



**Caesar Rodney Institute  
Center for Energy & Environment**

**Public Comments Docket BOEM-2020-0005**

**Vineyard Wind 1 Offshore Wind Energy Project Supplement to the  
Draft Environmental Impact Statement**

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The following comments are submitted in response to BOEM Vineyard Wind 1 Offshore Wind Energy Project Supplement to the Draft Environmental Impact Statement (EIS) <sup>1</sup>.

I agree with the BOEM decision to include cumulative impacts of the build out of additional offshore wind projects in neighboring lease areas, and future projects in the Vineyard 1 lease area. Approval and construction of the Vineyard 1 project will open the door to additional offshore wind construction. How would future projects be limited once the first is in place?

It is not uncommon for the first project in a region to be placed furthest out from shore, and to be of relatively small scale to minimize viewshed, and other environmental impacts. A good example is the Orsted "Skipjack" project off the Delaware coast. The first phase will only have 12 turbines located in the furthest corner of the lease area in a tight grid pattern to minimize visual impact. The closest turbine will be about 19 statute miles from the coast, and cover a small area of the coast. However, the lease area extends the entire 30 plus miles along the Delaware beach resort area, comes as close as 13 miles to shore, and will have dramatically more visual impact when filled out with as many as 187 wind turbines according to the Orsted website.

I agree with the draft EIS conclusions that the cumulative impact of the proposed action will be major for commercial fisheries, for hire fisheries, navigation and vessel traffic, scientific research and studies, and military and national security. The EIS conclusions are based on responses from the US Marine Fisheries Service, the US Coast Guard and Navy, and marine research organizations.

I disagree with the draft assessment assumption that if the Vineyard Wind 1 project is not built, it will be replaced with other offshore wind projects to meet state mandates. Other projects may be restricted for the same reasons Vineyard 1 may be rejected for BOEM permit approval. For example, if Vineyard 1 was rejected because of visual impacts of being too close to shore, any future project a similar distance from shore could also be rejected.

I disagree with the draft EIS conclusion the cumulative impact of the proposed action will have moderate negative impacts, and minor benefits on tourism. In deciding the impact on viewshed the draft EIS quotes from a BOEM commissioned study from Parsons and Firestone (page 3-86)<sup>2</sup>:

- *At a distance of 15 miles the percentage of respondents who reported their beach experience would be worsened by the visibility of WTGs (Wind Turbine Generators) was about the same as the percentage of those who reported that their experience would be improved (e.g. by the knowledge the benefits of offshore wind).*
- *About 68 percent of respondents indicated that visibility of WTGs would neither improve nor worsen their experience.*

- Reported trip loss (respondents who stated that they would visit a different beach without offshore wind) would average 8 percent when wind projects were 12.5 miles offshore, 6 percent when 15 miles offshore, and 5 percent when 20 miles offshore.
- About 2.6 percent of respondents were more likely to visit a beach with visible offshore wind turbines at any distance.

The summary of the study findings, and the study itself have several flaws. The Parsons/Firestone study used visualizations of a 579' tall turbine compared to the Vineyard current plan of using 837' tall turbines, and the turbines will be as close as 14 miles from shore. The taller turbines have the equivalent visual impact of moving the turbines 5 miles closer to shore in the Parsons/Firestone study, or equivalent to 10 miles. At 10 miles, survey respondents stated their recreational beach experience would be worse with turbines visible by a three to one margin (29 percent to 10 percent at 10 miles shown in Figure 3 below). Trip loss is expected to be 14 percent compared to trip gain from curiosity trips of 2.6 percent (see study Figure 5 below).

