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David J. Collins, Acting Executive Secretary
Maryland Public Service Commission
William Donald Schaefer Tower
6 St. Paul St., 16th Floor
Baltimore, MD 21202

11/12/2019

RE: Public Comments PSC Docket 9431

Dear Mr. Collins,

Please accept these public comments regarding the changing technology planned for the Skipjack, and U.S. Wind offshore wind projects. Both projects are now considering building with the latest General Electric 12 megawatt wind turbines. I believe the changes require a major review of the pricing, and Benefit Cost Analysis (BCA) portions of the original PSC review process for these projects. As originally approved, the projects represent a \$3.6 billion commitment from Maryland electric customers, and another \$0.6 billion in federal tax credits from U.S. taxpayers, and both deserve a just and reasonable PSC finding.

1 Adoption of the latest, most efficient technology requires a review of approved pricing

The National Renewable Energy Laboratory study, “The Vineyard Wind Power Purchase Agreement: Insights for Estimating Costs of U.S. Offshore Wind”¹, compared the nominal levelized cost for energy and renewable energy credits in 2022 dollars for the Ørsted 400 MW first stage Vineyard Wind project approved in May, 2018, to the 120 MW Ørsted Skipjack, and 248 MW U.S. Wind project approved in May, 2017. The levelized price for the Vineyard Wind project is \$74.23/MWh, 52 percent lower than the \$155.94/MWh price of the Maryland projects adjusted to 2022 dollars. Both the Vineyard Wind and Skipjack projects are also expected to go online in 2022. The Vineyard Wind project will use 9.5 MW turbines with the first phase requiring about \$1.4 billion in investment, or about \$3.5 million a MW. The Skipjack project was expected to require \$0.7 billion in capital for 8 MW turbines, or about \$5.7 million a MW. With Skipjack now planning to use 12 MW turbines it would be expected the capital cost, and cost per MWh would be more in line with the Vineyard Wind Project. The price premium for the Skipjack project adds up to almost \$400 for residential customers over the 20 year contract period, and about \$2.4 million dollars for an industrial customer at the 75,000 annual MWh cap. The original price of the Maryland projects appears wildly over-priced. A renegotiation in price is warranted.

The Skipjack projects was to come ashore in Ocean City, Maryland, and the U.S. Wind project electric transmission cable was to go through the Indian River Inlet to the Indian River Power plant in Millsboro, DE. Because of concerns over lost tourism with visible wind turbines, Ocean City officials are banning transmission cables from their shores. Delaware State Parks Director Ray Bivens announced the U. S. Army Corp of Engineers has banned any cable from Indian River Inlet. Consequently, Director Bivens announced a plan to bring the Ørsted Skipjack cable ashore at Fenwick Island State Park, and for a second cable for a potential second phase in the Ørsted lease area. U. S. Wind may very well ask for access to the park as well. Building out the two lease areas could result in 1.2 to 1.8 GW of total capacity. That could require an 8 acre substation, and an 18 mile, major transmission line be built to the Indian River Power Plant at a potential cost



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of \$50 to \$75 million. Who will pay for that? Delmarva Power customers? Would the Maryland PSC approve such infrastructure on a flood prone barrier island?

In addition, the conditions of the PSC approval required, “each developer also must take advantage of the best commercially available technology to lessen views of the wind turbines by beach-goers and residents, both during the day and at night”. The change to taller 12 MW turbines does not meet that objective, so should the project move forward?

These questions need to be considered in a re-opened 9431 Docket.

2 The potential cost of lost beach tourism needs to be considered in a new Benefit Cost Analysis

No consideration was given in the original Docket to potential lost beach tourism as a cost in the BCA. Six studies have used visualizations of beach views of wind turbines off the coast in surveys of beach community visitors. While all used slightly different methodologies, each confirmed the potential of lost tourism. The two most recent studies from North Carolina State University², and the University of Delaware³, adjusted for the latest 853’ tall wind turbines at the 13 to 17 mile distance of the PSC approved projects, found a range of 15 percent to 54 percent of tourists would likely stop coming to a beach where wind turbines are visible. Attached to this document is the potential economic impact if just 20 to 30 percent of tourism is lost in Delaware. Lost economic activity, just off the Delaware beaches, may total \$591 to \$887 million on a \$3 billion base of direct and indirect benefits. That could lead to 4,920 to 7,400 job losses, and a \$ 92 to \$138 million loss of state and local tax and fee revenue. The loss would be larger off the coast of Ocean City where tourism activity is 50% higher. It is possible this issue alone could wipe out most of the \$2 billion economic benefit for these wind projects calculated by Levitan & Associates. This must be factored in a revised BCA.

