



The Offshore Wind Farm Round-Up

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RAPIDLY ESCALATING COSTS AFFECTING FUTURE PLANS?

An article published in *The New York Times* August 7, 2023 reports rising costs for wind developers are a problem for governments in Europe, the United States and elsewhere.

In recent months, several offshore wind project developers in the U.S. have sought to renegotiate power supply contracts or to terminate them, due to rapidly increasing costs, due partly to supply chain issues and rising demand. Three projects off the coast of NY and two off the coast of MA are specifically mentioned in the article.

Access the full article "Offshore Wind Runs Into Rising Costs and Delays" by clicking on the link

<https://www.nytimes.com/2023/08/07/business/offshore-wind-costs-delays.html>



PREVIOUSLY APPROVED SUBSIDIES

There were several requests for more specific information regarding a statement about \$16.1 billion in subsidies already approved for the three local projects (two Ocean Wind projects off the coast of Atlantic City and the Atlantic Shores project in the southern portion of the lease area). What is new about this statement and the target of subsequent research was the mention of specific subsidies amounting to \$16.1 billion.

Frequently Used Terms

OREC = Offshore Renewable Energy Certificate. One OREC is equivalent to the agreed-upon price to be paid for 1 megawatt hour of wind energy (“MWh”) when the contract was awarded

LNOC = Levelized Net OREC Price. The LNOC is the difference the state pays to the offshore wind project for the ORECs vs. the current price of electricity, which varies

BPU = New Jersey Bureau of Public Utilities, the state agency with authority to oversee the regulated utilities, which provide critical services such as natural gas, electricity, water, telecommunications, and cable television

In evaluating the bid for the Offshore Renewable Energy Certificates (ORECs) contract, the NJ Board of Public Utilities (“BPU”) rates each bid based on the following criteria with the respective weighting:

Criterion	Weight
OREC Purchase Price and Ratepayer Impacts	50%
Economic Impacts and Strength of Guarantees for Economic Impacts	20%
Environmental and Fisheries Impacts	20%
Likelihood of Successful Commercial Operation	10%

The BPU retained the consulting firm Levitan & Associates to help with the analysis. Levitan calculated an estimate called the Levelized Net OREC Price (“LNOC”) which they defined as

LNOC = The unitized (dollars per MWh) net OREC cost is the OREC Purchase Price minus the revenue credits for energy and capacity and the avoided cost of Tier 1 Renewable Energy Certificates (“RECs”), levelized in nominal dollars over the 20-year OREC term.

In other words,

- The LNOC is the difference that the state pays to the offshore wind project for the OREC versus the price of electricity.

- While the OREC price is fixed by the terms of the contract, the electricity price varies during the hour/day/month/year and the amount of electricity produced will depend on the strength of the wind and how many megawatts the project is capable of producing.
- In short, this is the subsidy given by the BPU to the owners of the off-shore wind projects over the 20-year period.

The LNOC price (which is project specific) multiplied by the amount of electricity generated by Ocean Wind 1, Ocean Wind 2 and Atlantic Shores, respectively, totals to about \$16 billion over the life of the 20-year contracts.

The table below shows how the \$16 billion is calculated

Project	LNOC \$/MWh	Output MWh/yr	Contract Term years	Subsidy =
				LNOC x Output x Contract Term \$millions
Ocean Wind 1	46.46	4,851,489	20	4,508
Ocean Wind 2	42.30	5,034,000	20	4,259
ASOW 1	58.51	6,181,000	20	7,233
Total		<u>16,066,489</u>		16,000

■ Federal tax subsidies in the form of tax credits for offshore wind project investments already exist.

The Inflation Reduction Act passed in 2022, provides a 30% tax credit for off-shore wind projects that start construction before January 1, 2025. The tax credit will be extended if the U.S. does not achieve certain targets for reduction of greenhouse gas emissions. Projects can be eligible for another 10% tax credit if the project meets certain domestic content requirements and another 10% if the project is located in fossil fuel dependent energy communities.

For more details about these tax credits, click on the link below to access an explanation provided by WINDEXchange, which is supported by the Wind Energies Technologies Office at the U.S. Department of Energy

<https://windexchange.energy.gov/projects/tax-credits>

■ The Seward & Kissel LLP¹ Maritime Blog explains the extent of federal tax subsidies for offshore wind investments.

Access the full article by clicking on the link

[https://maritime.sewkis.com/blog/government-tax-incentives-for-offshore-wind-investments - :~:text=The Production Tax Credit \(PTC,facility is placed into service.](https://maritime.sewkis.com/blog/government-tax-incentives-for-offshore-wind-investments-:~:text=The Production Tax Credit (PTC,facility is placed into service.)

