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Hon. Sherri L. Golden, Secretary
NJ Board of Public Utilities
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PO Box 350
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August 29, 2024

SEP 10 2024

BOARD OF PUBLIC UTILITIES
TRENTON, NJ

**RE: IN THE MATTER OF NEW JERSEY'S FOURTH SOLICITATION FOR OFFSHORE
WIND RENEWABLE ENERGY CERTIFICATES (ORECs)
Docket No. QO24020109**

Dear Madam Secretary:

I am deeply concerned with the large subsidies and rate increases supporting offshore wind development. In particular, I object to permitting Atlantic Shores to re-bid its existing contract for Offshore Renewable Energy Certificates (ORECs) pursuant to the subject solicitation. As the Board's procedures do not permit stakeholders direct involvement in this procurement, I wish to hereby register my concerns and objections to any potential award of revised or new contracts to this contractor.

Atlantic Shores has indicated that their bid comprises projects located in their Atlantic Shores South (AS South) lease area OCS-A-0499, which include the Atlantic Shores One (AS1) and the Atlantic Shores Two (AS2) projects, both of which have been previously bid into BPU Solicitations. The AS1 project currently has an existing OREC contract awarded in the Second Solicitation in 2021. The AS2 project unsuccessfully bid into the Third Solicitation. From a ratepayer cost perspective, both these factors raise grave concerns regarding any potential awards to Atlantic Shores under this Fourth Solicitation:

- Atlantic Shores has not formally requested that the existing AS1 contract be changed or vacated. As such any revised or new contract with higher OREC pricing or more favorable terms should not be allowed.
- Any AS2 bid that again exceeds the OREC pricing of recent awards (\$140-165/MWH) will entail significantly higher ratepayer subsidies than the existing AS1 contract or those awarded in the Third Solicitation, which are the subject of ratepayer challenge.

To further detail my concerns, I have provided the attached analysis of the likely impact of any new awards to Atlantic Shores which may result from this Fourth Solicitation. The conclusions of this report are clear. At the likely OREC prices for potential awarded AS1 and AS2 bids:

- It is estimated that the project subsidies, together with the Third Solicitation awards, would increase electric bills by 28% for residential users, 35% for commercial users, and 39% for industrial users. These added costs amount to direct rate-payer subsidies of \$65 billion over the

lifetime of the projects. As a result, the ratepayer subsidies and increases in retail customer bills will exceed levels that are reasonable and just under NJ law.

- Total present value costs of the AS South projects outweigh benefits by \$86 billion and a factor of 6 to 1. Thus, a positive benefits-cost ratio or net economic or environmental benefits cannot be achieved as required by the Offshore Wind Economic Development Act (OWEDA).
- With Federal tax credits and rate subsidies the project's owners will realize an annual return on investment of 18-22%, far more than the 9% allowed to regulated utilities. At this level, a fair balance of financial risks and rewards between ratepayers and Atlantic Shores shareholders cannot be achieved and thus would fail to comply with OWEDA.

Indeed, the same conclusions can be reached based on the existing AS1 OREC agreement, which has a levelized OREC price of \$106/MWH. Therefore, unless the Atlantic Shores bid is significantly *below* those previously awarded OREC prices, no award can be made in compliance with applicable state law.

It is important to note that the costs involving the direct ratepayer subsidies and the effect of those higher electric rates on NJ economy are directly associated with lost jobs and lower wages, as well as lost tourism dollars, as detailed in the attached report, all fall disproportionately on lower income residents and communities who can least afford them and would be forced to seek more affordable places to live.

Accordingly, as Mayor representing nearly 13,000 residents and businesses in Florence Township NJ, I am calling upon the BPU to entertain only bids by Atlantic Shores that significantly *reduce* the approved OREC pricing for AS1. Any bid seeking to increase the approved OREC prices must be rejected as it would violate OWEDA and cause economic harm to the state and ratepayers. Should the Board persist in making such awards under this Fourth Solicitation, our option will be pursuing all available legal avenues to ensure that any resultant contract is challenged and overturned in accordance with applicable state law.

