

**STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

**IN THE MATTER OF OFFSHORE WIND
TRANSMISSION**

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BPU DOCKET NO. QO20100630

Response of Mid-Atlantic Offshore Development, LLC

To

BPU Staff Clarifying Questions Set 2

July 15, 2022

1. MAOD's first CQ response explains: "In the case that Proposal 453 is selected without the Proposal 321 DC converter stations, the AC of the switchyard portions included in proposal 321 would be built by MAOD." Please confirm that MAOD is willing to build this AC switchyard portion of proposal 321 in the case described and acquire the adjacent land for DC converters ("Scenario 1").

Response:

MAOD understands that the BPU may select various combinations or portions of the SAA proposals at its sole discretion, and MAOD confirms it is willing to build the AC switchyard portion of proposal 321 and acquire the adjacent land for DC converters, defined in this document as "Scenario 1."

Please see Question 6 for further discussion.

2. Alternatively, would MAOD be willing to build or acquire the facilities and land described above plus the underground infrastructure included in MAOD's proposal from the proposed substation to an offshore bulkhead location capable of hosting DC cables and converters later installed by offshore wind generation developers (i.e., land for converter station's, vaults and duct banks, but not the DC cables and converter stations themselves) ("Scenario 2"). In this scenario, MAOD would complete all of the onshore work and near-offshore work necessary for use by multiple future offshore wind generation developers to be able to install their own DC cables and converters using the facilities built by MAOD with interconnection at MAOD's proposed AC substation.

Response:

MAOD confirms it is willing to build or acquire the facilities and land defined above as "Scenario 2".

Please see Question 6 for further discussion.

3. If so, please provide cost estimates (based on and at a similar level of detail as provided in its Option 2 proposal) for the facilities included in Scenario 1 and Scenario 2. Please include estimates with and without the land necessary to support two to four DC converter stations.

Response:

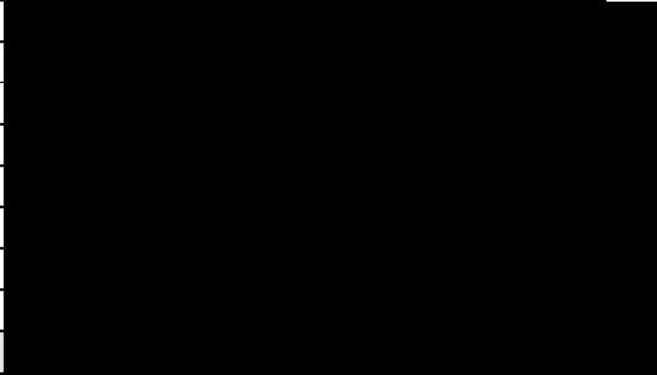
The costs estimate for the facilities included in Scenario 1 and Scenario 2 are presented in the table below.

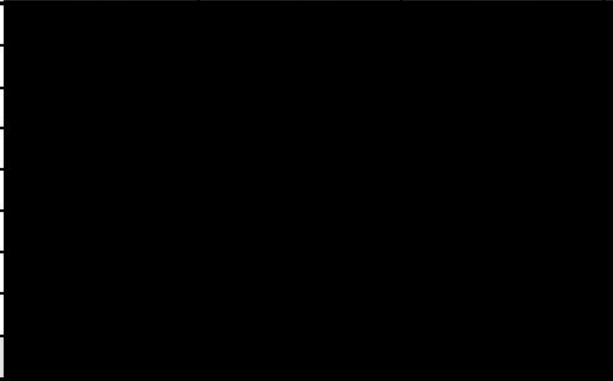
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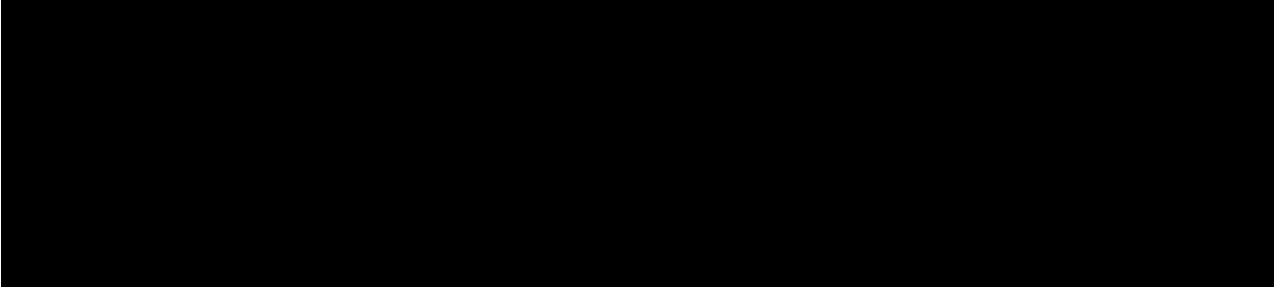

