



# MARINE MAMMAL COMMISSION

2 May 2014

Ms. Michelle Morin  
Office of Renewable Energy Programs  
Bureau of Ocean Energy Management  
381 Elden Street (HM 1328)  
Herndon, Virginia 20170-4817

Dear Ms. Morin:

The Marine Mammal Commission (Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Bureau of Ocean Energy Management's (BOEM) environmental assessment on Lease Issuance for Wind Resources Data Collection on the Outer Continental Shelf Offshore Georgia (BOEM-2014-017) and the associated 2 April 2014 notice (79 Fed. Reg. 18578). The proposed interim policy lease would grant Southern Company exclusive rights to conduct site characterization and site assessment activities for five years in the lease area.

## RECOMMENDATIONS

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

- include in its preferred alternative a prohibition on all construction and decommissioning activities as well as a prohibition on geophysical and geotechnical activities during the 1 November to 30 April North Atlantic right whale calving period; and
- (1) prepare an environmental impact statement that comprehensively assesses the potential impacts of large-scale renewable energy development on North Atlantic right whales and other marine mammals prior to the issuance of a commercial lease for wind or other renewable energy development in the Florida/Georgia right whale calving area, and (2) include in the environmental impact statement a range of alternatives that includes sufficient protections for North Atlantic right whales and other protected marine mammals.

## BACKGROUND

Southern Company has applied for an interim policy lease from BOEM to install one meteorological tower and/or up to two meteorological buoys and associated equipment for the collection of site-specific wind and environmental data within three Outer Continental Shelf (OCS) lease blocks off Tybee Island, Georgia. Activities under the lease would also include geotechnical and shallow hazards surveys. The anticipated timing of the project would be five years after lease issuance.

Each of the action alternatives identified by BOEM (Alternatives A, B, and C) would include a prohibition on pile driving activities from 1 November to 30 April to reduce sound-related

disturbance to North Atlantic right whales, which use the proposed leasing area for calving during that time period. Additionally, alternative B would prohibit all construction, geophysical, geotechnical, and decommissioning activities from occurring during the 1 November to 30 April time period. Alternative C, BOEM's preferred alternative, would prohibit all site assessment and site characterization activities from occurring within lease block 6074 – an area that the Department of Defense has identified as a military use area. All other provisions would be the same as Alternative A.

## **RATIONALE**

In its 14 January 2013 comments on BOEM's notice of intent to prepare an environmental assessment on Southern Company's interim policy lease request, the Commission recommended that BOEM include an alternative that would restrict site assessment and construction activities from occurring during the calving season of right whales, from 1 November to 30 April. That alternative was included (Alternative B) but is not BOEM's preferred alternative. Instead BOEM identified Alternative C as its preferred alternative, which would prohibit only pile driving from 1 November to 30 April. This alternative would prevent some, but not all, sources of disturbance and possible impacts during right whale calving season.

As noted in the Commission's previous comments, Southern Company's proposed construction and site characterization activities and associated vessel traffic present a risk to right whales as they would occur within an area where the whales are seasonally resident. Pile driving associated with construction of a meteorological tower may represent the greatest risk of all of the proposed activities that generate sound underwater. However, sound generated by sub-bottom profilers, side-scan sonar, and multibeam echosounders also pose disturbance risks to right whales and other marine mammals. For example, sub-bottom profilers used for geophysical surveys and to guide sub-bottom sampling generate sound source levels (201–205 dB re 1 $\mu$ Pa at 1 m) and frequencies (0.5–24 kHz) comparable to other sound sources that are considered to pose risks to marine mammal physiology (e.g., hearing) and behavior (e.g., habitat use) (Cox et al. 2006). Preliminary modeling exercises and studies with captive animals suggest that exposure to sub-bottom profilers could cause a temporary threshold shift or behavioral response if animals are below the ship (Wood et al. 2012). Other sound sources used in site characterization surveys, such as echosounders, are not expected to result in a loss of hearing or other physiological response in marine mammals (Lurton and DeRuiter 2011); however, their use may result in disturbance and ultimately stranding under certain conditions (Southall et al. 2013). There is also a risk of collisions between whales and survey vessels. Right whale mother and calf pairs may be particularly vulnerable to vessel strikes while on the calving grounds given their tendency to spend more time at the surface than other age/sex groups for purposes of resting, nursing, or playing; they also appear to swim at slower speeds than other individual whales (Hain et al. 2013).

BOEM states in the environmental assessment that avoidance of sensitive resources is its primary mitigation strategy. That strategy could be accomplished in this case by restricting all sound producing activities and associated vessel traffic from occurring during sensitive time periods for right whales, as outlined in Alternative B. Based on the anticipated duration of those activities (one month for site characterization surveys, one week for decommissioning of a meteorological tower, and one day for decommissioning of a meteorological buoy), requiring that those surveys be conducted outside of the sensitive time period for right whales would not appear to place an undue

economic burden on the lessee. This is reinforced by BOEM's acknowledgement that most survey and construction activities would occur during more favorable weather conditions that exist from May to October. BOEM has concluded that total potential impacts of Alternative B to air quality, water quality, coastal habitats, and benthic habitats would not increase as compared to Alternative A (and presumably also Alternative C), and that socioeconomic impacts would be similar<sup>1</sup>. Because the restrictions on construction and decommissioning activities identified under Alternative B would avoid impacts to right whales and would not increase impacts on other resources, the Commission recommends that BOEM include in its preferred alternative a prohibition on all construction and decommissioning activities as well as a prohibition on geophysical and geotechnical activities during the 1 November to 30 April North Atlantic right whale calving period.