3 The BCA calculation used to approve the projects was flawed, and needs to be re-done

The Maryland Offshore Wind Energy Act requires offshore wind projects provide a net economic benefit to the state. Submissions by the PSC consultant, Levitan & Associates, show all the net benefits, and included indirect and induced effects. However, calculations did not include indirect, or induced effects on the cost side. According to the Office of the People’s Council, “However, none of the analyses provide an analysis of the impacts, if any, that higher electricity rates for businesses throughout the State will have on employment and wages in the State”. Higher electricity rates impacts every area of economic activity. The OPC goes on to state, “Additionally, there is certainly reason to believe that the project could have an impact on businesses in the Ocean City area, but neither the applicants nor the Levitan Report provided any analysis of the impact the projects could have on property values or tourism in Ocean City”.

Levitan never submitted a BCA for the final agreed OREC prices. The Levitan report of 3/17/2017 provides an “Independent Estimate of Net Ratepayer Costs” in 2016 dollars in Table 4, page ES36, and an “Independent Estimate of In-State Economic Benefits” in 2015 dollars in Table 5, page ES39. I updated the estimates using 2016 dollars in both tables, and using the final agreed OREC prices and found costs of \$2.013 billion exceeded benefits of \$1.988 billion. Using the same ratio of direct to indirect/induced expenditures in the benefit calculation to roughly estimate the impact on the cost side adds \$1.556 billion to



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the cost side of the equation. Including the potential of lost tourist revenue could add billions more. An accurate BCA might show costs exceed benefits by 2.5 times. A new BCA is critically needed.

In conclusion, an accurate Benefit Cost Analysis would conclude neither the Skipjack, nor the U.S. Wind projects should be allowed to move forward as costs exceed benefits by over two times. This makes sense as the agreed price is probably twice what it should be given current contract bids in other jurisdictions using similar technologies Ørsted, and U.S. Wind now intend to deploy.

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Notes:

- 1) The National Renewable Energy Laboratory, “The Vineyard Wind Power Purchase Agreement: Insights for Estimating Costs of U.S. Offshore Wind”, February, 2019, Philipp Beiter, Paul Spitsen, Walter Musial, and Eric Lantz, <https://www.nrel.gov/docs/fy19osti/72981.pdf>
- 2) North Carolina State University, “The Amenity Costs of Offshore Wind Farms: Evidence from A Choice Experiment”, March 216, Lutz ET. al., https://cenrep.ncsu.edu/cenrep/wp-content/uploads/2016/03/LPT_Offshore-Wind.pdf
- 3) 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>



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RELEASE: CRI - Center for Economic Policy and Analysis

RE: Economic Losses from Delaware Wind Turbines

DATE: 10/29/2019

Research from North Carolina State University, and the University of Delaware indicates that the siting of wind turbines off the beaches of Sussex County will reduce tourism by 15% to 54%. What toll will this take on the County's economy?

According to the most recent data (2017) from the Delaware Tourism Office, tourism spending added \$2.1 billion of economic activity to the Sussex County economy, creating 18,350 jobs. Applying a Sussex County tourism multiplier from the U.S. Bureau of Economic Analysis, the total contributions to the County economy are \$3.0 billion in activity and 24,600 jobs.

The biggest economic benefits are accrued by rental homes (\$2.2 billion including the multiplier), followed by food and beverage businesses (\$382 million), retail shopping (\$259 million), and hotels and motels (\$277 million).

A drop in tourism spending of just 20% to 30% would result in total losses of economic activity ranging from \$591 million to \$887 million and job losses ranging from 4,920 to 7,400.

Based upon estimates from the Delaware Tourism Office, there would be an associated annual loss of \$92 million to \$138 million in state and local government taxes and fees.

Dr. John E. Stapleford, Director
Center for Economic Policy and Analysis