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	Proposal 1 Scenario 1 \$M	Proposal 2 Scenario 1 \$M	Proposal 3 Scenario 1 \$M
	431	551	321
Engineering			
Permitting			
Site Control / Land Acquisition			
Materials / Equipment			
Construction			
Construction Management			
Overhead & Miscellaneous			
Contingency			
Total			

	Proposal 1 Scenario 2 \$M	Proposal 2 Scenario 2 \$M	Proposal 3 Scenario 2 \$M
	431	551	321
Engineering			
Permitting			
Site Control / Land Acquisition			
Materials / Equipment			
Construction			
Construction Management			
Overhead & Miscellaneous			
Contingency			
Total			

- 
4. For Scenario 1, if MAOD is willing to build the AC portions of the portions included in proposal 321 and acquire adjacent land for DC converters, would MAOD allow the winners of future offshore wind solicitations to lease applicable portions of the land necessary to build and operate DC converter stations that connect to the AC portion of the substation? If so, please explain the approach MAOD would take to provide all offshore wind generation developers equal access to the land while minimizing costs to New Jersey ratepayers. Please feel free to propose an alternative arrangement that would permit MAOD to allow future offshore wind solicitation winners to use the land.

Response:

As described, MAOD is willing to build facilities and secure land associated with Scenario 1. Further, MAOD affirms that it will allow winners of future offshore wind solicitations to access the AC substation facilities and will lease applicable portions of the land necessary to build and operate DC converter stations that connect to the AC substation.

MAOD's interaction and coordination with a future developer would depend on the facts and circumstances. But, importantly, as a transmission-owning member of PJM, MAOD would be obligated to abide by the FERC's open access requirements which include reasonable access to land rights necessary for generator interconnection.

MAOD would like to emphasize that it will not aim to monetize its investments twice such that NJ ratepayers cover its cost and return through both an SAA award and indirectly through any OREC ultimately covering a generator's infrastructure use obligations. Specifically, MAOD would include an appropriate credit in its formula rate to offset any generator lease payments.

5. For Scenario 2, if MAOD is willing to build the facilities noted above, would MAOD allow the winners of future offshore wind solicitations to access the underground facilities for installing their DC cables and to lease applicable portions of the land necessary to build and

operate DC converter stations that connect to the AC portion of the substation? If so, please explain the approach MAOD would take to provide all offshore wind generation developers equal access to these facilities and land while minimizing costs to New Jersey ratepayers. Please feel free to propose an alternative arrangement that would permit MAOD to allow future offshore wind solicitation winners to use the land.

Response:

As stated above, MAOD would work with PJM, the relevant transmission owners, and all future offshore wind developers to lease or otherwise make land access available for purposes of increasing offshore wind generation deliverability for New Jersey ratepayers. As a transmission-owning member of PJM, MAOD would be obligated to abide by the FERC's open access requirements which include reasonable access to land rights necessary for generator interconnection.

6. Please indicate any other changes to MAOD's proposal that would be impacted by BPU selecting just the components identified above in Scenario 1 and Scenario 2.

Response:

The changes to MAOD proposal resulting from BPU selecting just the components identified above in Scenario 1 and Scenario 2 [REDACTED] for Scenario 1 or Scenario 2.

Other potential impacts for consideration are provided in an Appendix

7. Please specify the maximum capacity rating of the AC portion of the proposed substation for each configuration proposed.

Response:

The AC switchyard will be composed of a 230kV 4 x breaker-and-a-half substation with maximal nominal current of 4000A and seven single phase 500/230kV 450MVA each autotransformers to step up the voltage for connection to the Smithburg substation.

