Economic Analysis of a Potential Re-Bid of the Atlantic Shores One Offshore Wind Project

by

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Executive Summary

As part of its Second Offshore Wind Solicitation, in June 2021 the NJ Board of Public Utilities (BPU) approved the Atlantic Shores Offshore Wind One (AS1) Project as a qualified offshore wind facility and deemed it eligible to receive payments for Offshore Renewable Energy Credits (ORECs) for 1510 MW of electrical generating capacity.

On March 6, 2024 the BPU announced a proposed Fourth Solicitation seeking bids for an additional 1200-4000 MW of offshore wind capacity. In this solicitation, BPU proposes to allow companies who were awarded ORECs in the First or Second Solicitations to re-bid those projects and receive new awards which would supersede the existing OREC prices. Since this will undoubtedly result in higher ratepayer subsidies than those already associated with the existing OREC prices, it is appropriate to estimate the ratepayer impact of this unprecedented Re-Bid proposal and whether such an action by BPU would comply with the Offshore Wind Economic Development Act (OWEDA) which imposes mandates on the BPU meant to protect ratepayers. That is the purpose of this report.

The following are the major findings and conclusions which are detailed in the report:

Ratepayer Impacts

- On a successful AS1 Re-Bid NJ ratepayers will be required to pay **triple** the market price for power from the AS1 facility, from **$101-174/MWH** higher. This represents a much higher ratepayer subsidy than that associated with the existing AS1 OREC prices.
- The AS1 Re-Bid ratepayer subsidy will total $16 billion over the life of the facility and the 2023 present value (PV) of these above market ratepayer costs is **$10 billion** compared with $3.7 billion for the existing AS1 contract.

Benefit-Cost Analysis

- The increase in OREC prices in an AS1 Re-Bid far outweigh any economic or environmental benefits of the project by an even wider margin than for the existing project.
- BPU's estimate of economic benefits ignores the offsetting negative economic impacts of the project on beach tourism and on shore and fishing

communities, which is estimated to be in excess of $350 million/year or over **$4 billion** on a PV basis.

- The increases in retail electric rates will have a substantially larger negative impact of the state economy resulting in significant job and wage losses equivalent to a PV of $**16 billion.**
- The values used by BPU to represent the environmental benefits are highly subjective and are intended to reflect global impacts of greenhouse gas emissions and are thus inappropriate for representing only state-wide impacts, as required by law.
- Using the methodology employed by the BPU's consultant, the costs of an AS1 Re-Bid far outweigh its purported benefits with a benefit-cost ratio estimated to be no more than **0.25 (i,e., costs outweigh benefits by a factor of 4 to 1).**
- Net positive economic or environmental benefits and benefit-cost ratio of greater than 1.0 cannot be achieved at OREC prices resulting from an AS1 Re-Bid and thus would fail to comply with OWEDA.

<u>Developer's Return on Investment</u>

- If allowed to re-bid, the Atlantic Shores owners will realize a **21%** internal rate of return (IRR) on its investment which would increase to **25%** 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%.
- A fair balance of financial risks and rewards between ratepayers and shareholders at OREC prices resulting from an AS1 Re-Bid cannot be achieved and thus would fail to comply with OWEDA.

<u>Cumulative Impacts</u>

- The total impact of an AS1 Re-Bid, together with projects approved in the Third Solicitation will burden ratepayers with above market subsidies ranging from $1.4 billion in 2032 to over $3 billion by 2047. The total subsidy over the operating period of these projects has a 2023$ PV of **$31 billion**.
- Electric bills will increase by **22%** for residential**, 27%** for commercial and **32%** for industrial customers.

Conclusions

The AS1 project as currently approved imposes ratepayer subsidies and costs which have not been demonstrated to meet the cost-benefit requirements nor provide a fair balance of financial risk and rewards between ratepayers and the shareholders of the developer as required by OWEDA[1]. We have also shown conclusively that the projects awarded in the Third Solicitation also fail to meet the requirements of OWEDA[2].

This report demonstrates that allowing Atlantic Shores to re-bid the existing AS1 contract will exacerbate these deficiencies and burden ratepayers with significantly higher above market power prices and subsidies. The cumulative impact of this, in combination with the other approved projects, will raise rates by more than 20% for all classes of retail customers.

