

MEMORANDUM

To Board of Public Utilities, Division of Clean Energy

From: Brian O. Lipman, Esq., Director
New Jersey Division of Rate Counsel

Date: August 26, 2022

RE: Ratepayer Impact Analysis,
Offshore Wind (OSW) Transmission Solicitation; BPU# QO20100630

1. Introduction

Thank you for the opportunity to provide input on the results of the OSW transmission solicitation. By way of background, in November 2020, the Board formally requested that the State’s offshore wind public policy goals be incorporated into PJM’s regional transmission planning process through a pathway known as the State Agreement Approach (“SAA”).¹ On April 15, 2021, PJM opened a 120-day solicitation window on behalf of NJBPU for developers to submit transmission solutions to assist in bringing offshore wind energy to the existing power grid.²

The solicitation process, which was managed by PJM, sought potential transmission options for four interrelated components of an open access offshore wind transmission solution, including:

- Option 1a: Upgrades to the existing grid to facilitate the offshore wind energy injections;
- Option 1b: Extension of the onshore transmission grid closer to offshore wind locations;
- Option 2: Optimal landfall approaches to reduce environmental impacts, and any necessary offshore substations; and
- Option 3: Interconnections between offshore substations, sometimes called a transmission “backbone,” to provide benefits of a networked offshore grid.

On January 27, 2022, the Board announced it had received 80 bids from developers.³

¹ NJBPU Moves to Make New Jersey First State to Align Offshore Wind Transmission Policy with Regional Plan, New Jersey Board of Public Utilities, 11/18/2020.

² NJBPU Announces Major Step Forward in Offshore Wind Goals with Launch of First-of-its-Kind Competitive Solicitation, New Jersey Board of Public Utilities, 04/15/2021.

³ New Jersey Advances Offshore Wind Transmission Proposal at Federal Energy Regulatory Commission, New Jersey Board of Public Utilities, 01/27/2022.

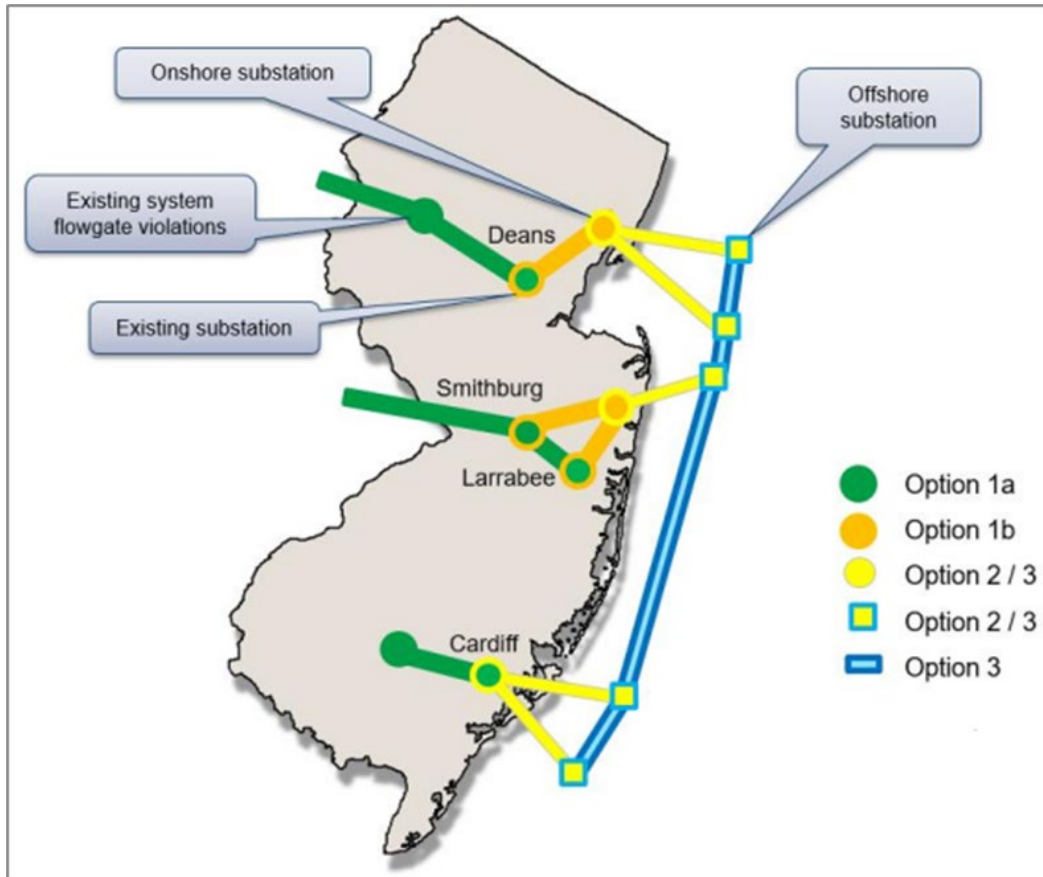
2. Overview of Bids

This solicitation resulted in 80 bids from 13 developers, or applicants. The 13 applicants were:

