



# MARINE MAMMAL COMMISSION

23 February 2015

Mr. James F. Bennett, Chief  
Office of Renewable Energy Programs  
Bureau of Ocean Energy Management  
381 Elden Street, HM 1328  
Herndon, Virginia 20170

Dear Mr. Bennett:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Bureau of Ocean Energy Management's (BOEM) 23 January 2015 notice of availability of an environmental assessment (EA) for commercial wind lease issuance and site assessment activities on the Atlantic Outer Continental Shelf (OCS) off North Carolina (80 Fed. Reg. 3621). The Commission previously commented on BOEM's call for information and notice of intent to prepare an environmental assessment for commercial wind energy leasing and site assessment activities off North Carolina (see letter of 7 March 2013). Several of the Commission's recommendations were incorporated into the EA. This letter addresses remaining issues for BOEM's consideration before it finalizes the EA.

## Summary of the proposed action and alternatives

BOEM has proposed to issue commercial wind energy leases within three Wind Energy Areas (WEA) offshore North Carolina. The WEAs are as follows:

- Wilmington West begins 10 nmi (18.5 km) from the shore and extends roughly 12.3 nmi (22.8 km) in an east/west direction at its widest point. It consists of approximately nine OCS blocks and includes approximately 51,595 acres.
- Wilmington East begins 15 nmi (27.8 km) from shore and extends 18 nmi (33.3 km) in a southeasterly direction at its widest point. It consists of approximately 25 OCS blocks and includes approximately 133,590 acres.
- Kitty Hawk begins 24 nmi (44.4 km) from shore and extends seaward 13.5 nmi (25 km) in the north to 0.6 nmi (1.1 km) in the south. From north to south, it extends approximately 25.7 nmi. It consists of approximately 21.5 OCS blocks and includes approximately 122,405 acres.

BOEM has identified three action alternatives within the subject EA:

- Alternative A (BOEM's preferred alternative) would issue commercial and research wind energy leases within the entirety of the three WEAs offshore North Carolina and approve site assessment activities on those leases;
- Alternative B would exclude the entire Wilmington West WEA from leasing and site assessment activities to reduce the likelihood of impacts on North Atlantic right whales; and

- Alternative C would exclude high-resolution geological and geophysical surveys during peak migration of right whales (1 November to 30 April) to limit vessel activity.

### **Standard Operating Conditions**

Proposed standard operating conditions that would apply to all three alternatives include vessel strike avoidance measures, deployment of protected species observers, establishment of a 200-m default exclusion zone for sound sources operating at frequencies below 200 kHz, implementation of ramp-up and power-/shut-down procedures, operational restrictions during periods of low visibility (or the use of an alternative monitoring plan, such as passive acoustic monitoring), and reporting of all protected species observed, including injured or dead animals. The proposed standard operating conditions do not include restrictions on high-resolution geophysical surveys during peak migration of right whales (1 November to 30 April) in any of the WEAs identified.

The EA is inconsistent as to whether seasonal restrictions on pile driving are part of the standard operating conditions for wind energy activities. The Table of Alternatives Considered (Table 2-1) states that pile driving would be prohibited during the winter months because of migration patterns of North Atlantic right whales, but that prohibition is referenced only as part of Alternative C. However, on page 2-7 the EA states that seasonal restrictions on pile driving would apply to all alternatives. The seasonal restriction on pile driving is not included as a standard operating condition in Appendix B, along with the other conditions noted previously. The Commission supports a seasonal restriction on pile driving to protect right whales from sound disturbance during the winter calving period as a standard operating condition, and it is the Commission's assumption that that condition would apply to all three alternatives, as noted at page 2-7 as well as other places throughout the document (see, for example, pages 4-25 and 4-42). As such, the Commission recommends that BOEM revise its Table of Alternatives Considered (Table 2-1) and its Standard Operating Conditions (Appendix B) to clarify that the restriction on pile driving during the winter months (1 November through 30 April) would apply to all three alternatives.

