



NJ Offshore Wind SAA Proposal Window Update

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Transmission Expansion Advisory Committee
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2021 SAA Proposal Window to Support NJ OSW

Description of Options

- Option 1a, Onshore Upgrades on Existing Facilities
- Option 1b, Onshore New Transmission Connection Facilities
- Option 2, Offshore New Transmission Connection Facilities
- Option 3, Offshore Network

- PJM system reliability
- Project constructability
- Project costs
- Project risk mitigation
- Environmental benefits
- Permitting plan
- Quality of proposal and developer experience
- Flexibility, modularity, and option value of solutions
- Market value of offshore wind generation
- Additional New Jersey benefits



NJBPU OSW Solicitation Schedule

Solicitation	Capability Target (MW)	Capability Awarded	Issue Date	Submittal Date	Award Date	Estimated Commercial Operation Date
1	1,100 ⁽¹⁾	1,100	Q3 2018	Q4 2018	Q2 2019	2024-25
2	1,200-2400 ⁽²⁾	2,658	Q3 2020	Q4 2020	Q2 2021	2027-29
3	1,200	N/A	Q3 2022	Q4 2022	Q2 2023	2030
4	1,200	N/A	Q2 2024	Q3 2024	Q1 2025	2031
5	1,342	N/A	Q2 2026	Q3 2026	Q1 2027	2033

(1) NJBPU Solicitation Award - June, 2019

(2) NJBPU Solicitation Award - June, 2021

<https://www.njcleanenergy.com/renewable-energy/programs/nj-offshore-wind/solicitations>

NJBPU OSW Solicitation Schedule and Points of Injection

- NJ BPU has five solicitations for offshore wind, and solicitations #1 and #2 have been awarded
- Default points of injection at the start of the SAA window were updated after June 30, 2021 following discussions with NJ BPU and completion of NJBPU generation solicitation #2 award
- Proposals were requested to evaluate incorporation of generation solicitation #2 in proposing 6400 MWs of additional capability needed (transmission for 1100MW assumed included with generation solicitation #1)
- Some proposals provided alternative POIs for solicitation #2. PJM will develop internal costs associated with generation solicitation #2 system reinforcement needs outside of window process to allow comparison of alternative POIs provided for solicitation #2



Changes to Offshore Wind Injection Assumptions

Default POIs and Injection Amounts		Prior to June 30, 2021		After June 30, 2021	
Solicitation	POI	Awarded MW	Modelled* MW	Awarded MW	Modelled* MW
1	Oyster Creek 230 kV	1100	816*	1100	816*
1	BL England 138 kV		432*		432*
2	Cardiff 230 kV		900	1510	1510
2	Smithburg 500 kV		1200	1148	1148
3-5	Deans 500 kV		3100		2542
3-5	Larrabee		1200		1200
TOTAL		1100	7648	3758	7648

* Solicitation #1 modeled MW per awarded queue position.



- **New Substations**

- Reega 230 kV substation that taps Cardiff-New Freedom 230 kV
- Neptune 230 kV substation that taps Oceanview-Larrabee 230 kV and Oceanview-Atlantic 230 kV
- Fresh Ponds 500 kV substation that taps Deans-Windsor 500 kV and Deans-Smithburg 500 kV
- Half Acre 500 kV substation that taps Deans-Windsor 500 kV
- Lighthouse 500 kV substation at the shore that connects to a new Crossroads 500/230 kV substation near Larrabee 230 kV

- **Existing Substations**

- Atlantic 230 kV, Oceanview 230 kV, Sewaren 230 kV, Werner 230 kV, New Freedom 230 kV, Orchard 500 kV