1. Anbaric Development Partners, LLC (“Anbaric”)
2. Atlantic City Electric Company (“ACE”)
3. Atlantic Power Transmission, a Blackstone Infrastructure Partners portfolio company (“APT”)
4. Con Edison Transmission, Inc. (“ConEdison”)
5. Jersey Central Power & Light Company (“JCP&L”)
6. LS Power Grid Mid-Atlantic, LLC (“LS Power”)
7. Mid-Atlantic Offshore Development, LLC, a joint venture of EDF Renewables North America (EDFR) and Shell New Energies US, LLC (Shell New Energies) (“MAOD”)
8. NextEra Energy Transmission MidAtlantic Holdings, LLC (“NextEra”)
9. Outerbridge New Jersey, LLC, a subsidiary of Rise Light & Power, LLC (“RILPOW”)
10. PPL Electric Utilities (“PPL”)
11. PSEG Renewable Transmission LLC and Orsted N.A. Transmission Holding, LLC (“PSE&G”)
12. Public Service Electric & Gas Company (“PSE&G”)
13. Transource Energy, LLC (“Transource”)

Nearly one-third of bids (26 out of 80) consisted of Option 1a proposals. In addition, there were 12 Option 1b proposals, 25 Option 2 proposals, and 17 Option 3 proposals. Figure 1, below, illustrates the structure of such options.

Figure 1. Description of Options



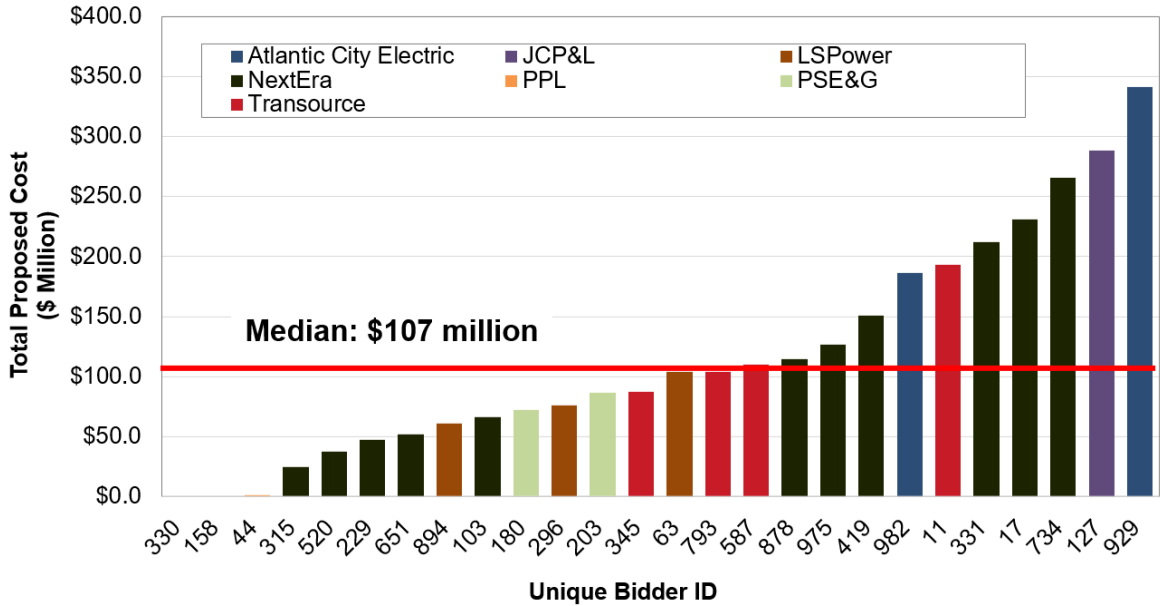
2.1. Option 1a Proposals

Option 1a proposals consist of upgrades to the existing grid to facilitate the offshore wind energy injections. PJM received 26 Option 1a bids, and it divided the Option 1a proposals into multiple geographical clusters to facilitate reviews of these bids. The geographic breakdown of such bids is as follows:

- Northern NJ (4 proposals)
- Central NJ (6 proposals)
- Southern NJ (5 proposals)
- Southern NJ Border (4 proposals)
- PA-MD Border (7 proposals)

Figure 2 illustrates the proposed costs of the Option 1a bids. 13 of the 26 bids were less than \$100 million, and the median proposed bid was \$107 million.