It is important to note that the costs involving the direct ratepayer subsidies and the effect of those higher electric rates on NJ economy in the form of lost jobs and lower wages, as well as lost tourism dollars, all fall disproportionately on lower income residents and communities who can least afford them. Accordingly, it is strongly recommended that no opportunity be provided for a re-bid of the Atlantic Shores One contract.

[1] Economic Analysis of the Atlantic Shores Offshore Wind Project, Whitestrand Consulting, August 2023.
[2] Economic Analysis of the Attentive and Leading Light Offshore Wind Projects, Whitestrand Consulting, March 2024.

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1.0 Introduction

As part of its Second Solicitation of offshore wind bid, the NJ Board of Public Utilities (BPU), in its order of June 30, 2021[3], has approved the Atlantic Shores One (AS1) offshore wind project as a qualified offshore wind facility and deemed it eligible to receive payments for Offshore Renewable Energy Credits (ORECs) for 1510 MW of electrical generating capacity. The BPU concluded that the project will not impose unreasonable costs on NJ ratepayers and that a cost-benefit analysis demonstrates a net positive economic and environmental outcome to the state. These conclusions were examined and challenged in a prior report by this author[4] which was submitted as the basis of a petition[5] for review of the BPU order. This petition was dismissed by BPU on the grounds of untimely filing, without consideration of the merits of the filing.

In its proposed Fourth Solicitation Guidance Document[6], BPU has included provisions allowing projects previously awarded ORECs in the First or Second Solicitations to re-bid those same projects and potentially receive even higher OREC prices than currently approved. Since such a re-bid has 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 the June 2021 AS1 award, as in all of its solicitations, the BPU has relied in large part on the evaluations by its consultant, Levitan & Associates, Inc. (LAI) of the proposed bids submitted by developers[7]. In this study of a potential AS1 Re-Bid, we have used the same input values reported and applied in the most recent LAI evaluation of bids in the Third Solicitation[8] wherever available and

[3] BPU Order of June 30, 2021 Docket Nos. Q020080555 and Q021050824

[4] Economic Analysis of the Atlantic Shores Offshore Wind Project, Edward O'Donnell, Whitestrand Consulting, August 2023.

[5] Save LBI Verified Petition, Docket Nos. Q020080555 and Q021050824, August 7, 2023

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

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

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

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 a 15% increase 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 of Return (IRR) in support of investment decisions and financial risk to the owners. However, ratepayers are not investors in these projects but are consumers of the power output. Their view of the present value (PV) of future costs to them is much different and they view future dollars as having more value than investors. For ratepayers, standard economic theory would dictate use of a 3% consumption discount rate which is generally used to value future dollars from their perspective[9].

- Levitan's Benefit-Cost analysis methodology, upon which the BPU relies, is flawed in a number of important respects including:
    - The monetization of environmental benefits is based on avoiding hypothetical harm to future global populations from greenhouse gas (GHG) emissions rather than confining consideration of such benefits to those accruing to the state as required by the NJ Offshore Wind Economic Development Act (OWEDA)[10].
    - 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. NJ law[11] requires that BPU use the Social Cost of Carbon (SCC) associated with a 3% discount factor. A 3% discount rate reduces that value to $51/ton and the purported global benefit by a factor of 3.8.

[9] Discounting for Public Benefit-Cost Analysis, Resources for the Future, Qingran Li and William A Pizer, June 2021.
[10] OWEDA, N.J.S.A. 48:3-87.1 to -87.2, L. 2010, c. 57, eff. Aug. 19, 2010; amended by 2019 c. 440, §2,
[11] NJSA 48:3-87.d(2).

- Levitan has failed to include any costs associated with harm to shore tourist economy, commercial fishing or the impact of higher electric rates on the state economy in terms of lost jobs and wages.
- No consideration is given to the added costs of transmission upgrades which are a direct result and necessary cost of the projects.
- Levitan has not included the lost revenue from reductions in Regional Greenhouse Gas Initiative (RGGI) allowances that will be a direct result of displacing in-state fossil generation.

In our analysis of an AS1 Re-Bid we present ratepayer impacts based on more appropriate and inclusive assumptions regarding these matters and contrast our results with those presented by LAI for the original AS1 OREC award.

3.0 Ratepayer Impacts

An independent analysis and review of the BPU consultant's evaluation of the original AS1 proposal reveals that New Jersey ratepayers already will 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 Re-Bid it is expected that these prices will be significantly higher and in this section we compare the ratepayer impacts of the original OREC prices with those likely to result from a AS 1 Re-Bid.