■ The U.S. Treasury Department has created a high-level overview about how the \$270 billion in tax incentives, part of the \$369 billion in the Inflation Reduction Act dedicated to combating climate change, can be used to build a clean energy economy by supporting qualifying investments in wind, solar, energy storage, and other renewable energy projects that meet certain criteria.

Access the entire overview by clicking on the link

<https://home.treasury.gov/system/files/136/Fact-Sheet-IRA-Equitable-Clean-Energy-Economy.pdf>



ØRSTED'S TAX BREAK

■ On July 6, Governor Murphy signed into law a bill that had been narrowly approved by the NJ Legislature that allows Ørsted, the developer of the Ocean Wind 1 offshore wind project off the coast of southern NJ, to keep federal tax credits that it would have otherwise been required to be passed along to New Jersey utility ratepayers. In addition, it created penalties to Ørsted if the project is not built (\$100 million) and if the project does invest in the expected wind energy facilities or infrastructure necessary to support the wind industry (\$200 million)

Access the July 6 article from the Associated Press by clicking on this link

<https://whyy.org/articles/new-jersey-governor-signs-tax-break-for-orsted-s-offshore-wind-farm/>

■ Ørsted will be able to keep the difference in the value of the federal tax credits based on the Inflation Reduction Act and the increased construction costs vs. what the estimated Federal tax credits were at the time of the Ørsted bid for the ORECs contract. It has been widely reported that the value of this difference would be somewhere between \$1 billion - \$1.4 billion.

The nonpartisan Office of Legislative Services, tasked with drafting a fiscal estimate for the impact of bill, predicted only that “it will have an indeterminate impact on State and local

¹ *From its website:* “Published by Seward & Kissel LLP, known globally as the go-to U.S. law firm in the maritime industry, the Maritime Blog covers topline legal and regulatory issues as well current news and developments affecting the maritime industry.”

finances” explaining that it cannot provide a precise estimate of the bill’s fiscal impact due to lack of certain information regarding the Ocean Wind 1 Project.

The Office of Legislative Services also noted that Ocean Wind 1 is the only qualified offshore wind project to which the bill applies.

The Legislative Fiscal Estimate provided by the Office of Legislative Services on June 29, 2023 describes the bill and comments on its financial impact.

Click on the link below to access the full report.

https://pub.njleg.gov/Bills/2022/S4500/4019_E1.PDF

■ At the end of July, two New Jersey groups, Defend Brigantine Beach and Protect Our Coast NJ, filed a lawsuit in state court, claiming that the new law violates a provision of the state constitution that generally prohibits legislation that specifically favors a single, private entity.

A July 28, 2023 article published by Reuters summarizes that action and may be accessed by clicking on the link

<https://www.reuters.com/legal/government/new-jersey-residents-challenge-orsted-offshore-wind-farms-1-billion-subsidy-2023-07-28/>

Access the complaint filed on July 27, 2023 in the Superior Court of New Jersey Mercer County by Defend Brigantine Beach and Protect Our Coast NJ by clicking on the link

<https://fingfx.thomsonreuters.com/gfx/legaldocs/akpeazykapr/Orsted New Jersey lawsuit.pdf>



COST OF WIND ENERGY

■ As August 30, 2023 on its website, the NJ Bureau of Public Utilities reported that the estimated impact to ratepayers specifically from the Atlantic Shores project is a monthly increase of \$2.21 for residential customers, \$20.81 for commercial customers and \$172.25 for industrial customers, beginning when the project is operational in 2027 – 2028.

Access the full report by clicking on this link

https://www.nj.gov/bpu/pdf/OSWFactSheets_Final_630.pdf

■ We are aware of several contradictory statements about how much our electric bills can be expected to increase when the wind projects off our coast become operational. We continue to search for the data behind of these statements, which have been shared with no credit to their sources.

We would appreciate hearing from you if you can provide a link to any source information about the impact of the wind projects on local ratepayers' electric bills. Please email your information to RoundUpLBI@gmail.com



CURRENT ELECTRIC RATES: NEW JERSEY vs. THE U.S.

■ Readers were alarmed to hear that New Jersey is #10 on a list ranking states by the cost of electricity, with position #1 being the highest.

That number turns out to be close. According to the U.S. Energy Information Administration² ("EIA"), New Jersey ranked #13 in residential rates with 18.24 cents/kilowatt hour as of June 2023. In the Middle Atlantic States, as grouped by the EIA, the rates were 18.38 cents/kilowatt hour and 21.63 cents/kilowatt hour for Pennsylvania and New York, respectively.

■ Readers were also alarmed to hear that New Jersey's electric rate was 26% above the national average. According to the EIA, the average cost per kilowatt hour in the U.S. was 16.11 cents as of June 2023. NJ's rate at the same time was 13.2% higher than the national average.