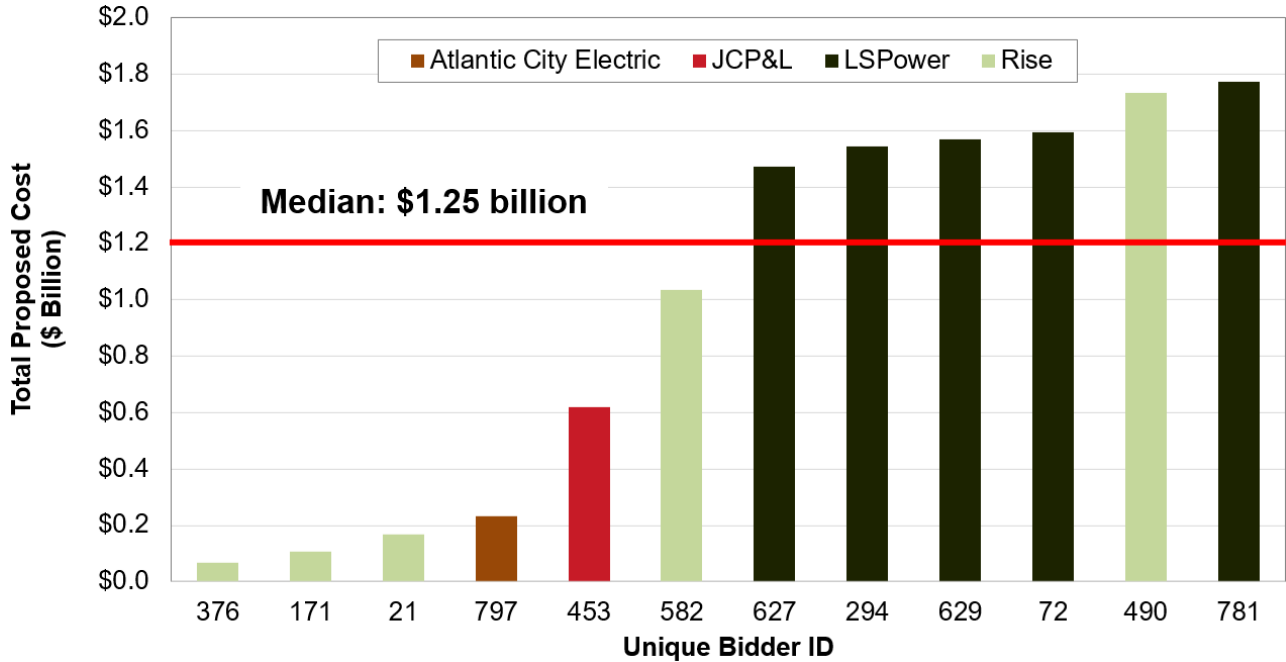
Figure 2. Option 1a Proposals



2.2. Option 1b Proposals

Option 1b proposals comprise extensions of the onshore transmission grid closer to offshore wind locations. PJM received 12 Option 1b bids: four had proposed costs below \$600 million, and six had proposed costs above \$1.4 billion. The median cost proposal, meanwhile, was \$1.25 billion.

Figure 3. Option 1b Proposals



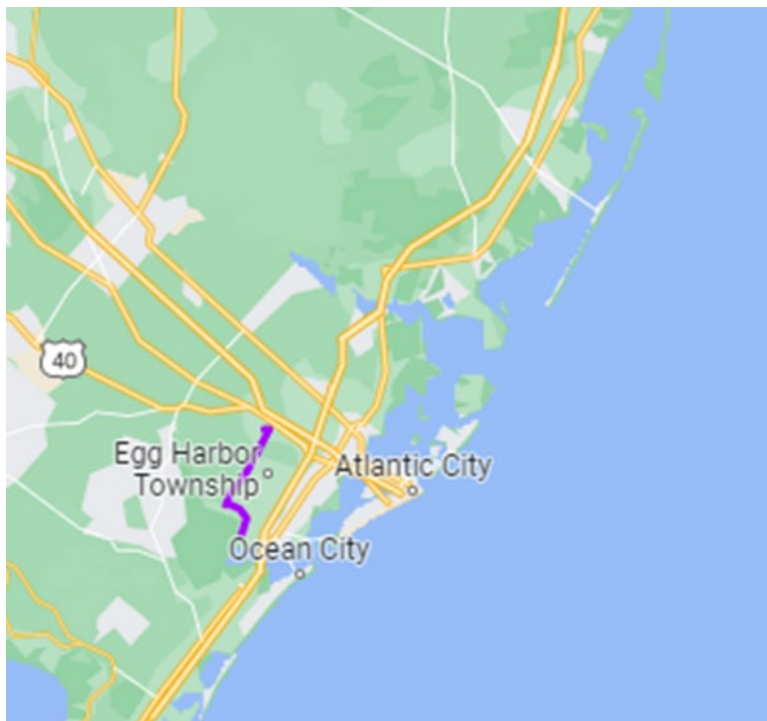
Proposals 376, 171, and 21:

