

The Offshore Wind Round-Up

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IN THIS ISSUE

- Atlantic Shores Offshore Wind South Project 1 has announced its intention to rebid its contract to provide electricity to New Jersey. Details begin <u>on this page</u>.
- Information about hurricanes and offshore wind turbines begins <u>on page 3</u>.
- Information about changes in how U.S. power grids are planned and funded begins <u>on</u> page 5.
- A **broken turbine blade** was reported in Vineyard Wind off the coast of Massachusetts last month. Details begin <u>on page 6</u>.

ATLANTIC SHORE SOUTH PROJECTS: A RE-BID AND A SECOND ATTEMPT

Background:

- The NJ Bureau of Public Utilities ("NJBPU") periodically **solicits applications** to secure Offshore Wind Renewable Energy Certificates ("ORECs") during a set window of time. An OREC represents one megawatt of electricity generated by an offshore wind farm and committing to purchase ORECs is how NJBPU buys power for NJ.
- During these New Jersey Offshore Wind Solicitation periods, offshore wind farm developers submit applications in which they state that they can supply a specific amount of electrical power at a specific cost. NJBPU either selects a developer and approves the application as stated or rejects the application and the developer can then re-apply during a subsequent solicitation period, if desired.
- There have been four solicitation periods in the past four years. Atlantic Shores Offshore Wind ("ASOW") did not participate in the First Solicitation, which began in September 2018, and was awarded to Ørsted in June 2019. It did, however, participate in the Second Solicitation, which was awarded to ASOW South Project 1 and Ørsted Wind 2 on June 30, 2021.
- **ASOW Project 2** participated in the Third Solicitation, which opened March 2023 and closed August 2023, but did not win the award.

On July 10, 2024, Atlantic Shores Offshore Wind issued a press release with this headline: "Atlantic Shores Bids into New Jersey's Fourth Offshore Wind Solicitation." The award is expected to be announced in **December 2024**.

Access the full press release from ASOW by clicking on this link <u>https://atlanticshoreswind.com/atlantic-shores-bids-into-new-jerseys-fourth-offshore-wind-solicitation/</u>

From the NJBPU website:

"Fourth New Jersey Offshore Wind Solicitation

To meet New Jersey's clean energy goals, and to implement Governor Phil Murphy's vision of making New Jersey a leading hub of offshore wind development, the Board of Public Utilities ("BPU" or "Board") hereby announces that it is soliciting Applications to secure Offshore Wind Renewable Energy Certificates ("ORECs") targeting at least 1,200 MW and up to approximately 4,000 MW of capacity. The Board reserves the right to award less than 1,200 MW or more than 4,000 MW of capacity if circumstances warrant. The Board seeks to promote robust competition in this Fourth Solicitation and future solicitations to support the continued development of the offshore wind industry in New Jersey."

Access the Solicitations section on the NJBPU by clicking on this link <u>https://bpuoffshorewind.nj.gov/fourth-solicitation/</u>

A spokesperson for ASOW provided the following information on July 15:

- ASOW South Project 1 is being **re-bid**. Details of the bid cannot be shared because the bidding process is competitive, but the volume of ORECs is "consistent with" and "very similar to" the initial bid [1,510 MW was awarded in that bid].
- ASOW is trying again to win the award for **ASOW South Project 2** during this solicitation.
- The three factors that informed the bid submitted four years ago remain in play: 1) the compounding elements of inflation; 2) interest rates as they impact the cost of money; and 3) supply chain challenges, particularly given Europe's accelerated demand for alternative sources of energy. Russia has cut its oil and gas supplies to EU nations over the past two years because of the war in Ukraine. In response, Europe is accelerating its construction of wind and solar power energy facilities to reduce its reliance on fossil fuels.
- In addition, a fourth factor has become significant: Increased energy demand. PMJ¹ has
 released its long-term load forecast and concluded that total annual energy use throughout
 the PJM footprint is expected to increase nearly 40% by 2039.

¹ PJM is a regional transmission organization that manages the power grid and coordinates the movement of wholesale electricity through all or parts of Delaware, Illinois, Indiana, Kentucky,

 ASOW South Projects 1 & 2 are designed to send electrical power to New Jersey through the on-land connection facilities in Atlantic City and in Sea Girt in Monmouth County. There is **no commercial agreement** in place at this time between New Jersey and New York for the transmission of power from ASOW North.