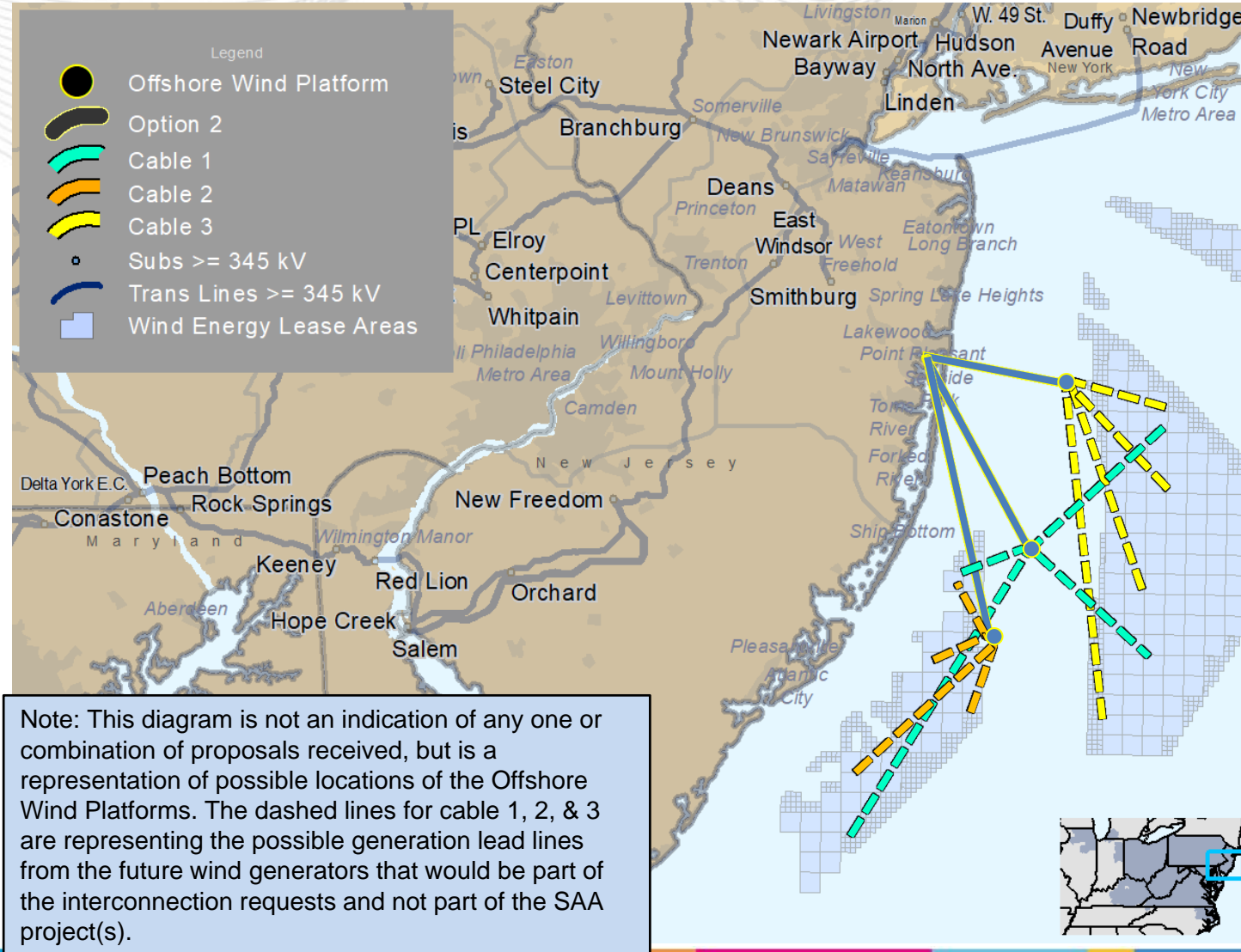


- PJM has completed summer, light load and winter deliverability testing associated with a number of proposals
 - A number of small magnitude violations not addressed in the proposals have been identified and appear to be able to be addressed by upgrades to existing facilities. PJM will be reaching out to the incumbent transmission owners for these proposed upgrades.
- PJM has reviewed the Option 1b & 2 proposals and in consultation with NJBPU has identified an initial set of 6,400 MW combinations to evaluate for generation solicitations 2-5
- After completion and review of this initial set of studies additional sets of Option 1b & 2 proposals will be selected to evaluate

Offshore Platform Locations and Project Total Cost

Engaged with consultant to look at total costs to give NJ complete cost comparison

- Proposals extend in part or in whole from the points of injection, including impacts to the existing network, to the shore transition point, out to offshore platforms for connection of future generation, and may include links between those platforms
- Due to the different locations that the proposals specified for the offshore platforms, some closer to the shore and some closer to the wind energy lease areas, PJM will estimate potential additional costs using per unit costs for comparison of the different proposals
- PJM expects to identify additional deposit requirements to be provided by proposing entities for this additional analysis – PJM will contact proposing entities to request additional funds



- PJM is working with consultants to review constructability issues associated with the proposals:
 - Independent review of construction costs
 - Project Complexity (technology, offshore platform design and configuration, cable crossings, submarine construction constraints)
 - Right of Way and Land Acquisition (submarine cable routing, onshore landing locations)
 - Siting and Permitting (Environmental impacts, public opposition risks)
 - Schedule (construction, equipment/supplier plans)

- PJM is working with a consultant to analyze the cost of the proposals over the entire service life of the projects.
- The analysis will use the financial parameters provided by the proposers but will apply certain assumptions, including:
 - Cash flow for all projects assumed to begin no earlier than beginning of second quarter 2023
 - Standardize the tax rates for all projects in the same geographic location
 - Standardize the depreciation start and rate base period for all projects
- PJM will evaluate cost containment provisions for the proposals.
- PJM will also evaluate costs over the life of the projects under different scenarios including project cost increases, and schedule delays.

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NJ Offshore Wind SAA Update



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1	2/2/2022	<ul style="list-style-type: none">• Original slides posted

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