



SPECIAL INITIATIVE
ON OFFSHORE WIND

February 23, 2015

VIA [HTTP://WWW.REGULATIONS.GOV](http://www.regulations.gov)

U.S. Department of the Interior
Bureau of Ocean Energy Management
381 Elden Street
Herndon, VA 20170

Re: Comments on BOEM Docket Number BOEM-2005-0001 -- Notice of Availability of an Environmental Assessment for Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore North Carolina

To Whom It May Concern,

As stakeholders involved in laying the foundations for the offshore wind industry in the U.S., we have followed closely the BOEM site identification and leasing process along the Atlantic Coast. In most cases, BOEM has done a good job with the difficult task of balancing stakeholder needs when identifying potential leasing areas for offshore wind energy.

However, recent decisions by BOEM regarding the North Carolina Wind Energy Areas have raised significant concerns about both the substance of those decisions as well as the process used to arrive at those decisions.

We appreciate the opportunity to share those concerns through these comments and look forward to working with BOEM to address them. Please do not hesitate to contact any of us for additional information or discussion.

Regards,

Brian O'Hara
President, Southeastern Wind Coalition

Stephanie McClellan
Director, Special Initiative on Offshore Wind

John Anderson
Senior Director - Permitting Policy and Environmental Affairs, American Wind Energy Association

Comments to BOEM on North Carolina / Kitty Hawk Wind Energy Area

1. The visual buffer chosen is unnecessarily far

Choosing an over-the-horizon visual buffer of 33.7 nm, which is well beyond what BOEM even considered in a visual simulation, is unnecessarily far. We believe 10 nm is a much more reasonable minimum distance to avoid the majority of concerns from visual impacts, although even that distance limits significant development potential.

BOEM's own visualization studyⁱ released in December 2012 notes that turbines would have limited visibility, especially during the peak tourism season, even if they are placed at less than half the distance of the visual buffer in Kitty Hawk. According to that study, during 83% of summer days, turbines at 15 nautical miles would not be visible for most of the day. Even at 10 nm, turbines would be out of sight for most of the day on 72% of summer days.

As noted in the visualization study, weather and atmospheric conditions are quite often the factors that determine whether or not an offshore turbine will be visible. A 33.7 nm visual buffer requires turbines to be so far offshore that they are below the horizon and physically impossible to see from an elevated position on top of a lighthouseⁱⁱ. That is the most extreme position possible, and adopting that position imposes significant additional cost for drastically diminished returns.

2. The visual buffer chosen sets a troubling precedent

Requiring offshore wind turbines to be sited beyond the horizon from national parks and/or historic landmarks would have a devastating impact on the ability to develop the U.S. offshore wind industry. Using the same criteria in other locations we would see visual buffers of:

- Up to 43.2 miles on the East Coastⁱⁱⁱ
- Up to 48.6 miles in Hawaii^{iv}
- Up to 49.8 miles on the West Coast^v
- At least 26 miles from any national park or historic landmark

In almost all cases, those sorts of visual buffers would push potential sites into water depths that are beyond the limit of current technological experience. Projects at these sites would see significant impacts through things like higher foundation costs, higher transmission costs, little or no construction vessel availability, shorter weather windows, and higher operations and maintenance costs. The cumulative effect of these impacts would be to slow or halt the adoption of this promising clean energy technology.

Even if BOEM makes each decision on a case-by-case basis, this particular decision that requires turbines to be beyond the horizon paves the way for similar decisions to be made in the future. The decision

could also provide opponents of offshore wind energy with one more avenue to litigate against projects under development. One thing we have clearly learned from Cape Wind is that even if those legal challenges lack merit, they can still have a detrimental impact on potential projects.

3. The decision was made without seeking state input.

BOEM's "Smart from the Start" initiative highlights "the excellent work that has been underway in cooperation with the states" for designating Wind Energy Areas in Virginia, Maryland, Delaware, New Jersey, Rhode Island, and Massachusetts.^{vi} However, in the case of North Carolina, BOEM imposed a visual buffer that eliminated over 86% of the Kitty Hawk Call Area (over 750,000 acres) without seeking any state input on that visual buffer.