Attachment: Economic Analysis of the Atlantic Shores South Offshore Wind Project

Sincerely,



Kristan Marter

Mayor

**Economic Analysis
of the
Atlantic Shores South
Offshore Wind Project**

by

Edward P. O'Donnell



August 2024

Benefit-Cost Analysis

- The following is the benefit-cost summary for the AS South project:

	<u>AS1</u>	<u>AS2</u>	<u>Combined</u>
Benefits (\$PV Billions)			
Energy, Capacity and REC Credits	5.11	4.50	9.61
Economic Benefits	3.40	3.00	6.40
Avoided Emissions	<u>0.01</u>	<u>0.01</u>	<u>0.02</u>
Total Net Benefits	8.52	7.51	16.03
Costs (\$PV Billions)			
OREC Payments	15.78	13.86	29.64
Impact on Tourism	6.00	6.00	12.00
Impact of Higher Electric Rates	28.00	26.00	54.00
Transmission Upgrade Costs	0.00	1.70	1.70
Lost RGGI Emissions Revenue	<u>2.50</u>	<u>2.00</u>	<u>4.70</u>
Total Costs	52.28	49.56	101.84
Net Benefits/ (Costs) (\$PV Billions)	(43.76)	(42.05)	(85.81)
Benefit/Costs Ratio	0.16	0.17	0.16

- As indicated, the PV costs of the AS South project would exceed any potential benefits by **\$86 billion** and the BCR is no more than 0.16 (i.e., **costs outweigh benefits by a factor of 6 to 1**).
- AS South OREC payment costs alone would exceed any benefits by more than \$13 billion and on that basis alone, the BCR would be no more than 0.55. Thus, a BCR greater than 1.0 cannot be achieved. Furthermore, **there is neither a net economic nor a net environmental benefit as required by OWEDA.**

Developer's Return on Investment

- The Atlantic Shores owners will realize a **18%** internal rate of return (IRR) on its investment which would increase to **22%** if they qualify for and are allowed to retain the additional 10% bonus Investment Tax Credit (ITC).
- The IRR is well in excess of that which is reasonable for its level of financial risk in the project or that allowed regulated utilities which is about 9%.

TABLE OF CONTENTS

	Page
Executive Summary	i
1.0 Introduction	1
2.0 Methodology	2
3.0 Ratepayer Impacts	4
4.0 Benefit-Cost Analysis	7
5.0 Project Developer Economics	12
6.0 Cumulative Impacts	14
6.1 Ratepayer Subsidies	14
6.2 Customer Bill Impacts	15
7.0 Conclusions	17

LIST OF TABLES

4-1 Benefit Cost Comparison	11
6-1 Economic Impact of Project OREC Costs on Retail Customer Bills	16

LIST OF FIGURES

1-1 Atlantic Shores South Project	1
3-1 AS1 OREC Prices vs PJM Market Price	5
3-2 Added Ratepayer Cost for AS1 Project	6
5-1 Developer's AS1 Re-Bid Internal Rate of Return	13
6-1 Cumulative Annual Ratepayer OREC Subsidies	15

AS1 (1510 MW) has an existing contract for supply of Offshore Renewable Energy Credits (ORECs) while AS2 (1327 MW) unsuccessfully bid in the previous Third Solicitation.

In its Fourth Solicitation Guidance Document¹, BPU is seeking bids for 1200-4000 MW of offshore wind capacity. In addition to bids from new projects, BPU has included provisions allowing projects previously awarded ORECs in the First or Second Solicitations, which includes AS1, to re-bid those same projects and potentially receive even higher OREC prices than currently approved.

Since new awards to AS1 and AS2 have the potential to significantly increase ratepayer subsidies and developer returns on investments, it is the purpose of this report to examine the magnitude of such potential increases and to determine whether they would allow BPU to make those awards in compliance with the requirements of the Offshore Wind Economic Development Act (OWEDA) by which BPU is bound.

2.0 Methodology

In all of its solicitations, the BPU relies in large part on the evaluations by its consultant, Levitan & Associates, Inc. (LAI) of the proposed bids submitted by developers, including the AS1 award in the Second Solicitation². In this study of the AS South projects, we have used the same input values reported and applied in the most recent LAI evaluation of the AS1 bid as well as bids in the Third Solicitation³ wherever available and deemed reasonable. Where key factors and assumptions have been redacted or unstated, we have used publicly available sources for comparable projects.

