the mitigation agreements currently published on the Clearinghouse website are for offshore wind farms.³⁴⁹ The Bay State Wind project was proposed to be located in the vicinity of ground-based radar systems but received Determinations of No Hazard for turbines up to 1,049 feet above mean sea level.

The Clearinghouse review process can also influence the approval of project-related documents. For the Vineyard Wind project, the Record of Decision listed several approval conditions related to potential impacts on radar systems and warning areas.³⁵⁰ These conditions included acknowledgment that the turbines could withstand sonic booms, that the Air Force would not be held responsible for any damage to property or personnel, and that the developer would coordinate with the DOD on any proposal to use defense airspace.³⁵¹ The COP also addressed the project's impacts on national security including potential DOD operations in the project area.³⁵²

M ELECTRIC TRANSMISSION INFRASTRUCTURE—PLANNING, PERMITTING, AND ENVIRONMENTAL REVIEW

Accelerating offshore wind development will require planning and modernization of the electric transmission system to permit the transfer of power generated from offshore wind turbines to the grid. To transmit power generated by the offshore wind turbines, significant subsea transmission infrastructure must be built to collect power from each turbine and transmit it to a central interconnection line, which then must transmit the power to a landing site on the coast for delivery into the grid. In addition, coastal areas have not traditionally required significant transmission infrastructure because loads are relatively small and remote. The injection of hundreds or thousands of gigawatts of power at coastal landing sites will require in most cases substantial and costly upgrades to the existing onshore transmission grid to maintain reliability.

Compounding the issue are limited ideal landing sites on the east coast of the United States. There are a few coastal sites where retired generation has left behind existing transmission infrastructure capable of supporting connection and injection of large quantities of electricity. For example, Brayton Point—the site of a large, retired coal plant in Massachusetts—is now proposed to function as an offshore wind hub, including a logistical port and support center capable of component manufacturing, staging, operations, and maintenance for offshore wind as well as a 1200 MW high-voltage direct current (HVDC) converter to support interconnection of offshore wind. However, there are not enough sites with this level of existing infrastructure necessary to accommodate the individual interconnection of all the projects necessary to meet the Biden administration's offshore wind goals. That means interconnection is likely to be expensive, particularly for projects that start development later than the current frontrunners. As one way to ease this issue and offer improved grid reliability, some transmission developers are advancing proposals for offshore backbone transmission infrastructure that would connect multiple offshore wind projects to the existing grid. For example, Anbaric Development Partners has proposed such projects in Massachusetts³⁵³ and offshore New York and New Jersey.³⁵⁴

348 Report on the Impact of Wind Energy Developments on Military Installations, Dept. of Defense 4 (Apr. 2016), [https://www.acq.osd.mil/dodsc/library/RTC%20Report%20on%20Wind%20Energy%20Impacts%20-%20Letters%20and%20Report%20-%20\(USA000910-16\).pdf](https://www.acq.osd.mil/dodsc/library/RTC%20Report%20on%20Wind%20Energy%20Impacts%20-%20Letters%20and%20Report%20-%20(USA000910-16).pdf).

349 Library, Mil. Aviation and Installation Assurance Siting Clearinghouse, <https://www.acq.osd.mil/dodsc/about/library.html>.

350 Record of Decision: Vineyard Wind 1 Offshore Wind Energy Project Construction and Operations Plan, Dept. of Interior 97 (May 10, 2021), <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Final-Record-of-Decision-Vineyard-Wind-1.pdf>.

351 *Id.*

352 Vineyard Wind, Draft Construction and Operations Plan: Volume III § 7.9.1.1, (June 3, 2020), <https://www.boem.gov/sites/default/files/documents/oil-gas-energy/Vineyard-Wind-COP-Volume-III-Section-7.pdf>.