- Related to the statements above:

Access an article with the headline "Europe moves away from Russia's oil and gas" published by the U.S. Embassy & Consulates May 2023 by clicking on this link <u>https://ru.usembassy.gov/europe-moves-away-from-russias-oil-and-gas/</u>

Access the PMJ report by clicking this link

<u>https://insidelines.pjm.com/pjm-publishes-2024-long-term-load-forecast/ - :~:text=Peak winter</u> <u>load for the, of more than 43,000 MW.</u>

WIND TURBINES & HURRICANES

Many have expressed interest in reading the **full document** from the New Jersey Bureau of Public Utilities that was included as blurred background in Save LBI's full-page announcement on page 21 in the first section of the July 10th issue of *The Sandpaper*.

This document is not a report about the impact of hurricanes. Rather, it is a **Memorandum of Agreement** between the New Jersey Board of Public Utilities ("NJBPU") and the National Offshore Wind Research and Development Consortium ("Consortium").

The Memorandum **memorializes an agreement** between these two entities to commit money (from the NJBPU) and research facilities and time (from the Consortium) for Part II of an existing project in which a more accurate **hurricane prediction model** is being created to reduce the uncertainty and associated need for conjecture around hurricane risk.

In its Offshore Wind Strategic Plan, the NJBPU confirmed its intent to **join with other states** to coordinate regional monitoring and research and to support – i.e., help pay for -- scientific and technical research at state and regional levels to address issues related to all aspects of offshore wind energy projects.

The three statements highlighted in the July 10 full-page Save LBI announcement are part of the Discussion and Findings section of this Memorandum. This section presents justifications for the need to receive an additional \$200,000 from the NJBPU to fund Phase II of the development of this hurricane prediction model. Phase I was funded from March 2022 through February 2024.

Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. <u>https://pjm.com/about-pjm</u>

As a Public Member Sponsor of the Consortium, NJBPU is required, as are all members, to **support research initiatives in offshore wind** by contributing a total of \$1,000,000 to the Consortium during a four-year period. NJBPU's current arrangement with the Consortium began January 1, 2022 and runs through December 31, 2025.

Access the full Memorandum of Agreement by clicking this link <u>https://nj.gov/bpu/pdf/boardorders/2024/20240214/8C ORDER NOWRDC Phase II.pdf</u>

An overview of the **paths of hurricanes** within the leased area of Atlantic Shores South and surrounding areas from 1979 – 2018 is included in Section B.1.4 in Appendix B of the final Environmental Impact Statement ("EIS") for Atlantic Shores South.

Figure B.1-2 in that section shows the paths of each of the **nine named storms** within 200 nautical miles of the ASOW South leased area during those years. Table B.1-4 names the storms and includes **the year** they occurred and the **storm category**.

Access this section by clicking on the link below and then scrolling down to Section B.1.4 <u>https://www.boem.gov/sites/default/files/documents/renewable-energy/state-</u> <u>activities/AtlanticShoresSouth_AppB_SuppInfo_FEIS.pdf</u>

Section 2.3 Non-Routine Activities and Low-Probability Events in the EIS includes information about the standards wind turbines must meet regarding **severe weather, including hurricanes**.

From Section 2.3

- "Atlantic Shores has committed to adhering to IEC 61400, an international standard² regarding WTGs [offshore wind turbines]. The engineering specifications of the WTGs and their ability to sufficiently withstand weather events is independently evaluated by a certified verification agent when reviewing [the two types of design reports] according to international standards, which include withstanding hurricane events." Page 2-64
- "One of these standards calls for the structure to be able to withstand a 50-year return interval event.³ An additional standard includes withstanding 3-second gusts of a 500-year return interval event, which would correspond to Category 5 hurricane windspeeds." *Page* 2-64

Access the full EIS by clicking on the link below and then scrolling down to Section 2.3. Page numbers in the EIS are centered at the bottom of each page. <u>https://www.boem.gov/sites/default/files/documents/renewable-energy/state-</u> activities/AtlanticShoresSouth Vol1 FEIS.pdf

² IEC 61400 is an international standard published by the International Electrotechnical Commission (IEC) regarding wind turbines <u>https://www.iec.ch/homepage</u>

³ A return interval event, also known as a return period, recurrence interval or repeat interval, is an average time or an estimated average time between events such as earthquakes, floods, landslides or river discharge flows to occur.