However, there are several items where we disagree with the LAI methodology which significantly affect the results. These include:

- LAI has failed to analyze the ratepayer impact of BPU's new inflation adjustment factor which can automatically result in an increase of up to 15% in ratepayer burden and have a significant additional impact on ratepayer costs.
- In determining ratepayer costs, LAI has used an inappropriately high 7% discount factor. A 7% discount factor reflects the developer's weighted average cost of capital and is appropriate for calculating its Internal Rate

¹ NJ Offshore Wind Fourth Solicitation Guidance Document, BPU, March 6, 2024

² Evaluation Report New Jersey Offshore Wind Solicitation #2, May 25, 2021, Levitan and Associated Inc.

³ Evaluation Report New Jersey Offshore Wind Solicitation #3, January 10, 2024, , Levitan and Associated Inc.

3.0 Ratepayer Impacts

An independent analysis and review⁶ of the BPU consultant's evaluation of the original AS1 proposal reveals that New Jersey ratepayers already would bear a substantial and inordinate burden of additional costs through the lifetime of the proposed generation facility. This additional cost is in the form of above market prices for power embedded in the guaranteed ORECs proposed by the bidder and approved by the BPU. In any new AS South award, it is expected that these prices will be significantly higher and in this section we estimate the ratepayer impacts likely to result from new OREC awards to AS1 and AS2.

The existing BPU order entitles AS1 to collect fees for ORECs produced at \$86.62/MWH beginning in 2028 and increasing to \$141.92/MWH in 2048. Transmission upgrade costs will add another \$6-10/MWH to these guaranteed prices. The levelized cost of energy (LCOE) associated with these existing OREC prices is \$106.16/MWH before transmission cost and \$114.03/MWH with the added transmission cost.

While the new AS South bids are presently confidential, it may be assumed that they will exceed the OREC prices awarded by BPU to Attentive Energy and Leading Light Wind in January 2024. The LCOE of the Attentive Energy award, without any transmission costs, is \$165/MWH. It is thus a likely benchmark which an AS bid will again exceed, as it did in its unsuccessful Third Solicitation bid. We estimate that the AS South bid will be at least \$175/MWH.

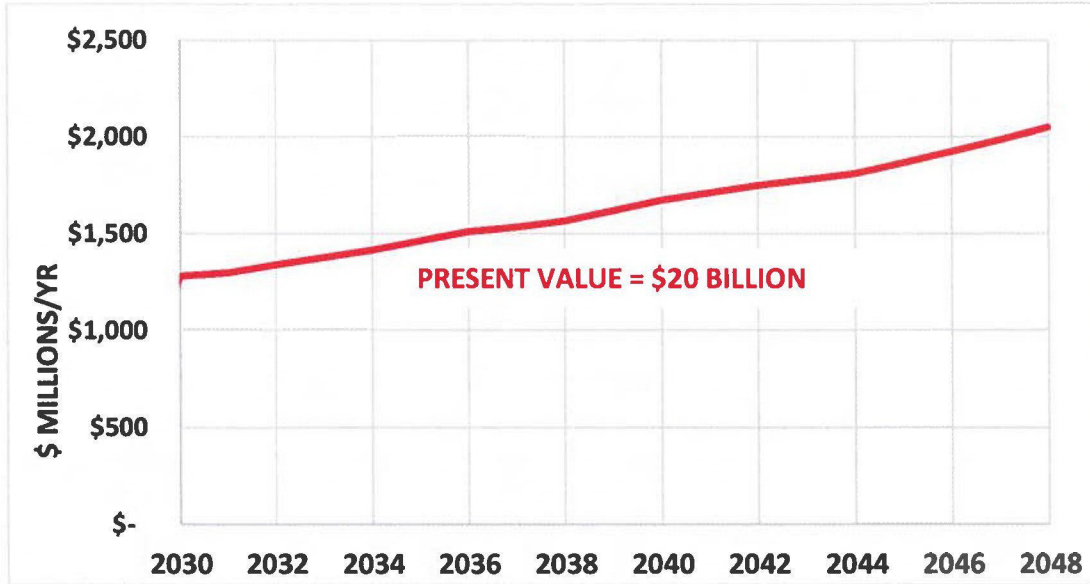
Furthermore, the proposed terms of the Fourth Solicitation allow approved OREC prices to be adjusted up or down by as much as 15% based on a defined inflation adjustment mechanism which is more liberal than in the Third Solicitation and was non-existent in the First and Second Solicitations.