353 Commercial Renewable Energy Transmission on the Outer Continental Shelf Offshore New York and New Jersey; Notice of Proposed Grant Area and Request for Competitive Interest, 84 Fed. Reg. 28582 (June 19, 2019);

354 Anbaric Unsolicited Right-of-Way/Right-of-Use & Easement Grant Application: Southern New England Ocean Grid Project (Nov. 18, 2019), <https://www.boem.gov/sites/default/files/documents/renewable-energy/Anbaric-S-New-England-OceanGrid.pdf>

Figure 2: Anbaric's proposed \$650M project to transform a Massachusetts coal plant into a wind manufacturing facility.³⁵⁵



Figure credit: S&P Global

Offshore backbone transmission infrastructure would coordinate interconnection more efficiently than multiple individual project interconnections, thus potentially minimizing marine impacts. In addition, by connecting to the onshore grid at fewer locations, backbone infrastructure has the potential to streamline the interconnection process for multiple offshore wind projects, with associated cost savings. Moreover, backbone transmission infrastructure could serve to interconnect two or more regional transmission systems, thereby providing enhanced reliability across regions. However, transmission planning and interconnection are at best coordinated at the regional level, and inter-regional interconnection is notoriously difficult to achieve under current rules and practices. In addition, a transmission backbone may need to be permitted and constructed before its capacity is fully subscribed with offshore wind generation. This raises concerns about financing such backbone infrastructure or, if its costs will be paid by transmission customers regardless of whether it is fully utilized, the specter of stranded costs.

Complicating the development of these concepts further, multiple agencies have authority over various aspects of the planning and development of offshore wind transmission infrastructure.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) regulates the transmission and sale of electric energy in interstate commerce under the Federal Power Act (FPA). The FPA gives FERC broad jurisdiction over "all facilities for such transmission or sale of electric energy" with some exceptions, including facilities used in local distribution or only for the transmission of electric energy in intrastate commerce and many matters subject to regulation by the States.³⁵⁶ A key focus of FERC regulation under its FPA Section 205 authority is ensuring the rates charged for transmission services are just and reasonable and not unduly discriminatory or preferential.

³⁵⁵ Site of Former Massachusetts Coal Power Plant to be Used for Offshore Wind Industry, (March 17, 2022, 4:50 PM), <https://www.wcvb.com/article/gov-baker-brayton-point-offshore-wind-massachusetts-feb-17-2022/39121311>

³⁵⁶ 16 U.S.C. 824(b)(1).

For many years, FERC has used its broad authority under the FPA to regulate utility transmission planning and interconnection processes as well as transmission rates. For example, FERC has used its authority under FPA section 205 and section 206 to implement transmission planning reforms intended to prevent undue discrimination that would make transmission rates unjust and unreasonable. In Order 888, FERC required transmission providers to offer open-access transmission service in accordance with an open-access transmission tariff. FERC established in Order No. 888 that “the Commission’s power under the FPA ‘clearly carries with it the responsibility to consider, in appropriate circumstances, the anticompetitive effects of regulated aspects of interstate utility operations ...’ therefore, it had broad legal authority under the mandates of the FPA and federal court precedent “to order the filing of non-discriminatory open access transmission tariffs if we find such order necessary as a remedy for undue discrimination or anticompetitive effects.” Over the years, FERC has expanded this concept to further regulate transmission planning and interconnection processes and encourage formation of regional transmission organizations (RTOs) and independent system operators (ISOs).

Figure 3: RTOs/ISOs Electric Power Market



Figure credit: FERC

Transmission Planning Reform

In Order 890³⁵⁷, FERC required each transmission provider to have a coordinated, open, and transparent regional transmission planning process. FERC again relied on the need to eliminate opportunities for undue discrimination, this time in the context of transmission planning.³⁵⁸ FERC found that “reforms are needed to ensure that transmission infrastructure is evaluated, and if needed, constructed on a nondiscriminatory basis and is otherwise sufficient to support reliable and economic service to all eligible customers,”³⁵⁹ citing concerns for the “critical need for new transmission infrastructure,”³⁶⁰ which largely remains the case today with the rapid development of offshore wind. FERC found that it was necessary to “ensure that the planning process is sufficient to prevent undue discrimination and transparent enough to detect any remaining instances of undue discrimination.”³⁶¹

357 Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, 72 FR 12,266 (March 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007) (Order No. 890).

358 See Order No. 890, FERC Stats. & Regs. ¶ 31,241.

359 Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 57.

360 Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 58.

361 Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 61.

