

April 20, 2012

Mr. Gary D. Goeke
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Bureau of Ocean Energy Management
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Dear Mr. Goeke:

The Southern Alliance for Clean Energy is a regional organization that promotes responsible energy choices that create climate change solutions and ensure clean, safe and healthy communities throughout the Southeast. We welcome this opportunity to engage in a thoughtful offshore energy discussion and we would like to thank you for your willingness to discuss offshore energy. SACE would like to voice our support for offshore wind energy while urging a moratorium on offshore oil or natural gas development in the Mid-Atlantic and South Atlantic planning areas.

Offshore Wind Energy is a Better Investment than Offshore Oil and Gas

While no offshore wind farms have been built in the U.S., several proposed wind farms are in the advanced stages of the permitting process. Most of the proposed projects are in the North Atlantic Planning area; however, the Mid-Atlantic and South Atlantic planning areas arguably have the best offshore wind resource in the country.¹

Offshore wind energy isn't a new idea. Currently, nearly 4 gigawatts of offshore wind farms are operational in Europe.² A single gigawatt of offshore wind energy can generate as much electricity as is consumed by about 305,000 average-sized homes annually. Europe plans on installing 150 gigawatts of offshore wind energy by 2030, which would provide between 13% and 18% of that continent's electricity demand.³ Based on these projections, some 293,000 manufacturing, installation, operations and maintenance jobs could be created in the offshore wind industry in Europe by 2030. Aside from Europe, China is the only other place in the world where offshore wind farms are currently operational.⁴

With offshore wind electricity generation, there is no air pollution, no risk of a catastrophic accident, no water consumption and no mining operations.⁵ In addition to supplanting dirtier sources of energy, offshore wind farms may provide artificial reef sites. Some European studies suggest offshore wind farms act as habitat for fish and other wildlife, and may actually improve the ecosystem.⁶ More research must be completed to determine the total ecosystem impact from offshore wind turbines.

Offshore Oil and Gas Prospecting is Unnecessary and Harmful

The current Draft Programmatic Environmental Impact Statement (DPEIS) issued by BOEM for geologic and geophysical (G&G) activities off the Mid-Atlantic and South Atlantic planning areas extends significantly beyond areas of interest for offshore wind energy deployment. Geological and geophysical surveys beyond the needs for offshore wind development amount to prospecting activities for offshore oil and gas development. The excessive and intrusive nature of G&G activities for oil and gas prospecting will cause undue harm to the marine environment. Additionally, previous oil and natural gas assessments of the Mid-Atlantic and South Atlantic show there are limited economically viable resources in these planning areas. Geophysical and geological activities beyond what is necessary for offshore wind energy deployment are unnecessary and harmful.

The proposed G&G activities in the DPEIS extend from 3 nautical miles to 350 nautical miles – far beyond the internationally recognized 200 nautical mile exclusive economic zone. In order to cover this substantial swath of ocean area, shipping and aerial traffic are likely to significantly increase. Excessive shipping traffic can cause displacement and mortality of marine species, including fish, sea turtles and marine mammals. The North Atlantic Right Whale is particularly at risk from ship strikes⁷, and increasing shipping traffic for G&G activities may exacerbate hazards posed to this critically endangered species.

Seismic geological and geographic studies used for oil and natural gas resource assessments can emit extremely loud noises to penetrate deep into the seabed.⁸ These sounds bounce back from the seafloor and below to a collection system onboard a ship. Far from being benign, these loud noises have been shown to cause marine mammals distress and even deafness if the wildlife is too close.⁹ Many marine mammals and even fish rely on sound to navigate, hunt and mate. Conducting large-scale seismic testing off the Mid-Atlantic and South Atlantic coasts would do harm to the marine environment, and there is no guarantee of finding significant oil or natural gas resources.

Previous estimates on the offshore oil and natural gas resources for the Mid-Atlantic and South Atlantic show the areas do not contain substantial hydrocarbon resources. At \$110 per barrel, the Bureau of Ocean Energy Management estimates that the economically extractable resource potential for the Mid-Atlantic and South Atlantic combined is approximately 1.5 billion barrels of oil and about 11 trillion cubic feet of natural gas from between 3 nautical miles to 200 nautical miles from shore.¹⁰ To put the amount of oil potential into context, the U.S. consumes approximately 19 million barrels of oil a day¹¹, making the 1.5 billion barrels of oil worth about 79 days of U.S. oil demand. Natural gas consumption is expected to average about 70 billion cubic feet per day in 2012¹², which means the estimated natural gas resource offshore represents about 157 days worth of total U.S. demand. This minuscule amount of oil and natural gas cannot justify the large risk to the offshore environment from wide-scale G&G activities.

Furthermore, considering the end goal of G &G activities beyond areas of interest for offshore wind energy deployment is to drill for oil and gas, we would like to point out the intrinsic risk in investing time, energy, and money into the G&G process which may never even result in the production of energy. In the years between now and the potential installation phase of drilling rigs, clean energy technology and deployment are anticipated to advance greatly and supply greater amounts of clean energy for less expensively than they are currently capable. Given this scenario, the incentive for offshore drilling will be dampened, thus negating the value of near-term exploratory efforts. Furthermore as time passes and the public learns more about the long-term aftermath of the Deepwater Horizon disaster, we expect public opposition to offshore drilling to grow, particularly as offshore wind, as a clean, renewable, and popular ocean-based energy resource—and thus a counterpoint to offshore drilling—comes online.