- For each AC circuit connected at 230kV to Larrabee and Atlantic, the maximum capacity from the AC switchyard is 1590MVA.
- For each AC circuit connected at 500kV to Smithburg, the maximum capacity from the AC switchyard is 1350MVA.

8. It appears that the proposed route utilizes Hospital Road in Wall Township which is directly adjacent to Allaire State Park. Please identify how you propose to avoid impacts to state-owned lands in this area and your planned cable installation method for crossing the Manasquan River which runs underneath Hospital Road. In addition, have you considered any alternate routes in this area?

Response:

Currently the proposed cable route will cross under the Manasquan River in the right-of-way of Hospital Road [REDACTED]

[REDACTED] including Allaire State Park. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].

9. Have you had any discussions with the New Jersey Turnpike Authority for the use of the Garden State Parkway?

Response:

No discussions with the New Jersey Turnpike Authority (NJTA) have occurred regarding the use of the Garden State Parkway (Parkway) ROW as part of the onshore transmission corridor. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

10. Please clarify whether, and under what conditions, results from site surveys already done by MAOD for the onshore and offshore portions of potential export cables, could be made available to OSW developers using the SAA.

Response:

[Redacted]

[REDACTED]

Appendix

The bullet points below highlight specific considerations MAOD believes support an integrated transmission solution offered by MAOD Proposals (SAA Option 2), and to an extent, Scenario 2.

Timing & Delivery:

- Scenario 2 and MAOD Proposal scope results in fewer unique interfaces with municipalities, regulators, and permitting authorities, thereby reducing risk of timing delay
- A single onshore cable corridor requires a smaller construction and civil works footprint thereby minimizing community impact and reducing delay risk
- By integrating vendor and technical transmission scoping, work can begin in earnest immediately upon BPU's award of Scenario 2 or MAOD Proposal scope. Strong coordination between the eventual transmission owner and operator and generators may help mitigate this risk. Absent such coordination and in the case of Scenario 1, final onshore design and vendor selection would not be feasible until final OREC award (when generator design is complete)
- Existing offshore developments have run into municipal site control roadblocks, a risk magnified in Scenario 1

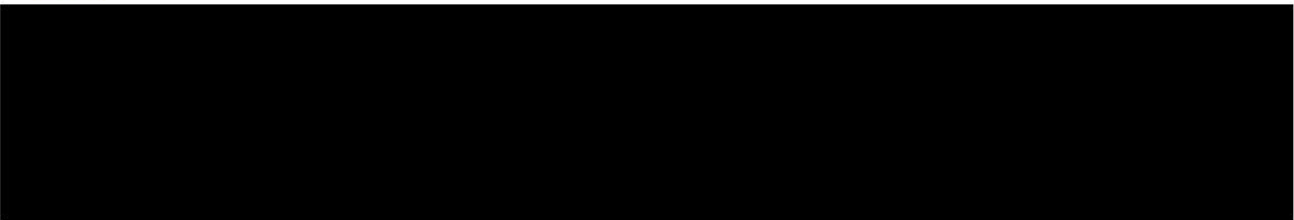
Environmental:

- Common offshore cable corridor in MAOD Proposal is materially less disruptive to the offshore seabed
- Likewise, a radial onshore solution (Scenario 1) requires redundant construction and associated environmental disturbance

Rights of Way and Permitting:

- Fewer unique regulatory, municipal, and landowner interfaces afforded by Scenario 2 and MAOD Proposal mitigate timing, delay, and general project delivery risk

Cost:

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- Increased coordination risk and potentially duplicative project management inefficiencies

Constructability:

- Increased potential for design interface risk (potentially requiring transmission development delay until offshore developers complete design and procurement plans)
- Increased construction coordination adding to cost and schedule risks

Reliability and Resilience:

- Integrated, interlink solution provides reliability, availability, and optimization benefits described in MAOD's Proposals
- Radial solution provides no redundancy on each individual generator line
- HVDC interlinks (included in MAOD Proposals onshore and offshore) provide alternative paths in cases of cable failure *and* onshore converter maintenance, allowing generators to continue delivering a portion of nameplate energy and maintain grid synchronization
- O&M risk potentially increased with multiple owners and technologies