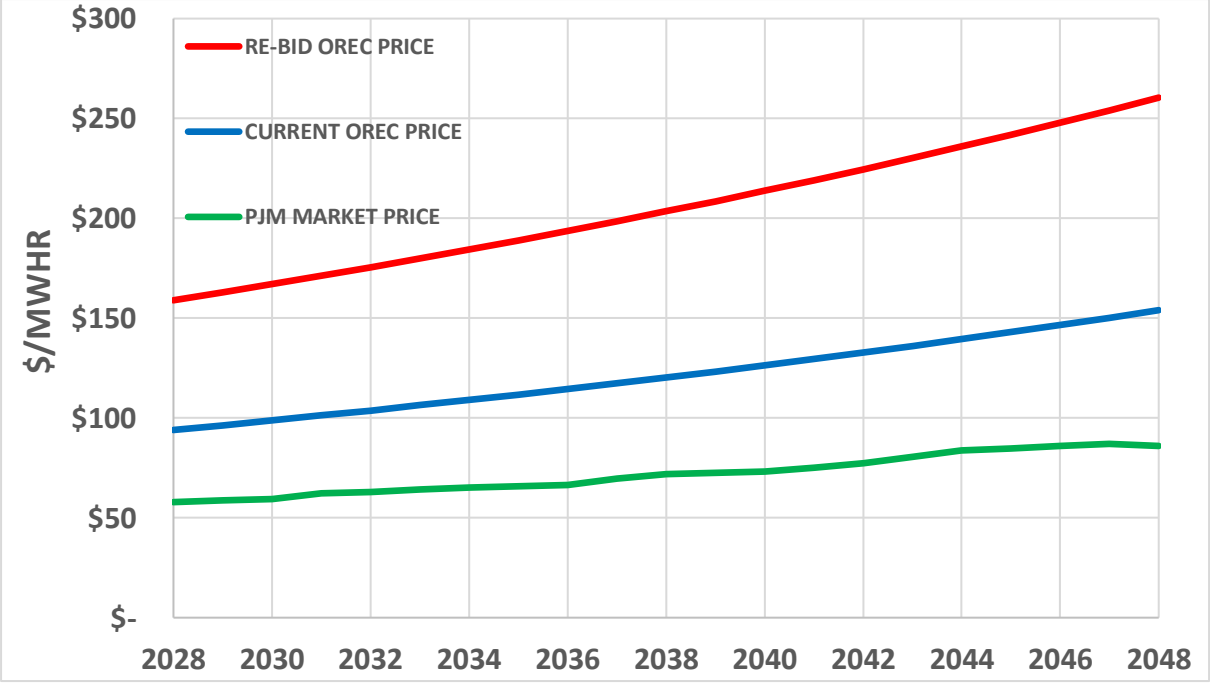
The existing BPU order entitles AS1 to collect fees for ORECs produced at $86.62/MWH beginning in 2028 and increasing to $141.92/MWH in 2048. Transmission upgrade costs will add another $6-10/MWH to these guaranteed prices. The levelized cost of energy (LCOE) associated with these existing OREC prices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

If AS1 is allowed to re-bid these prices, it is assured that they will be much higher, matching or exceeding the OREC prices awarded by BPU to Attentive Energy and Leading Light Wind in January 2024. The LOCE of the Attentive Energy award, without any transmission costs, is $165/MWH. As this project is of a comparable size (1342 MW) to AS1 (1510MW) it is a likely benchmark which an AS1 Re-Bid will equal or exceed. Furthermore, the proposed terms of the Fourth Solicitation allow these OREC prices to be adjusted up or down by as much as 15% based on a defined inflation adjustment mechanism which does not apply to the existing AS1 contract.

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 time of a bidder's best and final offer (BAFO) and a time three years prior to commercial operation. This time period is estimated to be 2-4 years. 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 three month through February 2024, since the Third Solicitation BAFOs were submitted, the calculated index has increased by 2.2% and on that basis the 15% cap would be reached in less than two years. Given the recent and long-term historical trends in these indices, it is highly likely that the adjustment calculated over such a period will exceed 15%, and result in an increased ratepayer subsidy.