THE U.S. POWER GRID

It is no secret that the U. S. power grid has increasingly become a **source of national concern**. In October 2023, the U.S. Department of Energy ("DOE") released an assessment of the state of the U.S. grid that included this introduction:

"The challenges facing the Nation's energy system have substantially shifted in the last one hundred years and will continue to evolve. Yet, today's grid cannot adequately support 21st century challenges —including the integration of new clean energy sources and growing transportation and building electrification — while remaining resilient in the face of extreme weather exacerbated by climate change. The power grid is the backbone of the nation's electricity system, and it must adapt to maintain reliability and resiliency."

From the website of the DOE:

"The National Transmission Needs Study ("Needs Study") is an assessment of existing data and current and near-term future transmission needs through 2040.

The Needs Study is an assessment of publicly available information and more than 120 recently published reports that consider historic and anticipated future needs given a range of electricity demand, public policy, and market conditions.

The Needs Study is not intended to displace existing transmission planning processes and is not intended to identify specific transmission solutions to address identified needs, but it does identify key national needs that can inform investments and planning decisions."

Access the full Needs Study by clicking on this link <u>https://www.energy.gov/gdo/national-transmission-needs-study</u>

Recently, the Federal Energy Commission approved a new rule that will change how the U.S. power grids that supply electricity throughout the country are planned and funded. Multiple news sources reported on this development at the time.

The following is from *The New York Times* May 13 reporting and the statements below are consistent with statements from other news sources:

 "The new rule by the Federal Energy Regulatory Commission, which oversees interstate electricity transmission, is the most significant attempt in years to upgrade and expand the country's creaking electricity network. Experts have warned that there aren't nearly enough high-voltage power lines being built today, putting the country at greater risk of blackouts from extreme weather while making it harder to shift to renewable sources of energy and cope with rising electricity demand.

- The nation's three main electric grids are overseen by a patchwork of utilities and regional grid operators that mainly focus on ensuring the reliability of electricity to homes and businesses. When it comes to building new transmission lines, grid operators tend to be reactive, responding after a wind-farm developer asks to connect to the existing network or once a reliability problem is spotted.
- The new federal rule, which was two years in the making, requires grid operators around the country to **identify needs 20 years into the future**, taking into account factors like changes in the energy mix, the growing number of states that require wind and solar power and the risks of extreme weather.
- Grid planners would have to **evaluate the benefits of new transmission lines**, such as whether they would lower electricity costs or reduce the risk of blackouts and develop methods for splitting the costs of those lines among customers and businesses.
- There is some precedent for this. The grid that handles electricity in 15 Midwest states, known as MISO, recently approved \$10.3 billion in new power lines, partly because many of its states have ambitious renewable energy goals that require more transmission. MISO estimated the lines would create up to \$69 billion in total benefits, including lower fuel costs and fewer blackouts. The grid operator was then able to split the costs even among states that didn't have renewable policies but would share in the rewards."

As with any new regulation with such far-reaching effects, there are those who support it and those who do not. Two articles below are helpful in identifying **the pros and cons**.

Access the May 13 New York Times article by clicking on this link <u>https://www.nytimes.com/2024/05/13/climate/electric-grid-overhaul-</u> ferc.html?unlocked_article_code=1.rk0.d_Ds.V7uOeqgyF1o7&smid=url-share

Access reporting from May 15 NJ Spotlight News by clicking on this link <u>https://www.njspotlightnews.org/2024/05/</u>

BROKEN TURBINE BLADE IN VINEYARD WIND

On July 13, part of a 350' blade on one of the offshore wind turbines manufactured by GE Vernova in Vineyard Wind, the offshore wind project located about 14 miles off the coast of Martha's Vineyard in Massachusetts, **broke off**.

Numerous news sources reported about this incident. Reporting published by a local news source, *The New Bedford Light*,⁴ on July 16 is consistent with statements from other news sources and includes a few more details.