In Order No. 1000, FERC implemented further reforms intended to improve regional coordination of transmission planning among transmission providers. FERC concluded that these reforms “are necessary to address remaining deficiencies in transmission planning and cost allocation processes so that the transmission grid can better support wholesale power markets and thereby ensure that Commission-jurisdictional transmission services are provided at rates, terms and conditions that are just and reasonable and not unduly discriminatory or preferential.”³⁶²

The courts have upheld FERC’s determination of its authority in Order No. 1000 over the objection of many stakeholders. Notably, the court rejected arguments that Order No. 1000 infringes on the states’ traditional regulation of transmission planning, siting, and construction.³⁶³ The courts affirmed FERC’s broader authority over transmission planning and noted that “because the planning mandate relates wholly to electricity transmission, as opposed to electricity sales, it involves a subject matter over which the Commission has relatively broader authority.”³⁶⁴ The courts also reasoned that “because the [Order No. 1000] planning mandate is directed at ensuring the proper functioning of the interconnected grid spanning state lines ... the mandate fits comfortably within Section 201(b)’s grant of jurisdiction over “the transmission of electric energy in interstate commerce.”³⁶⁵

Some RTOs and ISOs have adopted innovative categories of transmission upgrades that result in regional cost allocation, considering a wider array of project benefits and beneficiaries. For example, the Midcontinent Independent System Operator, Inc.’s (MISO) transmission planning process includes a category of transmission upgrades called “multivalue projects” (MVPs). MVPs are network upgrades that (1) reliably and economically enable regional public policy needs, (2) provide multiple types of regional economic value, and (3) provide a combination of regional reliability and economic values. If an MVP is selected to be included in the MISO transmission expansion plan, the cost of that MVP is allocated regionally rather than solely to customers in the zone where the project physically exists. This regional cost allocation allows for cost-sharing that has a positive impact on development.

Similarly, the PJM³⁶⁶ has incorporated into its regional transmission expansion planning process (RTEP) a State Agreement Approach (SAA) intended to take a state’s (or a group of states’) policy goals into account in transmission planning. The SAA requires that, if a state or group of states selects a state public policy project, the costs associated with that project will be recovered from customers in those states. In early 2021, New Jersey became the first state in PJM to initiate an SAA agreement with PJM that addresses planning studies PJM will perform to identify system improvements to interconnect and provide for the deliverability of offshore wind capacity at certain interconnection points. As part of the agreement, PJM initiated a competitive solicitation and received 80 proposals focused on solutions from upgrades to the existing grid, extension of the onshore grid closer to offshore locations, optimal landfall approaches to reduce environmental impacts, and interconnections between offshore substations to form an offshore “backbone.” As of March 2022, PJM is evaluating the proposals and will make recommendations on the most cost-effective and efficient transmission solutions to the New Jersey Board of Public Utilities. The SAA thus assists PJM and states like New Jersey in implementing state public policies regarding procurement of offshore wind generation.

362 Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, Order No. 1000, 76 FR 49842 (Aug. 11, 2011), FERC Stats. & Regs. ¶ 31,323 at P 99 (2011) (Order No. 1000).

363 South Carolina Pub. Serv. Authority v. FERC, 762 F.3d 41, 62 (DC Cir 2014).

364 *Id.* at 63.

365 *Id.* at 63-64.

366 PJM a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

Interconnection Reform

FERC has used its authority under FPA Sections 205 and 206 to require that transmission providers incorporate pro forma interconnection procedures in their tariffs.³⁶⁷ For example, in Order No. 2003, FERC adopted generator interconnection procedures and pro forma agreement for large generator interconnections finding that action “will reduce interconnection costs and time for Interconnection Customers and Transmission Providers, resolve most interconnection disputes, minimize opportunities for undue discrimination, foster increased development of economic generation, and improve system reliability.”³⁶⁸ FERC extended these requirements to small generator interconnections in Order No. 2006.³⁶⁹

Currently, FERC policy generally requires a “first come first served” approach in which generator-interconnect requests are studied in an interconnection queue based primarily on application date. In some cases, transmission providers have adopted cluster windows that allow groups of projects to be studied together. This approach can result in great cost uncertainty, as the studies for one project assume that earlier queued projects have been placed in service, and as earlier queued projects drop out, cost allocation for necessary interconnection upgrades can skyrocket. This approach also engenders a first-mover problem for offshore wind, where the first project to seek interconnection to a particular region will shoulder more of the network upgrade costs than projects that come along later.