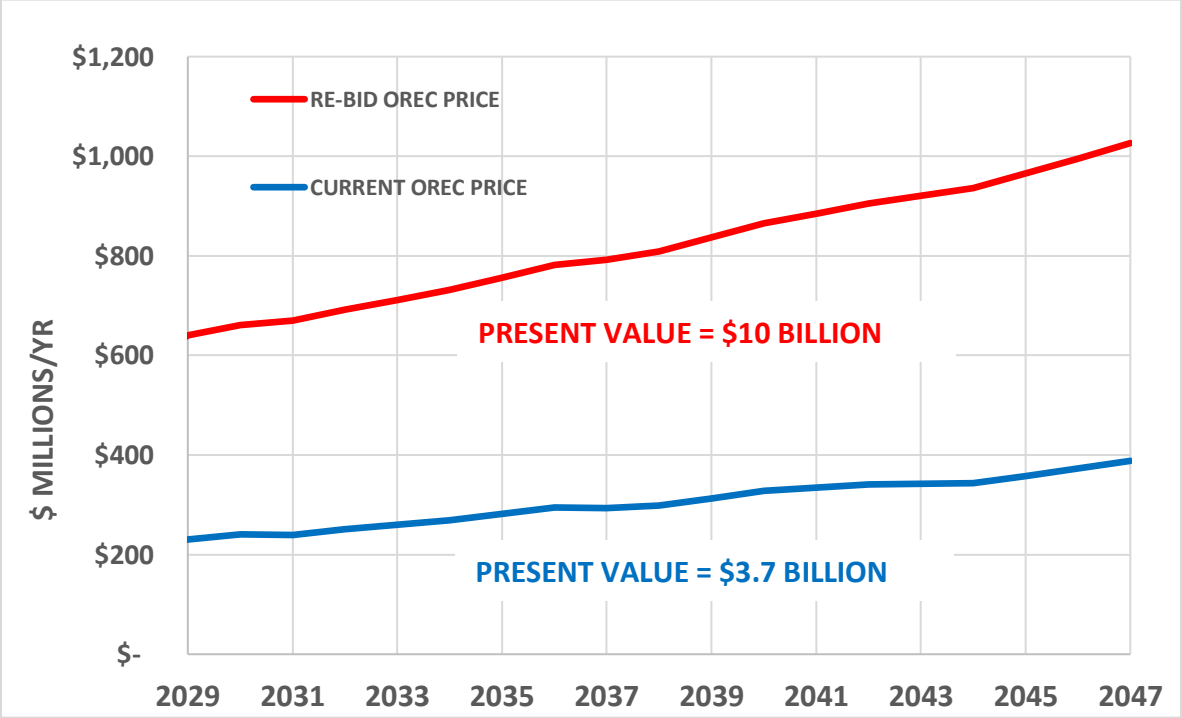
Thus with the inflation adjustment the OREC pricing on an AS1 Re-Bid will most likely be as much as $190/MWH, and with the transmission cost adder, $198/MWH, or an increase of 67% over the corresponding existing OREC price of $114/MWH. As an offset, the market revenue received from PJM for energy, capacity and Renewable Energy Credits (RECs) will be credited back to the ratepayers. Figure 3-1 below displays how the existing and projected Re-Bid OREC prices compare with the PJM market price of the offsets based on LAI projections in its evaluation of the Third Solicitation bids.

Figure 3-1. AS1 OREC Prices vs PJM Market Price



As can be seen from Figure 3-1 above, on an AS1 Re-Bid, ratepayers will be required to pay **triple the PJM market price, 67% higher than even existing OREC prices and from $101-174/MWH over and above the market price** for power from the AS1 facility. This in essence represents a ratepayer subsidy for offshore wind generation. As shown in Figure 3-2 below, this added cost burden is substantial on an annualized and lifetime basis.

Figure 3-2. Added Ratepayer Cost for AS1 Project



In a AS1 Re-Bid the ratepayer subsidy almost triples that due to the current OREC price and would range from over $600 million in the first full year of operation (2029) to over $1 billion million in 2047, totaling $16 billion over the life of the facility. **The 2023 present value (PV) of these above market ratepayer costs is $10 billion, increasing from the current OREC subsidy of $3.7 billion.** These values are calculated using an appropriate ratepayer discount factor of 3%. By contrast, LAI calculates the PV of the same current OREC price as $2.5 billion using a 7% discount factor which is not valid for that purpose.