⁴ *From The New Bedford Light website*: The New Bedford Light is a free, nonprofit, nonpartisan digital news outlet dedicated to community-based coverage of important local issues. . . . We seek to inform

Access the July 16 article from The New Bedford Light by clicking on this link <u>https://newbedfordlight.org/vineyard-wind-turbine-blade-sustains-damage-offshore/</u>

In an article headlined "What We Know About The Cause of the Vineyard Wind Turbine Failure So Far," the *Nantucket Current*⁵ published a report on July 17. Its reporting is consistent with statements from other news outlets and includes a few more details.

"[Vineyard Wind communications director Craig] Gilvarg provided additional details about the situation, including that the **blade experienced a breakage** approximately 65 feet out of the root. The turbine, he said, was in it commissioning phase and was still undergoing testing."

In October 2022, Atlantic Shores South announced its decision to use **the V236-15MW wind turbine** manufactured by Vestas. We are unaware at this time of any subsequent change in that decision.

Access the July 17 article from Nantucket Current by clicking on this link <u>https://nantucketcurrent.com/news/what-we-know-about-the-cause-of-the-vineyard-wind-turbine-failure-so-far</u>

A **follow-up article** appeared in the same publication on July 20. Photos of the damaged turbine and some of the debris are included along with a map showing the area in which Vineyards Wind occupies.

Access the full July 20 article in the Nantucket Current by clicking on this link <u>https://nantucketcurrent.com/news/debris-clean-up-continues-as-nantucket-considers-legal-action-against-vineyard-wind</u>

On July 24, the Vineyard Gazette **published an article** with the headline "Broken Vineyard Wind Blade Had a Manufacturing Defect."

Access the full article by clicking on this link

https://vineyardgazette.com/news/2024/07/24/broke-vineyard-wind-blade-had-manufacturing-defect

and nourish the civic culture of New Bedford and surrounds towns by providing in-depth, fact-based journalism and a broad platform for diverse community voices." <u>https://newbedfordlight.org/</u>

⁵ From the Nantucket Current website: Welcome to Nantucket Current, the online news source for Nantucket island. Our mission is simple: to provide our readers with the latest news, stories, and information about the island in an unbiased and unfiltered manner. As a publication of N Magazine, Nantucket Current was founded in April 2021 with the goal of delivering timely news coverage of important topics, while also highlighting the best of our community and shedding light on difficult issues." <u>https://nantucketcurrent.com/</u>

On August 1, almost three weeks later, WBUR⁶ reported in its local coverage section that "Eleven days after the incident, GE Vernova [the maker of the blade] announced the preliminary results of its investigation into the situation and concluded that the problem stemmed from a manufacturing error at a factory in Canada."

That August 1 article with the headline "The fallout from Vineyard Wind's broken turbine blade" provided **summaries** of the initial and on-going reactions from both pro-wind and anti-wind advocates.

Access the entire article by clicking on this link <u>https://www.wbur.org/news/2024/08/01/massachusetts-vineyard-wind-nantucket-debris</u>

THE ROUND-UPS

This Offshore Wind Round-Up was prepared by a group of writers and researchers from Long Beach Island, New Jersey. The first Round-Up first appeared in May 2022 and it has been published every month except two since its debut.

Round-Ups endeavor to periodically provide a review of recent research efforts in which the effects of offshore wind farms have been studied. In addition, they occasionally offer factual, **clarifying information**, in response to readers' questions and suggestions.

Research included in Round-Ups points you in the direction of the science and assumes **no point of view** one way or the other about the presence of offshore wind farms off our shore. Likewise, clarifications are provided without editorial comment; they are there for you to consider so you can **draw your own conclusions**.

Questions about the content of Round-Ups and **suggestion**s for future topics can be directed to <u>RoundUpLBI@gmail.com</u>. The Round-Up research and writing team welcomes questions and comments.

Round-Ups are **distributed** to the voting representatives of the eleven member organizations of the Joint Council of Taxpayers Associations of LBI (JCTA). The board members of each member association collectively make their own decisions about how and when this information will be distributed to its members and/or the community. Most often, taxpayer associations use their regular communication platforms, such as newsletters, website postings and/or social media, to make Round-Ups **available to the public**.

⁶ From the WBUR website: "WBUR is Boston's NPR. . . . A trusted and beloved local news source, WBUR has one of the strongest local newsrooms in the country, known for reporting original stories of significance to Boston and the region. . . . As a non-profit, WBUR has no paywall and no subscription fee — audience support makes our news and programming accessible for all."