Latest Developments in Transmission Planning and Generator Interconnection Related to Offshore Wind

FERC recently signaled potential wide-reaching reforms to regional electric transmission planning, cost allocation, and generator interconnection processes. In July 2021, FERC issued an *Advanced Notice of Proposed Rulemaking* (ANOPR) which examines whether existing approaches adequately account for the transmission needs of a changing resource mix.³⁷⁰ The ANOPR probes a wide range of topics and appears likely to generate specific proposals for fundamental reform to how we plan and pay for the grid. The ANOPR notes present limited resources at the regional transmission planning level “to proactively plan for the resource mix of the future, including both commercially established resources, such as onshore wind and solar, as well as emerging ones, such as offshore wind.”³⁷¹ In addition, FERC laid out its concerns with regional transmission planning processes and whether they are “sufficiently integrated with the generator interconnection processes”³⁷² or too “overwhelmingly focused on relatively near-term transmission needs”³⁷³ to meet emerging energy resources like offshore wind. The ANOPR invited comments on transmission planning, generator interconnection, and cost allocation.

The next steps for FERC are to issue one or more notices of proposed rulemaking (NOPR) identifying proposed changes to its regulations to address these issues. A NOPR regarding reforms to interconnection of offshore wind facilities in particular is anticipated in the near term.

To the extent FERC takes steps to amend its interconnection policies, such action may help advance other federal and state-specific focuses on transmission reform to accommodate offshore wind development from regulators such as the DOE, and the New York Public Service Commission (NYPS). For example, the DOE issued a Notice of Inquiry in conjunction with the current administration’s clean energy agenda promoting investment in transmission upgrades, including collaborating with FERC and other relevant federal agencies on significant issues affecting

367 Standardization of Generator Interconnection Agreements and Procedures, Order No. 2003, 68 FR 49845 (Aug. 19, 2003), FERC Stats. & Regs. ¶ 31,146 (2003) (Order No. 2003) (FERC noting that its authority to require these additions and changes to the OATT derives from its findings of undue discrimination in the interstate electric transmission market that formed the basis for Order No. 888. Order No. 2003 at P 4.).

368 Order No. 2003, FERC Stats. & Regs. ¶ 31,146 at P 919.

369 See Standardization of Small Generator Interconnection Agreements and Procedures, Order No. 2006, FERC Stats. & Regs. ¶ 31,180, order on reh’g, Order No. 2006-A, FERC Stats. & Regs. ¶ 31,196 (2005), order granting clarification, Order No. 2006-B, FERC Stats. & Regs. ¶ 31,221 (2006) (Order No. 2006)

370 Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, 176 FERC ¶ 61,024 (Jul. 15, 2021) (“ANOPR”).

371 176 FERC ¶ 61,024 at P 8.

372 *Id.*

373 *Id.*

the expansion of the transmission grid as well as long-term transmission planning to integrate offshore wind.³⁷⁴ The DOE also released an Offshore Wind Energy Strategies report focusing on regional and national strategies to accelerate and maximize the effectiveness, reliability, and sustainability of U.S. offshore wind energy development and operation.³⁷⁵ The report summarizes the current status of offshore wind in the U.S. as well as challenges to fast-track the development and implementation of offshore wind.

At the state level, for example, the New York Accelerated Renewable Energy Growth and Community Act invoked a comprehensive undertaking to publish a study on transmission planning and development. The mandate also requires the NYPSC and New York's electric utilities to develop and implement plans for the electric bulk and local transmission and distribution investments necessary to clean energy developments and mandate. As a result, the NYPSC embarked on an initiative requiring the study of "meshed" structures for offshore wind transmission interconnection infrastructure, and key modifications its offshore wind program, for a process catalyzed by the FERC ANOPR.³⁷⁶

FERC Backstop Transmission Permitting Authority

FERC has limited authority under the FPA to issue construction permits for transmission facilities. This permitting authority has traditionally resided with the individual states. Where a proposed transmission project must cross several state jurisdictions (as is the case with some offshore wind transmission projects), this has posed a steep and sometimes insurmountable obstacle to getting needed transmission infrastructure built.

In 2005, Congress added Section 216 to the FPA to address this issue.³⁷⁷ FPA Section 216 directs the DOE to conduct a study of electric transmission congestion triennially, in consultation with affected states and RTO/ISOs. Based on these studies, DOE may designate "any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers" as a "national interest electric transmission corridor." Section 216 enumerated certain broad considerations DOE may consider in designating national interest electric transmission corridors, including that "the economic vitality and development of the corridor, or the end markets served by the corridor, may be constrained by lack of adequate or reasonably priced electricity."