4.0 Benefit-Cost Analysis

The NJ Offshore Wind Economic Development Act (OWEDA) requires that all proposed projects demonstrate positive economic and environmental net benefits to the state to be considered for an OREC award, but the act does not provide details on how to determine the benefit-cost ratio (BCR). LAI has calculated this ratio as:

$$BCR = \frac{\text{(Ratepayer Offsets + Economic Benefits+ Environmental Benefits)}}{\text{OREC Costs}}$$

In its evaluation of the existing AS1 contract LAI concluded that the AS1 wind project has a BCR of 1.246 (an unduly precise number given the enormous uncertainties involved) but has redacted the specific values for each of the factors comprising the calculation. Using their described methodology we have reconstructed the components of their BCR calculation which are displayed on Table 4-1 below and compared with our analysis of the same factors.

Per our analysis, for the existing OREC prices, on a PV basis OREC Costs would be $9.16 billion and the value of Ratepayer Offsets (PJM energy, capacity and RECs) would be $5.6 billion. Thus, before including the projected Economic and Environmental Benefits, the BCR is less than 0.5, well below a positive outcome.

The project as approved claims to have positive Economic Benefits in terms of NJ GDP growth and jobs created in the state. These are detailed in the LAI report. However, no consideration is given to the significant negative economic impacts of the project on beach communities or commercial fishing. The negative impact on tourism and on our shore and fishing communities, is estimated to be in excess of $350 million/year[12] [13]. Over 20 years this has a 2023 PV of $4.36 billion. This would totally offset any Economic Benefits claimed to contribute to the BCR.

In addition to the negative impact on the NJ tourism and fishing economy, raising electric rates will have a damaging effect on the overall state economy by reducing employment and wages, similar to the effect of raising taxes. A

[12] University of Delaware, Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism, sponsored by the Bureau of Ocean Energy Management (BOEM), March, 2018

[13] https://espis.boem.gov/final%20reports/5662.pdf

2011 study[14] determined that raising electric rates by 2% as a result of offshore wind ratepayer subsidies would result in the loss of 2219 jobs and reduce average wages by $111 per year. This in turn would reduce total disposable income in the state by $330 million/yr. The Present Value in 2023 of this lost income over 20 years is $4 billion, Since the ratepayer subsidies for the existing AS1 OREC prices would raise rates by 5%, the PV of that cost impact is $10 billion. An AS1 Re-Bid would raise rates by 8% for a PV cost of $16 billion. Thus, the economic harm caused by raising retail electric rates is a very significant additional indirect economic cost of the project.

With respect to the Environmental Benefits, LAI has applied the US EPA's Interagency Working Group (IAWG) social cost of carbon (SCC)[15] and Technical Support Document[16] 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.

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 AS1 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

[14] "The Cost and Economic Impact of New Jersey's Offshore Wind Initiative", Beacon Hill Institute at Suffolk University, June 2011

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

[16] 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

case for representing only state-wide impacts. If we scale these purported global benefits down to state-wide benefits only, by using any reasonable measure of relative impact on the state to the entire world (GDP, population, land area, shoreline miles, carbon emissions, etc.), the total averted state social cost of emissions reduced by AS1 is far less than 1% of the global benefit.

Table 4-1 below is a comparison of the benefit-cost analysis as presented by LAI for the existing AS1 OREC contract with our own analysis of both the existing contract and of an AS1 Re-Bid. Our analysis includes the economic impact of the project and only the maximum state-wide environmental benefits as mandated by OWEDA, which we have conservatively assumed that 0.12%[17] of global values accrue to the state of NJ. This insignificant value of $10 million is more than offset by lost revenue accruing to the state from auctions of RGGI allowances from the emissions displaced by AS1. Along with the social cost of direct NJ environmental emissions associated with the manufacture, construction, operation and decommissioning of the wind turbines, we estimate the PV of these environmental costs to be to be $360 million. There is therefore a net environmental emissions related PV cost of more than $350 million for the project.

Table 4-1 Benefit-Cost Comparison

	LAI Existing	AS1 Existing	AS1 Re-Bid
Benefits ($PV Billions)			
Energy and Capacity Credits	1.98	3.82	3.82
RECs	0.52	1.78	1.78
Economic Benefits	1.46	3.40	3.40
Avoided Emissions (per IAWG)	2.47	0.01	0.01
Total Net Benefits	6.43	9.01	9.01
Costs ($PV Billions)			
OREC Payments	5.16	9.16	15.59
Impact on Tourism	0.00	4.36	4.36
Impact of Higher Electric Rates	0.00	10.00	16.00
Lost RGGI Emissions Revenue	0.00	0.35	0.35
Total Costs	5.16	23.87	36.30
Net Benefits/ (Costs) ($PV Billions)	**1.27**	**(14.86)**	**(27.29)**
Benefit/Costs Ratio	**1.246**	**0.38**	**0.25**

[17] The population of NJ is 9.3 million (or 0.12%) compared with over 7.9 billion worldwide..

