



MARINE MAMMAL COMMISSION

3 October 2011

Ms. Maureen Bornholdt, Chief
Office of Renewable Energy Programs (MS 4090)
Bureau of Ocean Energy Management
381 Elden Street
Herndon, Virginia 20170-4817

Dear Ms. Bornholdt:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed (1) the Bureau of Ocean Energy Management's 18 August 2011 notice of intent to prepare an environmental assessment on commercial wind lease issuance and site characterization for activities in the waters off Rhode Island and Massachusetts (76 Fed. Reg. 51391) and (2) the associated Call for Information and Nominations for commercial leasing for wind power (76 Fed. Reg. 51383). The Commission offers the following recommendations and rationale.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the Bureau of Ocean Energy Management—

- prepare an environmental impact statement, rather than an environmental assessment, to evaluate the potential biological and socioeconomic effects of issuing renewable energy leases in this area;
- include an alternative that would prohibit surveys, construction, and decommissioning of meteorological towers and buoys in the leasing area during migration of North Atlantic right whales (November through April) to minimize the likelihood of noise-related injuries and vessel collisions with right whales and other marine mammals;
- consult with the National Marine Fisheries Service, the Fish and Wildlife Service, the Marine Mammal Commission, and other federal and state agencies as appropriate to develop a set of standards for the collection of baseline information on marine mammals and their habitats, as needed for comprehensive management of energy development in the marine environment;
- use this consultation to identify and address any significant data gaps before initiating the leasing process for offshore renewable energy operations; and,
- provide a comprehensive analysis of the cumulative impacts of wind energy development and other human activities that affect the development area.

RATIONALE

Preparation of an environmental impact statement

The Marine Mammal Commission supports the development of wind energy to help meet the nation's energy needs with less risk to the environment than current sources of energy incur. Wind energy is undoubtedly safer in a number of important respects. That being said, the impacts of wind energy development on the marine and human environment are not well studied and should be characterized to ensure that lessees do not overlook potentially important impacts.

The National Environmental Policy Act requires that environmental impact statements be prepared for major federal actions that may significantly affect the quality of the human environment (42 U.S.C. 4371 et seq.). The Council on Environmental Quality's regulations implementing the National Environmental Policy Act require that significance be determined on the basis of both context and intensity (40 CFR §1508.27). In determining the intensity of an action, the regulations direct agencies to consider, among other things—

- unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas;
- the degree to which the effects on the quality of the human environment are likely to be highly controversial;
- the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks;
- the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration;
- whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment; and,
- the degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

One can make reasonable arguments that all of these criteria apply in the present case. The waters off Rhode Island and Massachusetts have long been recognized as an important migratory corridor and feeding area for endangered and threatened marine mammals and sea turtles, as well as seabirds. The activities required for wind development at the leasing stage pose a variety of risks to marine mammals, including the endangered North Atlantic right whale. Sub-bottom profilers used for geophysical surveys and sub-bottom sampling generate sound levels and frequencies comparable to other sound sources that pose risks to marine mammal physiology (e.g., hearing) and behavior (e.g., habitat use) (Cox et al. 2006, Gordon et al. 2004) and may lead to more serious consequences (e.g., stranding). Pile driving for construction of meteorological towers generates low-frequency sound impulses that are detectable up to 40 km from the source (McIwem 2006), could impair hearing in marine mammals at close range (Madsen et al. 2006), and could lead to changes in

behavior at intermediate distances. Increased vessel activity associated with construction of meteorological towers and the deployment of meteorological buoys may contribute to disturbance and increase the risk of vessel collisions with marine mammals (Laist et al. 2001).

In addition to potential effects on endangered marine mammals, the development of wind energy may present conflicts with human activities, such as commercial fishing and shipping. Fishermen and local communities have expressed concerns over potential conflicts between wind energy projects and commercial fishing. Communities located close to the development site may express some of the same concerns raised with regard to wind energy development at Cape Wind. In addition, activities occurring near the development area may overlap with a traffic separation scheme designated by the Coast Guard for vessels entering and leaving Rhode Island Sound and Narragansett Bay. Although none of these concerns seems insurmountable, an inadequate assessment may undermine management efforts related to these factors, with potential implications for marine mammal management. An environmental impact statement seems essential to integrate all these considerations in support of ecosystem-based management.

Offshore wind energy development involves relatively new technology and its short- and long-term effects on marine ecosystems remain somewhat uncertain. Importantly, wind energy development and management in this area may set a precedent for similar development in the mid-Atlantic and New England states and, indeed, throughout U.S. waters.

Because our nation is just beginning to use this technology in the marine environment and its effects on that environment are still uncertain, the Commission believes that the Bureau's approach to wind energy development should be efficient, but also comprehensive and deliberative. Environmental assessments are generally intended to determine whether an action is likely to have a significant impact on the human environment. Given the biological and economic resources in the proposed lease area, as well as the uncertainty regarding potential effects, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management prepare an environmental impact statement, rather than an environmental assessment, to evaluate the potential biological and socioeconomic effects of issuing renewable energy leases in this area.

Selection of alternatives

For this and other potential lease areas in the mid-Atlantic, the Bureau has used a proactive and collaborative approach for identifying specific lease areas as part of its "Smart from the Start" wind lease initiative. The initiative should help reduce environmental impacts and conflicts over use of space. Such an approach is consistent with the President's National Ocean Policy, particularly regarding marine spatial planning, and promotes more realistic leasing scenarios, more targeted data collections and surveys, and better assessment of environmental risk. The Call for Information and Nominations for leases off Rhode Island and Massachusetts reflects coordination with state task forces on renewable energy and extensive input from stakeholders. The Bureau's efforts to exclude traffic separation schemes and avoid other conflicts are examples of proactive planning.