Once DOE has designated national interest electric transmission corridors, Section 216(b) allows FERC to "issue one or more permits for the construction or modification of electric transmission facilities" within such corridors if it makes certain findings.³⁷⁸ First, it must find that a state in which the transmission facility is to be built either does not have authority or refuses to exercise authority to approve the project.

In addition, FERC must find that the facilities to be authorized by the permit will be used for the transmission of electric energy in interstate commerce; the proposed construction or modification is consistent with the public interest; the proposed construction or modification will significantly reduce transmission congestion in interstate commerce and protects or benefits consumers; the proposed construction or modification is consistent with sound national energy policy and will enhance energy independence; and the proposed modification will maximize, to the extent reasonable and economical, transmission capabilities.

As FERC's authority to issue a construction permit is limited to instances where a state's process is insufficient to allow a transmission project in a national interest electric transmission corridor to proceed, it is often called "backstop" permit authority. DOE acts as lead agency to coordinate all applicable federal authorizations, Tribal consultations and state agency review required to construct the permitted transmission line. Section 216 also grants the power of eminent domain to developers that receive a FERC construction permit under Section 216(b).

374 Building a Better Grid Initiative to Upgrade and Expand the Nation's Electric Transmission Grid to Support Resilience, Reliability, and Decarbonization, <https://www.federalregister.gov/d/2022-00883> (Jan. 19, 2022).

375 Offshore Wind Strategies Report, Dept. of Energy (Jan. 12, 2022).

376 Order on Power Grid Study Recommendations, Case 20-E-0197, et al., (Jan. 20, 2022).

377 16 U.S. Code § 824p.

378 *Id.* at § 824p(b).

Early on, efforts by DOE and FERC to use the authority granted them under Section 216 stalled, and so far, no national interest electric transmission corridors have been established (nor any transmission projects built pursuant to a FERC construction permit). In 2007, DOE made two transmission corridor designations, both of which were successfully challenged on appeal to the Ninth Circuit. In *California Wilderness Coalition v. DOE*,³⁷⁹ the Court found DOE failed to meet its statutory obligations in two key ways: first, it failed to consult sufficiently with the affected states when developing its congestion study that led to the designation of the corridors. The Court concluded that DOE must disclose the data and technical information DOE relied upon to reach its study conclusions, and that DOE is required to engage with states for sufficient time to provide a “real opportunity for consultation.”³⁸⁰ Second, the court found that DOE failed to conduct an adequate environmental analysis under NEPA. DOE had not performed any NEPA analysis, reasoning that the designation of the transmission corridors did not have any environmental impacts (only the actual transmission project siting decisions would have such impacts). The court’s majority rejected this argument, finding that designating transmission corridors still “influence[s] the areas in which the transmission facilities will be located.”³⁸¹ As such, the court directed DOE to take the “hard look” at environmental impacts of such designations required by NEPA by completing either an environmental assessment or environmental impact statement.

The scope of FERC’s backstop permitting authority was also questioned by the courts early on, and FERC’s recently expanded backstop siting authority under the Infrastructure Investment and Jobs Act of 2021 is as yet untested. The Fourth Circuit Court of Appeals reviewed FERC’s rulemaking adopting requirements for applications seeking transmission construction permits and adopted a very narrow reading of FERC’s ability to act when a state commission has “withheld approval for more than one year after the filing of an application.” FERC had interpreted the statutory language as allowing it to act when a state had denied a permit application as well as when a state had failed to act; the Fourth Circuit reversed, concluding that “[t]he word ‘deny’ is broad enough to include ‘withhold’ in its definition, but the word ‘withhold’ is not broad enough to include ‘deny’ in its definition.”³⁸² This interpretation had chilled prospects for extensive use of FERC’s backstop siting authority, but the 2021 IJJA clarified FERC’s backstop siting authority and allows FERC to overrule state objections.³⁸³ This authority could facilitate offshore wind facilities that connect to the grid through regional or interregional transmission lines to serve different markets or which need transmission to ensure grid reliability once new interconnections are made.

State Agencies

State agencies and public service commissions have original authority to site and permit electric transmission infrastructure within state lines, and they continue to play an integral role in the development of offshore wind projects from the bidding phase to the construction of these facilities and transmission lines related to offshore wind projects. However, these agencies’ processes are not well coordinated, though some of the PJM states have indicated a willingness to engage in collaborative planning processes and policy developments with RTOs/ISOs and other states.