As indicated the LAI calculation overstates the BCR for the existing AS 1 project by a large margin and, when economic costs are included and purported environmental benefits limited to the state**, the costs of a AS1 Re-Bid project exceed any potential benefits by $27.29 billion** on a present value basis. Instead of 1.246 as calculated by LAI, **the true BCR is no more than 0.25.**

Even without including the economic cost of the project, the AS1 Re-Bid OREC payment costs alone exceed any benefits by more than $6.5 billion and the BCR would be no more than 0.58. Thus, a BCR less 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 AS1 project are 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.

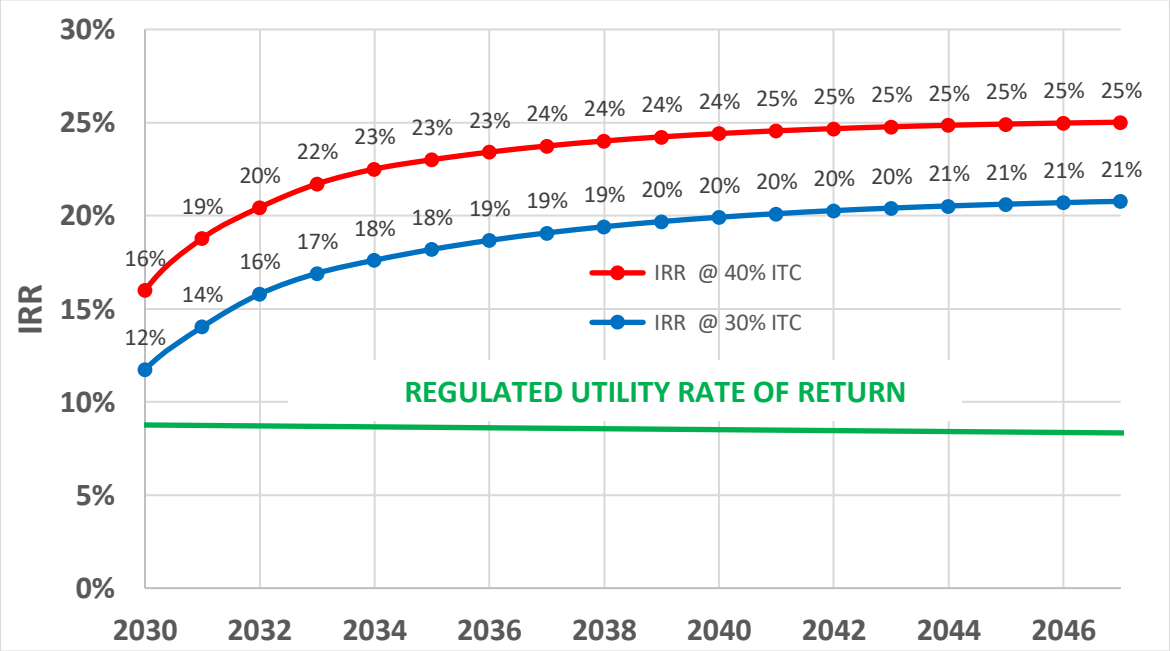
In addition to this, the Federal government has provided financial incentives through tax credits which greatly enhance the potential for positive returns on investment for such projects. The Inflation Reduction Act (IRA) enacted in 2022 offers offshore wind projects an Investment Tax Credit (ITC) of 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 AS1 was required to submit detailed information on its projected costs of the project and its resulting Internal Rate of Return (IRR) which represents its return on investment. This information is necessary to determine whether the approved OREC prices are reasonable given the projected developer's costs and assumed financial risks.

However, these project financial details detailed have been redacted from the LAI evaluation, so we are unable to review and comment on whether they are in fact reasonable and justify the large ratepayer subsidy built into the OREC pricing. We therefore have no alternative than to conduct an independent financial analysis, based on available information for similar projects.

Using expected current capital costs, financing terms, operating, maintenance and decommissioning costs and the revenue streams resulting from OREC production and tax credits, we calculated the IRR based on the expected cash flow over the life of the project. The result of our analysis is presented in Figure 5-1 below for a potential AS1 Re-Bid.