### **The Commission's Preferred Alternative**

BOEM's Alternative B would exclude the Wilmington West WEA from leasing, consistent with recommendations submitted by the National Marine Fisheries Service (NMFS). On 20 February 2015 (80 Fed. Reg. 9314), NMFS proposed an expansion of right whale critical habitat off Wilmington that includes offshore waters extending north to Cape Fear and up to 28 m in depth, which the Commission supports. The proposed critical habitat would encompass all of the Wilmington West WEA and a significant portion of the Wilmington East WEA. As stated in previous comments to BOEM (see letter of 2 May 2014), the potential for full-scale wind farm development<sup>1</sup> in right whale critical habitat is of significant concern to the Commission.

In addition, the Commission recommended in its 7 March 2013 letter that BOEM include an alternative that would limit site assessment in the mid-Atlantic during the 1 November to 30 April timeframe. As discussed in the Commission's comments, including this as a requirement would

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<sup>1</sup> Including site assessment, construction, and decommissioning activities.

minimize the likelihood of vessel strikes involving endangered right whales. Alternative C is responsive to that recommendation in that it would exclude high-resolution geological and geophysical surveys during peak migration of right whales (1 November to 30 April). For these reasons, and in anticipation of the proposed critical habitat for right whales being finalized, the Commission recommends that BOEM revise its Preferred Alternative to exclude from site assessment activities both the Wilmington West WEA and that portion of the Wilmington East WEA that falls within the boundary of the newly proposed right whale critical habitat in the southeastern U.S. calving area from 1 November to 30 April.

### **Impacts associated with the entire life cycle of wind energy activities**

Offshore wind energy activities involve relatively new technology that has yet to be installed in U.S. OCS waters. Therefore, considerable uncertainty exists regarding the potential short- and long-term impacts on marine mammals and their habitat (Boehlert and Gill 2010, Dolman and Simmonds 2010, Simmonds and Brown 2010, Bailey et al. 2014, Goodale and Milman 2014). The proposed wind energy activities, particularly in right whale critical habitat, will set a precedent for similar activities to occur in other critical habitat areas. Additionally, the extensive footprint and long duration of offshore wind energy activities have the potential to result in significant cumulative impacts on the marine environment.

The Commission is concerned that BOEM's environmental analyses for commercial leasing of wind energy areas to date have been limited to analyzing impacts associated with lease issuance and site assessment only, rather than the full life cycle of wind energy activities from site assessment through construction, operation, and decommissioning. BOEM (as the Minerals Management Service) commissioned a synthesis document on the environmental effects of alternative energy development in 2007 (Michel et al. 2007). That synthesis is no longer current regarding environmental effects, particularly given the information that has become available over the last decade on the environmental effects of construction and operation of numerous wind farms in northern Europe and China<sup>2</sup>, including effects on marine mammals and other marine wildlife (Brandt et al 2011, Lindeboom et al. 2011, Skeate et al. 2012, Teilman and Carstensen 2012, Dähne et al. 2013, Bergström et al. 2014, Haelters et al. 2014, Russell et al. 2014, Scheidat et al. 2014).

In light of the considerable efforts underway to develop wind energy resources in several areas of the mid-Atlantic, and particularly the proposal to conduct wind energy activities in right whale critical habitat, an updated analysis of the current state of knowledge regarding impacts of wind energy activities is warranted. That analysis should consider the full life cycle of wind energy activities as well as the cumulative impact of those activities in the Atlantic OCS, in the context of other human uses of the marine environment and ambient sound levels (Masden et al. 2009, Thompson et al. 2013, Rice et al. 2014). Such an analysis could help identify key data gaps and more fully guide future research, mitigation, and monitoring. Accordingly, the Commission recommends that BOEM include in the EA an updated analysis regarding the potential effects of the full life cycle of all commercial wind energy activities (leasing, site assessment, construction, operation, and decommissioning) in the Atlantic OCS as a future reasonably foreseeable activity—that analysis should incorporate new information on the longer-term and cumulative effects of wind energy activities on marine mammals, their habitats, and their prey species.

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<sup>2</sup> <http://www.gwec.net/global-offshore-current-status-future-prospects/>

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The Commission hopes these comments will be helpful to BOEM in meeting its responsibilities under the National Environmental Policy Act. Please let me know if you have any questions.

Sincerely,



Rebecca J. Lent, Ph.D.  
Executive Director

Cc: Jolie Harrison, NMFS Office of Protected Resources  
David Bernhart, NMFS Southeast Regional Office  
David Gouveia, NMFS Greater Atlantic Regional Fisheries Office

Enclosure

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