The state task force was formed in 2010 and met four times between 2011 and 2012. During that time, the National Park Service (NPS) requested a 20 mile (17.4 nautical mile) visual buffer and several Task Force members expressed concerns about such an extensive buffer, noting that it was unnecessarily far and would eliminate much of the best, lowest-cost, and conflict-free potential wind energy areas. Our understanding was that dialogue could continue and ultimately BOEM would balance the NPS visual buffer request with the concerns from state representatives on the Task Force who felt 20 miles (17.4 nautical miles) was too extensive.

Then in August 2014, to the surprise of many involved and contrary to the anticipated process, BOEM publicly announced a 33.7 nautical mile visual buffer in the Kitty Hawk wind energy area.

We have not been able to identify any stakeholder within the state, including the Task Force, the North Carolina Governor's office, the North Carolina Department of Environment and Natural Resources, or any other state agency, that was ever notified that a 33.7 nautical mile (38.8 mile) visual buffer had been proposed, or was even being considered, until it was announced publicly by BOEM.

Considering the distance announced is almost twice as far as the original NPS request, which was already a concern to several Task Force members, we believe this decision should be revisited and all stakeholders should have a chance to provide input.

4. Pushing areas this far offshore increases costs

To quantify the impact of such an extensive visual buffer, the Southeastern Wind Coalition worked with COWI and BVG Associates to conduct a collaborative analysis of the impact of moving projects so far offshore on the levelized cost of energy (LCOE). Both COWI and BVG Associates are internationally recognized consulting/engineering firms with extensive experience in offshore wind design, construction, and operations. COWI and BVG each have first-hand experience in several thousand megawatts of offshore wind development and construction in Europe and have also worked on many of the early U.S. development efforts.

In their analysis, they found that moving the inner boundary of a project in the Kitty Hawk area from 10 nm to 35 nm offshore would increase CAPEX by an estimated 18-20%, increase operating cost by an estimated 5-7%, and increase the cost of financing due to additional risk. Even with the estimated increase in wind speeds, this results in an increase to the levelized cost of energy (LCOE) of approximately 25%. The full analysis will be provided to BOEM as a separate document.

What drives this cost increase is both distance (more cabling, HVDC vs. HVAC, longer transit times, shorter weather windows) as well as water depth, since a project at a 35 nm distance to shore is in water depths approaching the limits of current industry experience. While we fully expect the industry to continue driving down costs and enabling development in deeper water, imposing restrictions that force the first U.S. projects into sites with unnecessary burdens is not the way to encourage the development of this industry in the U.S.

5. Increasing cost reduces the viability of development

One of the biggest near-term challenges for scaling offshore wind in the U.S. is bringing down the cost, and reducing cost is a major focus of global industry leaders. In Europe, scaling up development of offshore wind has depended on cost reductions, and government has been a strong partner in that. If one of BOEM's goals is to enable this industry in the U.S., then we should be prioritizing sites with the best potential to deliver lower energy costs while still meeting stakeholder needs.

Imposing unnecessary visual buffers, like what was done in the Kitty Hawk WEA, does just the opposite – it drives up the cost. Rather than encouraging growth and innovation, regulatory actions that place upward pressure on costs can slow or even halt the ability for this industry to get established in the U.S.

RECOMMENDATIONS:

A. Reconvene the NC State Task Force to reevaluate the areas.

A review of the North Carolina Call Areas should be re-opened so that stakeholders from the state task force have the opportunity to provide input on the range of options being considered, especially related to visual buffers.

B. Issue a statement clarifying that areas not included in a Call for Information & Nomination or an announced Wind Energy Area may be considered for leasing in the future.

Technology, ocean uses, and market needs can change rapidly so exclusion from a Call or WEA should not mean areas are “off the table” permanently.

ⁱ <http://www.boem.gov/Renewable-Energy-Program/State-Activities/NC/Task-6---Meteorological-Conditions-Final-Report.aspx>

ⁱⁱ Assuming a viewing height of 47.5m (equal to the focal plane of the Bodie Island Lighthouse) we calculated that a 33.7 nm distance would put a 112m tall object completely below the horizon.

ⁱⁱⁱ Block Island Southeast Light, RI. 79m focal plane.

http://en.wikipedia.org/wiki/List_of_lighthouses_in_the_United_States_by_height#Highest_focal_plane

^{iv} Makapuu Point Light, HI. 128m focal plane. Ibid.

^v Old Point Loma Lighthouse, CA. 141m focal plane. Ibid.

^{vi} <http://www.doi.gov/news/pressreleases/upload/11-23-10-Wind-FAQs.pdf>