Figure 5-1. Developer's AS1 Re-Bid Internal Rate of Return



We have assumed, as does LAI in its bid evaluation, that available Federal tax credits have been included as on offset to capital costs of the project, and thus passed through to ratepayers as reflected in the proposed all-in OREC prices for the project. With the passage of the Inflation Reduction Act (IRA) in 2022, a 30% Federal ITC is in effect for offshore wind projects. As indicated in Figure

5-1 above, with a 30% ITC, an **AS1 Re-Bid will realize an increasing return, rapidly approaching 21%** by the end of its economic life and through decommissioning.

The IRA provides for an additional bonus ITC of 10%, provided the project meets certain domestic content requirements on manufactured components used in the project. **If AS1 does in fact qualify for the 10% bonus ITC, their IRR will increase to 25%**. 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 over 20% 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 AS1 Re-Bid.

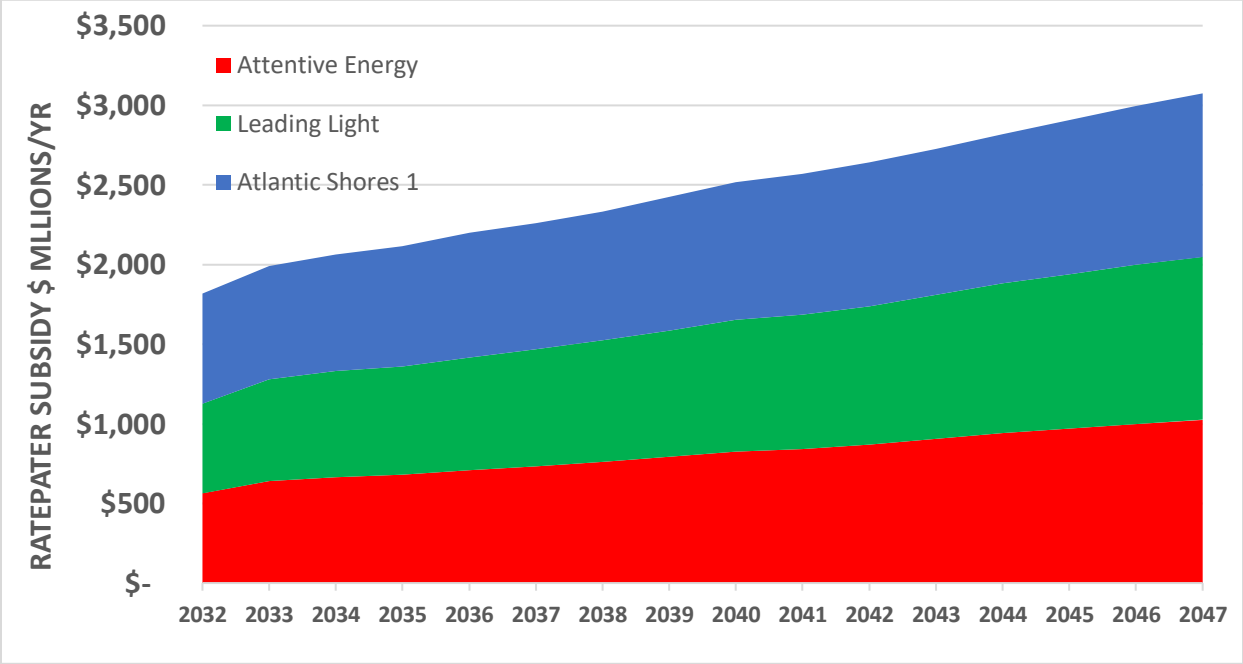
Of the prior awards in the First and Second Solicitations, only the 1510 MW AS1 project has an active OREC award. In January 2024 the Third Solicitation awarded an additional 3742 MW to Attentive Energy (1342 MW) and Leading Light Wind (2400 MW).

The following sections present the combined impact of the total 5252 MW of offshore wind projects approved to date by BPU in terms of total and PV ratepayer subsidies and increases in retail electricity bills for residential, commercial and industrial customers over the period 2028-2047.

6.1 Ratepayer Subsidies

Based on our analysis of the BPU approved OREC prices for Attentive Energy and Leading Light Wind Projects[18] together with the corresponding results for an AS1 Re-Bid project, including the 15% inflation adder, Figure 6-1 shows the cumulative annual ratepayer subsidy.