Proposals 376, 171, and 21 from Rise make up the lowest 1b bids. However, each of these proposals is contingent upon the selection of 1b proposals 582 or 490, which have proposed costs of \$1.03 billion and \$1.73 billion respectively.

Proposal 797:

Proposal number 797 from ACE is the lowest standalone lowest 1b cost bid (\$232.7 million). This bid offers the ability to bring 1,200 MW of OSW from near the shore at Great Egg Harbor to the existing Cardiff substations.

Figure 4. Proposal 797



Proposal 453:

Proposal number 453 from JCP&L is the second lowest standalone 1b cost bid (\$620.2 million). This bid, [REDACTED] offers the ability to bring 4,890 MW of OSW in Central NJ.

Figure 5. Proposal 453



2.3. PJM Reliability Analysis of Potential Option 1b/2 Scenarios

PJM completed reliability screening studies for 26 “Points of Injection” scenarios. Six of these scenarios consisted of portfolios of 1b options, while 20 scenarios consisted of portfolios of 1b/2 options. The screening results of the six 1b scenarios are listed below in Table 1.

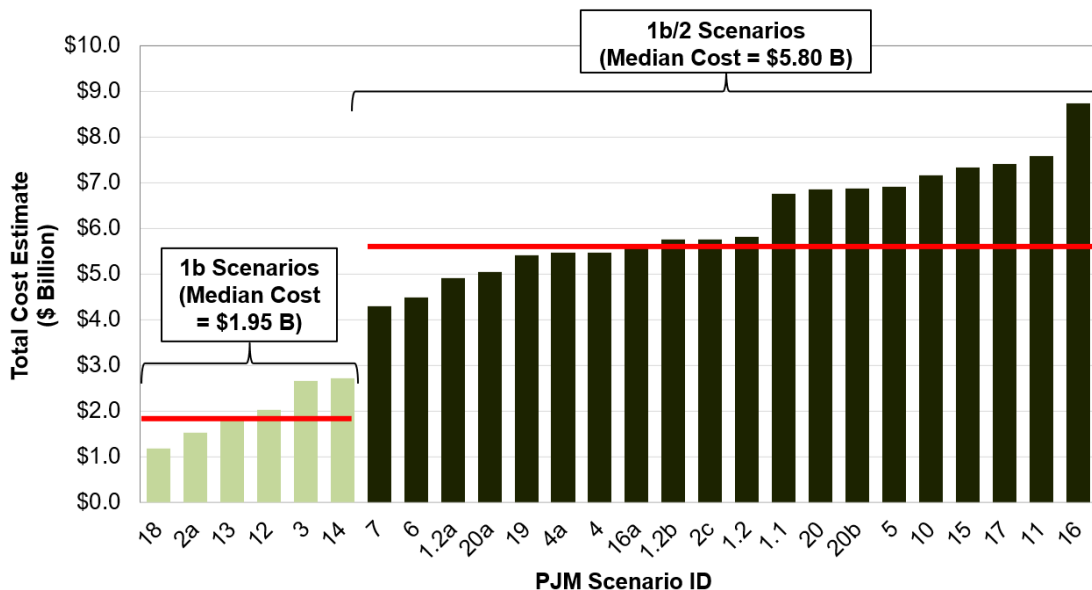
Table 1. Option 1b Scenarios

Scenario ID	Proposing Entity	PJM Proposal		SAA Capacity (MW)	Total Proposed Cost (\$ Millions)				Proposed Cost (\$ Millions/MW)
		IDs	Option		1b	2	1a	Total	
Option 1B Only									
2a	Atlantic City Electric	797; 930	1a, 1b	1,148	\$ 303				
2a	JCPL	453.1-18, 24, 28-29	1b	3,600	\$ 377				
2a	ACE and JCPL	Total	1a,1b	4,748	\$ 680	\$ -	\$ 863	\$ 1,543	\$ 0.32
3	Atlantic City Electric	797; 127.8&9	1b	1,148	\$ 458				