That said, it is the potential for full-scale wind farm development in the Florida/Georgia coastal area that is of greatest concern to the Commission. The National Environmental Policy Act requires that environmental impact statements be prepared for all major federal actions that may significantly affect the quality of the human environment (42 U.S.C. 4371 et seq.). Significance is determined on the basis of both the context and intensity of the proposed action (40 C.F.R. § 1508.27). In this case, the Florida/Georgia area is the only known calving and nursery area for endangered North Atlantic right whales and also contains important habitat for other endangered and threatened species, including humpback whales, sea turtles, and seabirds. Offshore wind energy development involves relatively new technology; therefore, considerable uncertainty exists regarding potential short- and long-term impacts on marine species and their habitat. The installation of wind energy turbines, and the manner in which they are operated and maintained, will set a precedent for expansion of this technology in waters that are used as calving habitat for right whales. Finally, the extensive areas and long duration of offshore wind energy operations have the potential to result in significant cumulative impacts on the marine environment.

For these reasons, the Commission recommended that BOEM prepare an environmental impact statement to evaluate the potential biological effects of issuing renewable energy leases in this area. Instead, BOEM limited its analysis of effects to actions proposed under the research lease (i.e., the construction, operation, and decommissioning of the meteorological tower and/or meteorological buoys). BOEM did not consider the impact of full-scale commercial wind energy development in the area as a reasonably foreseeable future action, even though the purpose of Southern Company's request for a research lease is to assess the feasibility of developing renewable energy resources off Georgia.

To ensure full consideration of potential short- and long-term and cumulative impacts of renewable energy development and options to minimize potential impacts to North Atlantic right whales and other marine mammals, the Commission recommends that BOEM (1) prepare an environmental impact statement that comprehensively assesses the potential impacts of large-scale renewable energy development on North Atlantic right whales and other marine mammals prior to the issuance of a commercial lease for wind or other renewable energy development in the Florida/Georgia right whale calving area, and (2) include in the environmental impact statement a range of alternatives that includes sufficient protections for North Atlantic right whales and other protected marine mammals.

---

<sup>1</sup> However, no information was provided on the absolute or relative costs to the lessee of implementing the various alternatives.

The Commission appreciates the opportunity to comment on BOEM's environmental assessment for renewable energy activities off Georgia. Please contact me if you have questions concerning the Commission's recommendations or rationale.

Sincerely,



Rebecca J. Lent, Ph.D.  
Executive Director

Enclosure: 14 January 2013 letter from Marine Mammal Commission to Michelle Morin, Bureau of Ocean Energy Management

## References

- Cox, T.M., T.J. Ragen, A.J. Read, E. Vos, R.W. Baird, K. Balcomb, J. Barlow, J. Caldwell, T. Cranford, L. Crum, A. D'Amico, G. D'Spain, A. Fernandez, J. Finneran, R. Gentry, W. Gerth, F. Gulland, J. Hildebrand, D. Houser, T. Hullar, P.D. Jepson, D. Ketten, C.D. MacLeod, P. Miller, S. Moore, D.C. Mountain, D. Palka, P. Ponganis, S. Rommel, T. Rowles, B. Taylor, P. Tyack, D. Wartzok, R. Gisiner, J. Mead, L. Benner. 2006. Understanding the impacts of anthropogenic sound on beaked whales. *Journal of Cetacean Research and Management* 7(3):177–187.
- Hain, J.H.W., J.D. Hampp, S.A. McKenney, J.A. Albert, and R.D. Kenney. 2013. Swim speed, behavior, and movement of North Atlantic right whales (*Eubalaena glacialis*) in coastal waters of northeastern Florida, USA. *PLOS ONE* 8(1):e54340.
- Lurton, X., and S. DeRuiter. 2011. Sound radiation of seafloor-mapping echosounders in the water column, in relation to the risks posed to marine mammals. *International Hydrographic Review*, November 2011, 7-17.
- Southall, B.L., Rowles, T., Gulland, F., Baird, R.W., and Jepson, P.D. 2013. Final report of the Independent Scientific Review Panel investigating potential contributing factors to a 2008 mass stranding of melon-headed whales (*Peponocephala electra*) in Antsohihy, Madagascar, 75 pages. Available at <http://iwc.int/cache/downloads/4b0mkc030sg0gogkg8kog4o4w/Madagascar%20ISRP%20FINAL%20REPORT.pdf>.
- Wood, J., B.L., Southall, and D.J. Tollit. 2012. PG&E offshore 3-D Seismic Survey Project Environmental Impact Report – Marine Mammal Technical Draft Report. SMRU Ltd, 121 pages. Available at <http://www.coastal.ca.gov/energy/seismic/mm-technical-report-EIR.pdf>.