The inflation adjustment is based on recognized official Federal inflation indices for labor, fabrication, steel and fuel prices and allow the base OREC price to be adjusted up or down depending on how much they deviate from the prices at the time of a bidder's best and final offer (BAFO) and a time three years prior to commercial operation. If the BPU approved inflation adjustment formula was calculated over the most recent available three years (2021-2023) the resulting inflation adjustment would be in excess of 26%. In the six months through May 2024, since the Third Solicitation BAFOs were submitted, the calculated index has increased by 2.5% and on that basis the inflation adjustment would add 5%/yr to the OREC price for AS1. Thus with the inflation

⁶ Economic Analysis of the Atlantic Shores Offshore Wind Project, Whitestrand Consulting, August 2023.

11,380,496 MWH/yr over the 20 year term of a new award. Based on this, as shown in Figure 3-2 below, the added net cost burden of the above market payments is substantial on an annualized and lifetime basis.

Figure 3-2. Added Ratepayer Cost for AS South Project



In a new AS South award the ratepayer subsidy almost triples that due to the current AS1 OREC price and would range from over \$1.3 billion in the first full year of operation (2030) to over \$2 billion million in 2048, totaling \$32 billion over the life of the facility. **The 2024 present value (PV) of these above market ratepayer costs is \$20 billion.** These values are calculated using an appropriate ratepayer discount factor of 3%.

AS2 would add about \$3 billion, so the total economic benefits from both projects would be \$6.4 billion.

With respect to the Environmental Benefits, LAI has applied the US EPA's Interagency Working Group (IAWG) social cost of carbon (SCC)⁷ and Technical Support Document⁸ to estimate the value of perceived benefits. The use of these reports in economic or regulatory decision-making is highly controversial and the subject of court challenges in several states. Indeed, the IAWG document provides for a wide range of values, depending on very subjective judgements of factors such as the rate at which potential social costs to future generations of present-day carbon emissions should be discounted to current dollars.

As a result, the value derived from the IAWG document as applied by the Federal Environmental Protection Agency (EPA) has varied from \$2/Ton during the Trump administration to \$190/Ton now being proposed by the current administration – a near hundred-fold increase, reflecting the reality that putting a monetary value on the social cost of carbon is a political rather than a scientific exercise.

The factor most recently used by LAI to value CO2 emissions of \$190/ton is based on a 2% discount factor which vastly overstates this value and is inconsistent with the 7% value used by them to estimate ratepayer costs. The \$/ton value is highly sensitive to the discount rate since it is applied to hypothetical harm to worldwide populations over several centuries in the future. In our benefit-cost calculations, we have consistently applied a 3% discount rate to evaluation of both costs and benefits. A 3% discount rate reduces that value to \$51/ton and the purported global benefit by a factor of 3.8.

Furthermore, and most importantly, the OWEDA mandates that, in order to approve an offshore wind project for OREC award, the BPU must find that the cost-benefit analysis for the project "demonstrates positive economic and environmental net benefits to the State" (emphasis added). Therefore, any consideration of Environmental Benefits of the AS South project of avoided carbon emissions must be confined to those affecting NJ residents, businesses, or institutions. The values proposed by the IAWG are intended to reflect global impacts of carbon emissions and are thus inappropriate and not suitable in any

⁷ "Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances" U.S. Environmental Protection Agency, November 2023.

⁸ U.S. EPA, "Technical Support Document Estimating the Benefit per Ton of Reducing Directly-Emitted PM2.5, PM2.5 Precursors and Ozone Precursors from 21 Sectors," January 2023

As noted, the effect of raising electric rates has a similar impact on the state economy as an increase in taxes. The AS South project will raise residential average rates by \$1.2 billion/yr which is about 0.15% of state GDP¹². Studies¹³ show that tax increases reduce GDP by a factor of 2.5 on a percentage basis. Thus, a rate increase of 0.15% of GDP will reduce state GDP by 0.38% or \$3.8 billion/yr. The 2024 PV of such economic loss over 20 years is also \$54 billion and so confirms the estimate based on the 2011 Beacon Hill Institute study.