379 *Cal. Wilderness Coalition v. U.S. Dept. of Energy*, 631 F.3d 1072 (9th Cir. 2011).

380 *Id.* at 1086.

381 *Id.* at 1098.

382 *Piedmont Env’t Council v. FERC*, 558 F.3d 304, 313 (2009).

383 *See* 16 U.S.C. 824p(b)(C)(iii).

N CLEAN AIR ACT

Although wind energy development is promoted to alleviate some of the air pollution concerns associated with the use of conventional fossil fuels in electricity production, offshore wind energy project development still triggers extensive air quality requirements under the Clean Air Act (CAA). The CAA permitting requirements applicable to an offshore wind project depend on several factors, including the location of the project, the air quality of the nearest onshore area, the number of sources of air pollution, and those sources' potential to emit pollutants. Construction and operation of offshore wind projects will often require issuance of an OCS permit pursuant to the CAA and its implementing regulations.

Outer Continental Shelf Air Permit

The CAA was enacted "to protect and enhance the quality of the nation's air resources so as to promote the public health and welfare and the productive capacity of its population."³⁸⁴ Section 328 of the CAA was enacted as part of a suite of amendments to the CAA in 1990 that directed EPA to establish requirements to control air pollution from OCS sources in order to attain and maintain federal and state ambient air quality standards and to comply with the Prevention of Significant Deterioration (PSD) requirements of the CAA.³⁸⁵ EPA has authority to issue OCS Air Permits to account for emissions from "OCS sources" of air pollution associated with a proposed project.³⁸⁶ An "OCS source" is any equipment, activity, or facility that (1) emits or has the potential to emit any air pollutant; (2) is regulated or authorized under the OCS Lands Act; and (3) is located on the OCS or in or on waters above the OCS.³⁸⁷ Offshore wind energy projects generally include one or more OCS sources and, therefore, require OCS permits.

Projects located within 25 nautical miles of a state's seaward boundary must comply with the federal, state, and local air quality requirements of the corresponding onshore area, including applicable permitting requirements.³⁸⁸ The attainment status of the corresponding onshore area will determine which CAA requirements are applicable to the project.³⁸⁹ Before applying for a preconstruction permit, a project proponent must first submit a Notice of Intent to EPA and the air pollution control agencies of the nearest onshore area and adjacent onshore areas.³⁹⁰ The Notice of Intent must detail the project's emission points, potential to emit, and other information relevant to assessing the project's air impacts.³⁹¹ EPA and the relevant air pollution control agencies will review the Notice and designate the corresponding onshore area for purposes of determining the air requirements relevant to the project.³⁹²

Projects located beyond 25 nautical miles from the state's seaward boundary are not tied to a corresponding onshore area. Instead, these projects are subject to federal air quality requirements, including EPA's PSD preconstruction permit program, the Part 71 Title V operating permit program, New Source Performance Standards, and some standards for Hazardous Air Pollutants promulgated under section 112 of the CAA.³⁹³

For all OCS sources, regardless of distance from the state seaward boundary, the project proponent must undergo the OCS permit application process, which follows the procedural requirements for federal permitting.³⁹⁴ The permitting agency (generally EPA)³⁹⁵ will then issue a permit that meets all federal requirements and, where applicable, requirements for the corresponding onshore area.

384 42 C.F.R. §7401(b)(1).

385 42 U.S.C. § 7627. Implementing regulations can be found at 40 C.F.R. Part 55.

386 40 C.F.R. § 55.1.

387 40 C.F.R. § 55.2. State and federal air regulations generally define emissions that result from the construction and decommissioning of a new source as "secondary emissions" that are not regulated under the permit. For OCS permits, however, the definition of "OCS source" requires EPA to include in the permit emissions from certain onsite construction equipment and vessels servicing the project.

388 40 C.F.R. § 55.3. The "corresponding onshore area" is either the onshore area geographically closest to the source or another onshore area that EPA designates. § 55.2.

389 40 C.F.R. § 55.2. The onshore area will be designated as an attainment, nonattainment, or unclassifiable area by EPA in accordance with section 107 of the Act.

390 40 C.F.R. § 55.4(a).

391 40 C.F.R. § 55.4(b).

392 40 C.F.R. § 55.5.

393 40 C.F.R. § 55.3.