Recommendations

In order to promote offshore wind energy, and minimize the financial and ecological risks associated with geological and geophysical (G&G) activities, the Southern Alliance for Clean Energy makes the following recommendations:

- 1) Contain G&G activities to the Wind Energy Areas (WEA) designated by the Bureau of Ocean Energy Management (BOEM). Thus far, BOEM has identified areas off Virginia, Maryland, Delaware and is actively working with taskforces in North Carolina and South Carolina to identify WEAs offshore.¹³ These areas are likely to be the focal points for first-generation offshore wind farm installations within the planning areas. Focusing on these areas for G&G activities will minimize ship traffic and will be maximally beneficial for offshore wind energy development. BOEM should also work to develop WEA's for Georgia and Florida.
- 2) Limit G&G activities to collect relevant data for near-term offshore wind energy deployment. Average turbine installation depth and distance from shore for offshore wind farm projects under development in Europe are approximately 25 meters depth and 20 miles offshore; however, commercially available turbines have been installed in Europe in up to 50 meters depth and up to approximately 62 miles offshore. Most turbines installed utilize a pile-driven monopile foundation structure and submarine interconnection cables.¹⁴ Shallow water, near-shore, shallow penetration G&G activities are best suited for offshore wind energy deployment technologies in the near term and BOEM should focus its efforts on these types of activities. Deep-penetration seismic surveys and electromagnetic surveys are likely unnecessary for offshore wind energy development and thus should be foregone.¹⁵
- 3) Minimize overlapping of similar G&G activities in the Mid-Atlantic and South Atlantic. Increased shipping traffic and intense acoustic surveying are likely to have impacts on the marine environment.¹⁶ Disallowing duplicative G&G activities is likely to decrease these impacts by reducing ship traffic.

4) Prohibit G&G activities from November to April, which is when the North Atlantic Right Whale are most likely to be within the Mid-Atlantic or South Atlantic planning areas.¹⁷

5) Do not allow G&G activities specifically designed for offshore oil and natural gas resource assessments or have limited applicability to the offshore wind industry.

Conclusion

Based on the Mid-Atlantic and South Atlantic's offshore wind energy resource, as well as the benefits of developing offshore wind farms, the Southern Alliance for Clean Energy recommends that the Bureau of Ocean Energy Management work to urgently promote and develop offshore renewable energy. Offshore wind energy, without the risks that fossil fuel development poses to the health and vitality of the region, has more benefits than costs, and is preferred over developing the miniscule offshore oil or natural gas resource. With proper siting, studies and incentives, offshore wind energy can generate abundant clean energy and create numerous jobs while protecting the marine environment.

Sincerely,



Simon Mahan
Renewable Energy Manager
Southern Alliance for Clean Energy

¹ National Wildlife Federation (2010). "Offshore Wind in the Atlantic: Growing Momentum for Jobs, Energy Independence, Clean Air, and Wildlife Protection."

² European Wind Energy Association (2012). "European Offshore Wind Industry – Key Trends and Statistics 2011."
[http://ewea.org/fileadmin/ewea_documents/documents/publications/statistics/EWEA_stats_offshore_2011_02.pdf]

³ European Wind Energy Association (2006). "No Fuel. Wind. Power without Fuel."

⁴ Zoninsein, Manuela (2010, September 7). "Chinese Offshore Development Blows Past U.S." The New York Times.

⁵ National Renewable Energy Laboratory (2010). "Large-scale Offshore Wind Power in the United States."

⁶ Vella, Gero (2001). "The Environmental Implications of Offshore Wind Generation".

⁷ National Oceanic and Atmospheric Administration. "Reducing Ship Strikes to North Atlantic Right Whales."
[<http://www.nmfs.noaa.gov/pr/shipstrike/>]

⁸ National Academies Press (1997). Research Required to Support Comprehensive Nuclear Test Ban Treaty Monitoring, p. 123. [http://www.nap.edu/openbook.php?record_id=5875&page=123]

⁹ National Academies Press (2003). Ocean Noise and Marine Mammals.
[<http://www.nap.edu/openbook.php?isbn=0309085365>]

¹⁰ United States Department of the Interior (2009, January). "Draft Proposed Outer Continental Shelf (OC) Oil and Gas Leasing Program: Considering Comments of Governors, Section 18 Factors and OCS Alternative Energy Opportunities." Minerals Management Service. [www.boemre.gov/5-year/PDFs/DPP_FINAL.pdf]

¹¹ Department of Energy (2012). "Petroleum and Other Liquids."
[http://205.254.135.7/dnav/pet/pet_sum_snd_d_nus_mbbldpd_a_cur.htm]

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- ¹² Department of Energy (2012). "Natural Gas." [<http://205.254.135.7/naturalgas/>]
- ¹³ Bureau of Ocean Energy Management. "State Activities." [<http://www.boem.gov/Renewable-Energy-Program/State-Activities/Index.aspx>]
- ¹⁴ European Wind Energy Association (2012). "European Offshore Wind Industry – Key Trends and Statistics 2011." [http://ewea.org/fileadmin/ewea_documents/documents/publications/statistics/EWEA_stats_offshore_2011_02.pdf]
- ¹⁵ Minerals Management Service (2010). "Descriptions of Geological and Geophysical Activities." [http://www.gomr.boemre.gov/homepg/offshore/atlocs/uses_of_seismic_infosheet.pdf]
- ¹⁶ National Geographic (2011). "Drifting in Static." [<http://ngm.nationalgeographic.com/2011/01/big-idea/noisy-ocean>]
- ¹⁷ National Oceanic and Atmospheric Administration. "Learn More about the North Atlantic Right Whale." [<http://sero.nmfs.noaa.gov/pr/mm/rightwhales/RightWhalesSouth.htm>]