This is in fact a conservative estimate since it does not reflect the effect of raising commercial or industrial rates on the GDP. Thus, the economic harm caused by raising retail electric rates is a very significant additional indirect economic cost of the project.

Transmitting wind power from offshore turbine locations across the state to the PJM grid will entail significant costs to install and upgrade transmission lines, substations, switchyards, HVAC/HVDC converter stations, and associated relays and other components. As shown on Figure 1-1 AS1 will connect to the grid via an HVAC cable making landfall at Atlantic City and proceeding inland to the Cardiff substation. As noted, the costs of this interconnection will add \$8/MWH to OREC costs and has been reflected in the OREC pricing and rate impact analysis.

In the case of AS2, the project will utilize the Larabee Tri-Collector (LTC) solution in which 6400 MW from four offshore wind projects will make landfall at Sea Girt and proceed inland to the Larabee substation in Howell TWP. The costs of the LTC solution will be recovered through transmission fees, not through OREC prices. Thus, they are an added cost that must be considered in the benefit-cost analysis.

To date BPU has authorized \$1.2 billion for upgrading of existing transmission links for the LTC solution but has not yet awarded contracts for the onshore cable vaults or other elements of the Larabee connection. In fact, bids submitted by Attentive and other bidders for the cable vaults were rejected as being too costly. So at this point the total cost of transmission upgrades are unknown but likely to be substantial.

Bids submitted for the LTC solution transmission upgrades to allow 6400MW of offshore wind to utilize that transmission pathway averaged \$1.3 billion/MW

¹² In 2023 NJ personal income tax collected was \$55 billion and GDP was \$810 billion.

¹³ The Impact of Individual Income Tax Changes on Economic Growth, Tax Foundation. June 14, 2022.

As indicated, when economic costs are included and purported environmental benefits limited to the state, **the PV costs of the AS South project exceed any potential benefits by \$86 billion and the BCR is no more than 0.16 (i.e., costs outweigh benefits by a factor of 6 to 1).**

Even without including the economic cost of the project, the AS South OREC payment costs alone exceed any benefits by more than \$13 billion and the BCR would be no more than 0.55. Thus, a BCR greater than 1.0 cannot be achieved. Furthermore, there is neither a net economic nor a net environmental benefit as required by OWEDA.

5.0 Project Developer Economics

A developer of a power generation project is entitled to realize a reasonable rate of return on its investment. However, the magnitude of the return is a function of the risk assumed by the developer. The greater the risk, the higher the expected return, and vice versa – the lower the risk, the lower a return expected or allowed.

The NJ legislature has recognized that the financial risk of offshore wind projects must be limited, in order to attract developers to bid on such projects. A key feature of this risk mitigation is the guarantee of revenue for power delivered through the establishment of OREC prices throughout the operating life of the facility. We have previously shown that the OREC prices approved by the BPU for the AS South project will be well in excess of market prices. Thus, they substantially reduce the risk to the developer. This price guarantee allows the developer to secure equity investors and project financing at a reduced cost of capital, lowering their up front and debt service costs throughout the life of the project.

In addition to this, the Federal government has provided financial incentives through tax credits which greatly enhance the potential for positive returns on investment for such projects. The Inflation Reduction Act (IRA) enacted in 2022 offers offshore wind projects an Investment Tax Credit (ITC) of 30% of the capital cost of the project to be collected when the facility becomes operational. In addition, a developer may qualify for additional ITC bonuses of 10% each for using domestically sourced materials and siting onshore facilities in economically disadvantaged communities.

In its bid AS South was required to submit detailed information on its projected costs of the project and its resulting Internal Rate of Return (IRR) which

5-1 above, with a 30% ITC, the owners of **AS South will realize an increasing return, rapidly approaching 18%** by the end of its economic life and through decommissioning.