394 40 C.F.R. Part 124.

395 EPA's jurisdiction extends to OCS sources off nearly all U.S. coasts, except for OCS sources located in the Gulf of Mexico west of 87.5° longitude (i.e., offshore TX, LA, MS, AL) and areas offshore the North Slope of Alaska, which are under the authority of BOEM and the Bureau of Safety and Environmental Enforcement.

Offshore wind projects often require OCS permits due to fuel combustion in engines on the wind turbine generators, electrical service platforms, and vessels used during construction, operation, and maintenance activities. However, the exact nature of the permits required is a function of the variables included in the project, which generally are not identifiable until the developer has submitted a detailed COP for review. The OCS Air Permit issued for the Vineyard Wind offshore energy project, for example, identified two separate OCS sources within the project, both of which EPA determined to be major sources of air pollutants: the Wind Development Area facility—or the wind farm itself—and the Offshore Export Cable Laying Activity—including the specialized vessel used to install electrical cables in federal waters outside the Wind Development Area.³⁹⁶ Because those sources were deemed major sources of criteria air pollutants, the permit required that the project meet PSD and Nonattainment New Source Review requirements, including specific emission limits, emission offsets for construction and operation activities, recordkeeping and reporting obligations, testing requirements, and fuel restrictions.³⁹⁷ More recently, on January 18, 2022, EPA issued the final OCS Air Permit for the proposed construction and operation of South Fork Wind, LLC's offshore windfarm.³⁹⁸ During that permitting process, EPA reassessed the application of the offset requirements under the Nonattainment New Source Review program to OCS sources. In the final permit, EPA removed the requirement to obtain emission offsets for construction emissions while maintaining control technology requirements for OCS sources engaged in construction activities and the requirement to obtain offsets for operational emissions.

Environmental Appeals of Permits

Project developers should be mindful of the permit appeal process that applies to OCS Air Permits. Within 30 days following EPA's issuance of the final permit decision, any interested parties may submit a petition for review of the permit to the EPA's Environmental Appeals Board.³⁹⁹ EPA then has the discretion to withdraw the permit as of right up to 30 days after filing its brief in response to the petition for review.⁴⁰⁰ After that, EPA may still withdraw the permit but must seek permission from the Environmental Appeals Board before doing so.⁴⁰¹ Upon withdrawal, EPA is required to prepare a new draft permit, but that permit must undergo the same process of public comment as would apply to any other draft permit.⁴⁰² The Biden administration's offshore wind energy goals⁴⁰³ suggest that EPA would not be inclined to withdraw an OCS Air Permit, however, project developers should be mindful that project opponents might use this permit appeal mechanism to make offshore development more arduous. For example, the Alliance to Protect Nantucket Sound and the Wampanoag Tribe of Gay Head/Aquinah filed such an appeal of the OCS Air Permit issued for the Cape Wind offshore energy project.⁴⁰⁴ The Environmental Appeals Board ultimately dismissed the appeal and EPA never indicated an intent to withdraw the permit, but the appeal process was an additional, resource-intensive step in the permitting process.

396 U.S. EPA Region 1, Outer Continental Shelf Air Permit: Vineyard Wind, LLC, Permit No. OCS-R1-03 (May 19, 2021), <https://www.regulations.gov/document/EPA-R01-OAR-2019-0355-0113>.

397 The permit requires Vineyard Wind to use of ultra-low sulfur diesel fuel for the Wind Development Area facility and Offshore Export Cable Laying Activity, including all vessels used during construction, operation, and maintenance activities.

398 U.S. EPA Region 1, Outer Continental Shelf Air Permit: South Fork Wind, LLC, Permit No. OCS-R1-04 (Jan. 18, 2022), <https://www.epa.gov/system/files/documents/2022-01/sfw-air-permit-final-ocs-r1-04.pdf>.

399 40 C.F.R. § 124.19.

400 40 C.F.R. 124.19(j).

401 *Id.*

402 *Id.*

403 See Fact Sheet: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs (Mar. 29, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/>.

404 See In the Matter of Cape Wind Associates, LLC, Petition for Review, EAB Dkt No. OCS 11-01 (Feb. 9, 2011), https://yosemite.epa.gov/OA/EAB_WEB_Docket.nsf/Filings%20By%20Appeal%20Number/35AADEBC180A09738525783300559160?OpenDocument.



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