However, the Bureau also has noted that more information is needed to determine whether additional restrictions are necessary. In this regard, the Commission believes that the Bureau should consider additional steps to protect right whales in the development area. In April 2010 observers sighted as many as 98 right whales—about one-fourth of the entire population—feeding in waters just south of Martha’s Vineyard, in and adjacent to the lease area identified in the Call for Information and Nominations. Clearly, the presence of endangered right whales and other marine mammals in the waters off Rhode Island and Massachusetts warrants special consideration in the development of alternatives for leasing in this area. In fact, the National Marine Fisheries Service has taken steps to provide the necessary protection. To minimize the probability of collisions, the Service has established a seasonal management area for right whales that requires vessels 65 feet and longer to slow to 10 knots off Block Island from November 1 through April 30.

However, it is not clear that the Service’s measure will be sufficient to protect right whales and other marine mammals in the affected area. To analyze the effects of leased areas off New Jersey, Delaware, Maryland, and Virginia, the Bureau included an alternative that would prohibit surveys, construction, and decommissioning of meteorological towers and buoys from November to April, i.e., during migration of North Atlantic right whales (76 Fed. Reg. 40925). In its letter to the Bureau dated 11 August 2011, the Commission supported that alternative because vessel speed restrictions in seasonal management areas around the entrance to Delaware Bay and Chesapeake Bay are helpful but insufficient to protect right whales. The Commission believes that a similar alternative is warranted for development off Rhode Island and Massachusetts. For that reason, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management include an alternative that would prohibit surveys, construction, and decommissioning of meteorological towers and buoys in the leasing area during the migration of North Atlantic right whales (November through April) to minimize the likelihood of noise-related injuries and vessel collisions with right whales and other marine mammals.

Baseline Monitoring

Adequate baseline information is necessary to evaluate the potential effects of wind energy development on marine mammals and their habitats. Baseline information should include both the physical properties and the biological components of the affected environment. It also should be sufficient to identify particularly sensitive populations (e.g., those listed as depleted, threatened, or endangered) as well as particularly sensitive areas (e.g., existing local, state, and federal marine protected areas, national monuments, essential fish habitats, designated critical habitats for rare, depleted, endangered, threatened or otherwise protected species, and biological hotspots or areas of particular biological richness).

Collecting adequate baseline data is challenging because of the inherent variability of biological communities. Understanding this variability requires long-term monitoring, beginning before siting and initial construction occurs and continuing beyond the lifecycle of development activities. If the Bureau fails to collect such information, it will not be able to gauge adverse effects associated with energy development, which is a requirement of responsible management.

On numerous occasions the Marine Mammal Commission has recommended that the Bureau (or the former Minerals Management Service) work with industry, the National Marine Fisheries Service, and the Fish and Wildlife Service to collect better baseline information for the purpose of determining whether energy-related activities are likely to have significant effects on marine mammals and their habitats. Important data gaps still exist, although some data are available on marine mammals and their habitats in the area under consideration here. The Commission commends the Bureau for recently providing funding to the National Marine Fisheries Service to address a major data gap—broad-scale data over multiple years on the seasonal distribution and abundance of marine mammals and other wildlife in U.S. Atlantic waters (the Atlantic Marine Assessment Program for Protected Species). Unfortunately, it is not clear that baseline assessment projects such as this one will keep pace with the aggressive schedule that the Department of the Interior has outlined for renewable energy development on the East Coast.

Given the growing demand for renewable energy and the need for baseline information, the Commission believes that the involved agencies should be establishing standards and priorities for the collection of that information rather than waiting until development is deemed urgent and the agencies do not have time to characterize the affected marine ecosystems adequately. Therefore, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management consult with the National Marine Fisheries Service, the Fish and Wildlife Service, the Marine Mammal Commission, and other federal and state agencies as appropriate to develop a set of standards for the collection of baseline information on marine mammals and their habitats, as needed for comprehensive management of energy development in the marine environment. The Marine Mammal Commission further recommends that the Bureau of Ocean Energy Management use this consultation to identify and address any significant data gaps before initiating the leasing process for offshore renewable energy operations.

Cumulative impacts

Wind energy development is not the only human-related factor that could affect marine resources in the area identified in the call for information and nominations. The Bureau's environmental review should include a detailed analysis of the combined and cumulative impacts of all human activities, including wind energy; fisheries; commercial shipping; tourism; contaminant and nutrient run-off from shore-based and inland industry, agriculture, and residential developments; military activities; and climate disruption. Climate disruption, in particular, may alter the physical, biological, and chemical environment during the lifetime of any wind energy development activity in this region. The Bureau's analysis of cumulative impacts must be rigorous enough to determine whether marine resources, including marine mammals, are being exposed to cumulative impacts that hinder their potential to maintain themselves as functioning elements of their ecosystem, and if they are, when, where and to what extent they are being exposed to such impacts. Therefore, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management provide a comprehensive analysis of the cumulative impacts of wind energy development and other human activities that affect the development area.

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The Commission hopes you find these recommendations and rationale helpful. Please contact me if you have questions or if the Commission can be of assistance as you consider these matters.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

cc: Mr. James H. Lecky, National Marine Fisheries Service
Ms. Mary Colligan, National Marine Fisheries Service
Ms. Lisa Lierheimer, Fish and Wildlife Service

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