The IRA provides for an additional bonus ITC of 10%, for meeting domestic content requirements or having onshore facilities in an energy community. In March the IRS released new rules¹⁵ for qualifying for the 10% energy community bonus credit. Now the developer merely has to locate data centers supporting construction or operation in a nearby port facility. This will make it relatively easy for AS South to receive the 10% bonus ITC. **If as expected AS South does in fact qualify for the 10% bonus ITC, their IRR will increase to 22%.** Under current NJ law such an increase in available tax credits must also be passed through to ratepayers and not contribute to greater return to the developer.

The BPU limits returns to regulated utilities for similar projects to about 9%. In view of the OREC price guarantees and tax credits available, we believe that a return of 18-22% is unduly generous and that the developer is being too richly rewarded for the level of risk assumed at expense of ratepayers who are bearing billions in present value of added costs to support the developer's return on investment.

6.0 Cumulative Impacts

As discussed, each project approved by BPU for award of ORECs involves subsidized costs that incrementally increase ratepayer costs and bills for all classes of retail customers. While BPU provides an estimate of the ratepayer impact of each individual project, it has not acknowledged or made known the cumulative impact of the combined projects together with prior awards under earlier solicitations. In this section we examine the cumulative impact of all such projects awarded to date, and of a potential new OREC award for AS South.

In January 2024 the Third Solicitation awarded an additional 3742 MW to Attentive Energy (1342 MW) and Leading Light Wind (2400 MW)¹⁶. A new award to AS South would add another 2837 MW to the approved projects. The following sections present the combined impact of the total 6579 MW of offshore wind projects approved by BPU in terms of total and PV ratepayer subsidies and

¹⁵ IRS Notice 2024-30, March 22, 2024.

¹⁶ BPU Orders of January 24, 2024 Docket No. Q022080481

Solicitations, LAI has estimated the increase in average monthly customer bills for residential, commercial and industrial customer for the three approved projects.

Applying the higher subsidy costs we have discussed and provided in the previous sections, we have also estimated the maximum monthly bill increase for each of the projects (average increases over the period 2028-2047 are about 85% of these values). Table 6-1 below presents the results of our analysis. We have displayed the increase in annual bills in \$/yr and on a percentage increase basis.

Table 6-1 Economic Impact of NJ Offshore Wind Project Costs on Retail Customer Bills

	<u>Attentive Energy</u>	<u>Leading Light Wind</u>	<u>AS South</u>	<u>Combined</u>
Ratepayer Bill Impact (\$/yr)				
Residential	\$116	\$131	\$224	\$472
Commercial	\$994	\$1,126	\$1,923	\$4,043
Industrial	\$8,377	\$9,485	\$16,206	\$34,068
Ratepayer Bill Impact (% Increase)				
Residential	7%	8%	13%	28%
Commercial	8%	10%	16%	35%
Industrial	10%	16%	18%	39%

As shown, the cumulative impact of these three projects results in significant increases in customer bills, averaging 33%. AS South alone will raise average bills by 15%. These values are above that permitted by NJ law¹⁸ for other renewable energy generation sources which are limited to no more than a 7% increase in customer rates.

The combined impact of these three projects will raise electric bills by **28%** for residential, **35%** for commercial and **39%** for industrial customers.

¹⁸ NJSA 48:3 – 18.d(2)



The Author

Edward P. O'Donnell is a principal in Whitestrand Consulting LLC. He has spent 35 years in the nuclear power industry as an engineer, manager and executive with responsibilities for design and licensing of numerous plants in the US and abroad. He was also responsible for corporate planning and rate matters for a NJ nuclear utility and has testified in utility rate proceedings before the NJ BPU.

He was responsible for managing the successful sale of nuclear units in NJ and PA and as a consultant for advising clients on the sale and purchase of nuclear plants. In this role he forecasted future costs and performance of plants for re-financing as merchant power suppliers in a de-regulated electrical energy market and performed analyses of the economic viability of nuclear plants in comparison with alternative fossil and renewable energy facilities.

Mr. O'Donnell holds an M.S. in Nuclear Engineering from Columbia University and has been a licensed Professional Engineer in NJ. He is also a registered Enrolled Agent, authorized to represent individual and business entities before the IRS on tax matters.