3	Rise	490; 376	1b	2,600	\$ 1,800				
3	JCPL	453.9-11, 16-17	1a, 1b	1,200	\$ 17				
3	ACE; Rise; JCPL	Total	1b	4,948	\$ 2,275	\$ -	\$ 392	\$ 2,667	\$ 0.54
12	LSPower	781	1b	4,890	\$ 1,772	\$ -	\$ 271	\$ 2,043	\$ 0.42
13	LSPower	629	1b	4,890	\$ 1,568	\$ -	\$ 283	\$ 1,851	\$ 0.38
14	Rise	490; 171	1b	3,200	\$ 1,841				
14	JCPL	453.18-27,29	1a, 1b	1,690	\$ 519				
14	Rise and JCPL	Total	1a, 1b	4,890	\$ 2,360	\$ -	\$ 370	\$ 2,730	\$ 0.56
18	JCPL	453	1b	4,890	\$ 620	\$ -	\$ 568	\$ 1,188	\$ 0.24

JCP&L 1b proposal #453 corresponds to Scenario 18, which is the least cost proposal of all six scenarios highlighted above. In addition, it is a component of three other 1b scenarios (Scenario 2a, Scenario 3, and Scenario 14).

Figure 6, below, demonstrates that Option 1b scenarios are significantly less expensive than the evaluated Option 1b/2 scenarios, with the least expensive Option 1b/2 scenario being 37 percent more expensive than the most expensive Option 1b scenario.

Figure 6. Option 1b/2 Scenarios



3. [Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

3.1. [Redacted]

[Redacted]

[Redacted]

[REDACTED]

[REDACTED]

3.2. [REDACTED]

[REDACTED]

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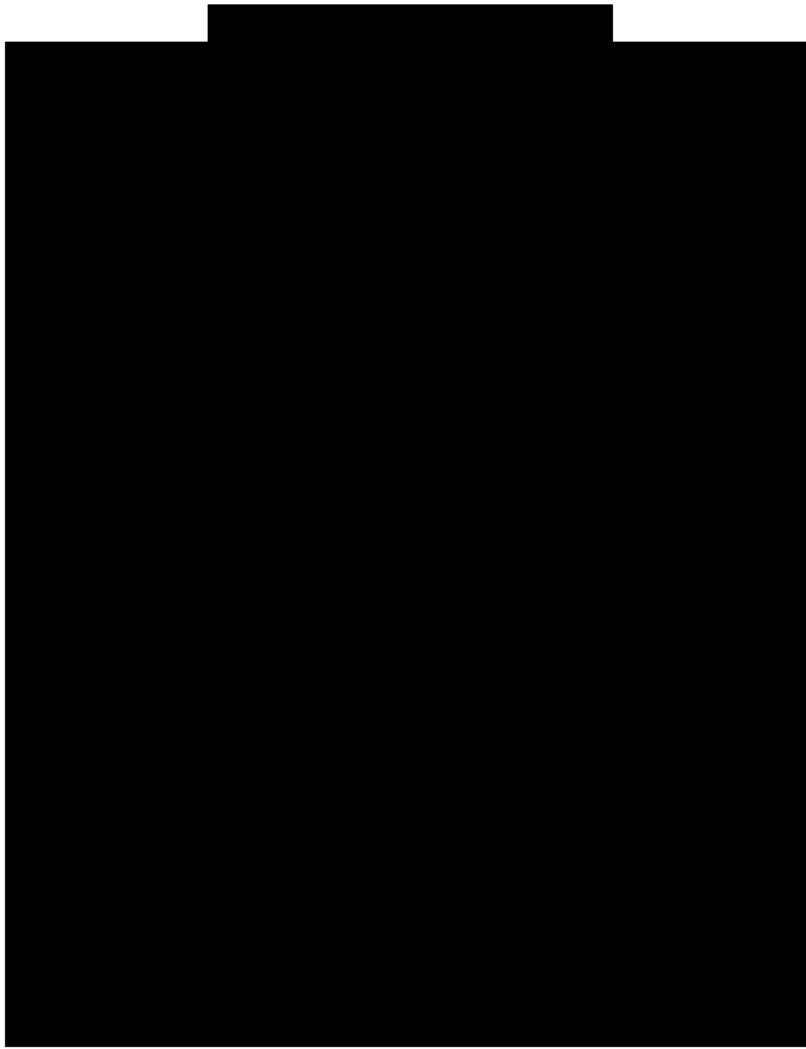
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4. Conclusions

Rate Counsel appreciates the opportunity to provide comments on the OSW transmission solicitation. Following our review, we have reached the following conclusions:

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