Year over year (June 2023 vs. June 2022), EIA reported the following changes in electric rates by category: Residential increased 6.2% and 4.6% in NJ and in the U.S., respectively. Commercial increased by 1.8% in NJ and decreased by 0.7% in the U.S.

Access EIA's chart showing the rates for all states by category and the U.S. average by clicking on the link

https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a



USE OF HELICOPTERS

We received queries about helicopters being used to fly crews to and from offshore wind projects, specifically the one off the coast of Virginia. By extension, concern was expressed about the frequency with which helicopters would be flying to and from the Atlantic Shores project, once construction begins, and what route(s) those helicopters would be taking.

² EIA is part of the U.S. Department of Energy. Every large energy source and every utility and non-utility supplier is required to report their data. The scope is wide and energy sources include oil and its derivatives (e.g., diesel, heating oil, gasoline), coal, gas, nuclear, and electricity.

The EIA prepares daily, monthly and annual report and also forecasts energy use; its forecasts are considered the standard for future use.

■ Since October 2020, two offshore wind turbines have been operating 27 miles off the coast of Virginia Beach, the first of two phases of the Coastal Virginia Offshore Wind project. When completed, the project will consist of 176 offshore wind turbines generating 2.6 gigawatts of energy. Construction of the second phase is expected to begin in 2024 and to finish in 2026.

Coastal Virginia Offshore Wind’s Construction and Operations Plan states that Dominion Energy is also adding a helipad to support monitoring and maintenance to each of the offshore substations for normal and emergency access by helicopters. Section 3.4.1.5 Summary of Construction Vessels and Helicopters includes the anticipated schedule of helicopter use during construction and Section 3.5.1 Offshore Operations and Maintenance states the frequency with which round trip helicopter trips would be required.

Access Coastal Virginia Offshore Wind’s COP by clicking on this link
[https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Public Sec 1-3.pdf](https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Public%20Sec%201-3.pdf)

■ The following from Atlantic Shore’s Construction and Operations Plan (“COP”)³ on page E-8 of the Executive Summary speaks to the use of helicopters.

“Offshore construction may require many different types of vessels, including heavy transport vessels, heavy lift vessels, tugboats and barges, jack-up vessels, cable laying vessels, crew transfer vessels, and service operation vessels. Atlantic Shores may also use helicopters for crew transfer and visual equipment inspections as well as fixed-wing aircraft to support environmental monitoring and mitigation.”

■ Panelists at the International Offshore Wind Partnering Forum (“IPF”) described the key role that helicopters are expected to play as offshore shore wind farms continue to be developed:

“Helicopters will potentially be used more extensively in the development of US offshore windfarms as they move further offshore, offering the benefits of large operational windows, low-carbon footprints and strong safety records, while mitigating impacts on marine life, according to panel of aviation logistics experts.”

Access the full article “Helicopters will underpin US offshore wind development” published April 2023 by Riviera Maritime⁴ by clicking on this link

³ Click on this link to access the COP: [https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/AtlanticShoresCOPVolume I Project Description.pdf](https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/AtlanticShoresCOPVolume%20I%20Project%20Description.pdf)

⁴ From the website: “Riviera Maritime have served the information needs of the world’s maritime, offshore and energy industries for over 20 years. . . . With an extensive portfolio of industry respected publications, conferences, websites, digital products, databases and bespoke services, we disseminate insight, analysis and intelligence to professionals globally. . . . [and] provide operational management around the world with need-to-know intelligence relevant to their business.”

<https://www.rivieramm.com/news-content-hub/news-content-hub/helicopters-will-underpin-development-of-us-offshore-wind-75690>

The delivery of the first helicopters to be used specifically in offshore wind projects was announced June 2023 by Energy Global, part of Palladian Publications.⁵

*Access the full article “LCI delivers first offshore wind helicopters to USA”
by clicking on this link*

<https://www.energyglobal.com/wind/28062023/lci-delivers-first-offshore-wind-helicopters-to-usa/>

This Offshore Wind Farm Round-Up was prepared by an all-volunteer group of writers and researchers from Long Beach Island, New Jersey.

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’ 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 projects 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 suggestions for future topics can be directed to RoundUpLBI@gmail.com. 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). Each taxpayer and property owners association then distributes this information to its members and the community via its regular communication methods, e.g., through newsletters; posted on websites; social media.

⁵ *From the website:* “Palladian Publications is based in Farnham, Surrey, England, where we specialise in publishing quality technical magazines for professionals in primary industries. [Founded in 1947, its original purpose was] to report and convey information on the very latest innovations in general engineering to a mainly European audience; we quickly established a distinguished reputation for the quality of our magazines and journals. Our global readership of the magazines spans more than 150 countries on five continents worldwide. Over 95% of the revenue earned by the company is generated from overseas markets.”