Figure 3 from Parsons/Firestone offshore turbines make trip better or worse

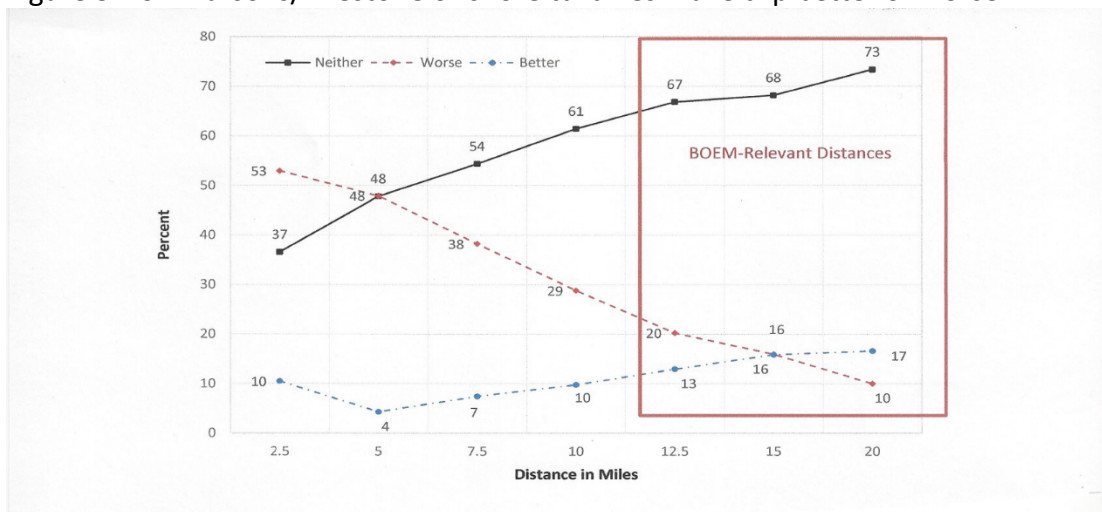
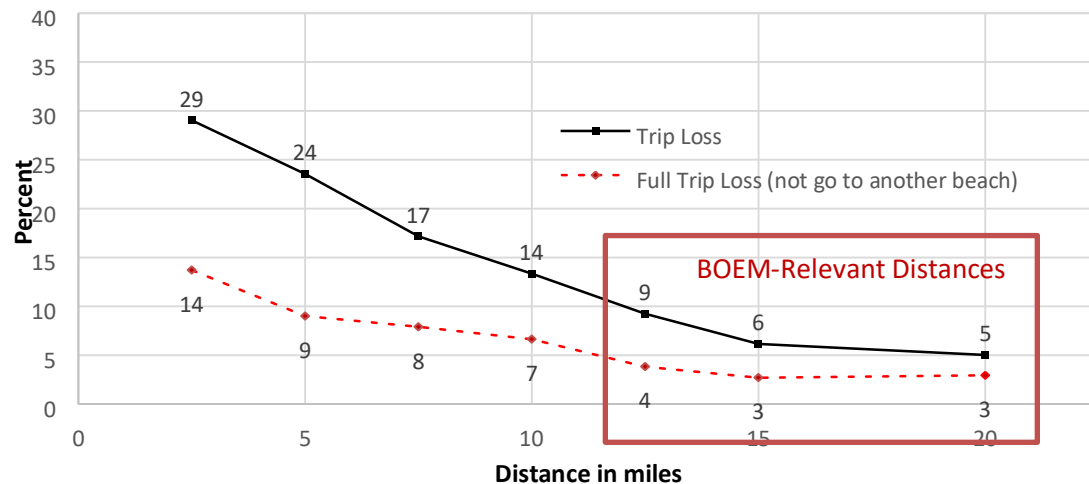


Figure 5 from Parsons/Firestone permanent trip loss V. curiosity trip gain



Further complicating the results, curiosity trips are a one-time event, while trip loss tends to be permanent. Also, negative responses about visible turbines were followed up, and adjusted for a measure of certainty while positive responses had no such follow up, or correction. The Parsons/Firestone study sample included people involved in beach activities (65 percent), and people who simply visited the beach area, but not the beach itself (35 percent) who would not be expected to oppose visible wind turbines. The Parsons/Firestone report stated property values would fall, but did not quantify by how much.

Contrast the Parsons/Firestone study with the study by Lutzeyer et.al. (2017), “The Amenity Costs of Offshore Wind Farms: Evidence from a Choice Experiment”<sup>3</sup>. The Lutzeyer study worked with beach home rental companies, and surveyed only people who had recently rented a house on, or near the beach. The study found 38 percent of beach renters would likely not come back to a beach with daytime visible turbines regardless of the distance as shown in the study quote below. In addition, others would return only with a rental discount depending on the distance.

*Overall, the willingness to accept estimates for the Never View class imply that these respondents would likely exit the local rental market if turbines were present, rather than make intensive margin tradeoffs among rental price and characteristics of the viewshed.*

The Lutzeyer study also showed nighttime visualizations of red flashing aircraft warning lights, and respondents stated even higher rates of objection with 55 percent not likely to return to a beach with nighttime visible turbines. In a query to Parsons/Firestone I learned they also showed nighttime visualizations but did not report the results. Since BOEM paid for the study the nighttime survey results should be demanded by BOEM.

Orsted has volunteered to install aircraft detection lighting systems (ADLS) that use radar to detect the presence of nearby aircraft to turn the warning lights on. Otherwise the lights are off reducing nighttime lighting by up to 99 percent. These systems have been approved by the Federal Aviation Administration that controls such systems up to 12 nautical miles from the coast, and by BOEM for greater distances.