Figure 6-1 Cumulative Annual Ratepayer OREC Subsidies



As indicated, the combined ratepayer cost embedded in the OREC prices for these three projects increases from $1.4 billion in 2032 to over $3 billion by 2047. The total subsidy over the operating period of these projects over **$53 billion**, which has a 2023$ PV of **$31 billion**.

6.2 Customer Bill Impacts

The rate subsidies embodied in the above market OREC prices will progressively impact retail customers bills as the offshore wind projects begin operation in 2028 and 2032. In its evaluation of bid proposals for the Second and Third BPU Solicitations, LAI has estimated the increase in average monthly customer bills for residential, commercial and industrial customer for the three approved projects.

[18] Economic Analysis of the Attentive and Leading Light Offshore Wind Projects, Whitestrand Consulting, March 2024.

Using the same methodology as LAI, but applying the higher subsidy costs we have discussed and provided in the previous sections, we have also estimated the monthly bill increase for each of the approved projects. Table 6-1 below presents the results of our analysis as compared with that of LAI. We have also displayed the combined increase in monthly bills in $/mo and on a percentage increase basis.

Table 6-1 ECONOMIC IMPACT OF NJ WIND PROJECT OREC COSTS ON RETAIL CUSTOMER BILLS

	Attentive Energy	Leading Light Wind	Atlantic Shores 1	Combined	Percent Bill Increase
LAI Analysis (Approved OREC Prices)					
Ratepayer Bill Impact ($/mo)					
Residential	$ 3.71	$ 3.13	$ 2.21	$ 9.05	**7.9%**
Commercial	$ 31.86	$ 26.87	$ 20.18	$ 78.91	**9.8%**
Industrial	$ 278.42	$ 234.80	$ 172.25	$ 685.47	**11.5%**
This Report (Base OREC Prices including AS1 Re-Bid)					
Ratepayer Bill Impact ($/mo)					
Residential	$ 7.87	$ 6.64	$ 7.85	$ 22.36	**19.6%**
Commercial	$ 67.58	$ 57.00	$ 67.30	$ 191.88	**23.9%**
Industrial	$ 590.59	$ 498.06	$ 567.10	$ 1,655.75	**27.7%**
This Report (Base OREC Prices Plus 15% Inflation Adder)					
Ratepayer Bill Impact ($/mo)					
Residential	$ 9.05	$ 7.64	$ 8.84	$ 25.53	**22.4%**
Commercial	$ 77.72	$ 65.55	$ 75.84	$ 219.11	**27.3%**
Industrial	$ 679.18	$ 572.77	$ 639.06	$ 1,891.01	**31.7%**

As shown, even without adjustment, the estimates provided by LAI demonstrate that the cumulative impact of these three projects result in significant increases in customer bills ranging from about 8% for residential, 10% for commercial and 11.5% for industrial customers. These values are above that permitted by NJ law[19] for other renewable energy generation sources which are limited to no more than a 7% increase in customer rates.

However, because LAI has significantly undervalued the OREC subsidies for all projects, these values also significantly understate the actual customer bill

[19] NJSA 48:3 – 18.d(2)

increases. As shown, at the Base OREC prices (without the 15% inflation adder) following an AS1 Re-Bid the increase will be more than twice the LAI estimates, and reach about **20%** for residential, **24%** for commercial and **28%** for industrial customers.

In the highly likely event that the 15% inflation adjustment is added to the Base OREC prices, these values increase further to **22%** for residential**, 27%** for commercial and **32%** for industrial customers.

7. 0 Conclusions

The AS1 project as currently approved imposes ratepayer subsidies and costs which have not been demonstrated to meet the cost-benefit requirements nor provide a fair balance of financial risk and rewards between ratepayers and the shareholders of the developer as required by OWEDA. It has also been conclusively shown that the projects awarded in the Third Solicitation also fail to meet the requirements of OWEDA.

This report demonstrates that allowing Atlantic Shores to re-bid the existing AS1 contract will exacerbate these deficiencies and burden ratepayers with significantly higher above market power prices and subsidies. The cumulative impact of this, in combination with the other approved projects, will raise rates by more than 20% for all classes of retail customers.

It is important to note that the costs involving the direct ratepayer subsidies and the effect of those higher electric rates on NJ economy in the form of lost jobs and lower wages, as well as lost tourism dollars, all fall disproportionately on lower income residents and communities who can least afford them. Accordingly, it is strongly recommended that no opportunity be provided for a re-bid of the Atlantic Shores One contract.

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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.

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