While the ADLS mitigates this issue for the Vineyard Winds 1 project, no such commitment has been made for other lease areas. While no exact cost could be determined for an ADLS could be determined there are several references the systems are very expensive, and thus not be offered voluntarily in every circumstance. For example, Orsted has discussed ADLS for the Skipjack project off the Delaware coast, but has not volunteered to install it. Without such systems the nighttime aircraft warning lights would constitute a major negative impact.

Martha’s Vineyard and Nantucket will face a cumulative 56 miles of continuous turbines on the southern horizon coming as close as 14 statute miles from seven separate proposed lease areas. The Martha’s Vineyard Commission<sup>4</sup> reports the combined direct economic impact

of tourism on the two islands was about \$333 million in 2016, with about 2,000 jobs, along with about \$26 million in state and local tax revenue. The U.S. Bureau of Economic Analysis<sup>5</sup> estimates an indirect multiplier of 1.43 bringing the total economic benefit to about \$475 million a year.

A 10 percent loss in net tourism using the Parsons/Firestone study would yield a Gross State Product loss of \$47.5 million a year. The Net Present Value of the loss over the expected twenty year life of the vineyard 1 project is \$576 million at a 7 percent discount rate, and \$827 million at a 3 percent discount rate.

Even a 1 percent tourism loss, given the lower population in the southern part of the islands, comes to about \$58 to \$83 million loss using the same discount rates. In either case, the cumulative impact is a potentially major impact, not a moderate impact as stated in the Draft Environmental Impact Study, and there are no offsetting minor benefits. The 1 percent loss becomes quite significant for projects closer to high impact tourist zones. I estimate the economic impact of a 1 percent loss of tourism in the Delaware and Maryland beach area would be about \$1 billion over the twenty-year expected life of the project.

### **In Conclusion**

BOEM in Docket 2020-0005 is appropriately:

- Using cumulative impact of neighboring offshore wind projects to consider the environmental impact of the Vineyard Wind 1 project
- Concluding that the cumulative impact of the proposed action will be major for commercial fisheries, for hire fisheries, navigation and vessel traffic, scientific research and studies, and military and national security

BOEM needs to correct:

- The draft EIS conclusion the cumulative impact of the proposed action will have moderate negative impacts, and minor benefits on tourism is wrong. A 10 percent loss in net tourism using the Parsons/Firestone study would yield a Gross State Product loss of \$47.5 million a year. The Net Present Value of the loss over the expected twenty year life of the vineyard 1 project is \$576 million at a 7 percent discount rate, and \$827 million at a 3 percent discount rate. Even a 1 percent tourism loss, given the lower population in the southern part of the islands, comes to about \$58 to \$83 million loss using the same discount rates. In either case, the cumulative impact is a potentially major impact, not a moderate impact as stated in the Draft Environmental Impact Study, and there are no offsetting minor benefits.

Other BOEM actions:

- BOEM should require the Parsons/Firestone team release the results of their nighttime visualization survey as BOEM paid for the study, and adjust the authors

conclusions taking into account the impact of taller turbines effectively making the turbines appear 5 miles closer.

- All offshore wind projects should be required to install Aircraft Detection Lighting Systems

Notes:

- 1) U.S. Bureau of Ocean Energy Management, Vineyard Wind 1 Offshore Wind Energy Project Supplement to the Draft Environmental Impact Statement, <https://www.boem.gov/sites/default/files/documents/renewable-energy/Vineyard-Wind-1-Supplement-to-EIS.pdf>
- 2) U.S. Bureau of Ocean Energy Management, University of Delaware, "Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism", March 2018, Authors: George Parsons and Jeremy Firestone, <https://www.boem.gov/espis/5/5662.pdf>
- 3) North Carolina State University, "[The Amenity Costs of Offshore Wind Farms: Evidence from A Choice Experiment](#)", March 216, Lutzeyer ET. al., [https://cenrep.ncsu.edu/cenrep/wp-content/uploads/2016/03/LPT\\_Offshore-Wind.pdf](https://cenrep.ncsu.edu/cenrep/wp-content/uploads/2016/03/LPT_Offshore-Wind.pdf)
- 4) Martha's Vineyard Commission, Martha's Vineyard Statistical Profile February, 2019, [https://www.mvcommission.org/sites/default/files/docs/web03\\_MVSP%20FINAL%20PRINT%202019-03-21-3.pdf](https://www.mvcommission.org/sites/default/files/docs/web03_MVSP%20FINAL%20PRINT%202019-03-21-3.pdf)
- 5) U.S. Bureau of Economic Analysis\_Regional Impact Multiplier System, composite multiplier for indirect impact of tourism dollars is 1.4351, for jobs 1.340257, for utilities 1.2983