



November 14, 2022

Ms. Carmen Diaz
Acting Secretary of the Board
New Jersey Board of Public Utilities
44 South Clinton Avenue, 1st Floor
PO Box 350
Trenton, NJ 08625 – 0350

Via email to: Board.Secretary@bpu.nj.gov

Re: In the Matter of the Opening of New Jersey’s Third Solicitation for Offshore Wind Renewable Energy Certificates (OREC), Docket No. QO22080481

Dear Acting Secretary Diaz,

Rise Light & Power, LLC (“Rise”) appreciates the opportunity to provide the Board with responses to the Request for Information, dated October 28, 2022, issued in connection with the preparation of the Solicitation Guidance Document (“SGD”) for New Jersey’s Third offshore wind solicitation¹.

We commend the BPU and the Murphy Administration for their nation-leading offshore wind energy goal, and for the recently-completed State Agreement Approach transmission program (“SAA”). Taken together, these programs put New Jersey on trajectory to be a global leader in offshore wind energy and will deliver major benefits for New Jersey’s economy, environment, and citizens. Rise is committed to contributing to the successful implementation of New Jersey’s offshore wind energy program in the most environmentally appropriate and cost-effective manner.

Rise respectfully submits the following selected responses for the Board’s consideration. Based on our team’s experience in offshore wind generation and transmission development², we offer several suggestions (in blue font) that we believe will reduce the risk of project execution, increase popular support, and deliver offshore wind to New Jersey’s ratepayers at the most competitive prices.

We also look forward to actively participating in the soon-to-be-schedule stakeholder meeting on this topic. Please do not hesitate to reach out to us if we can be of further assistance.

Respectfully,

A handwritten signature in purple ink, appearing to read "R. Young", is written over a horizontal line.

Richmond Young
Director of Development
Rise Light & Power

¹ Certain information in this document contains commercially sensitive business information and therefore has been redacted from this Public Version of Rise’s submission.

² Several members of the Rise team previously held senior roles at Deepwater Wind, where they were instrumental in the development and construction of the Block Island Wind Farm, and later at Ørsted, where they led the development of the Ocean Wind 1 project. Further details regarding Rise and its team are available at: www.RiseLight.com

Design Considerations for the Prebuild Infrastructure

As set forth in the SAA Decision, the Board directed Board Staff to require the “Prebuild” in the Third Solicitation. The Prebuild would require a single offshore wind developer to construct the necessary transmission infrastructure (“Prebuild Infrastructure”), which includes duct banks and access cable vaults, for its own project as well as the additional project(s) (up to four total cables) needed to fully utilize the SAA capability made available as a result of the Larrabee Tri-Collector Solution.

1. Please identify any requirements that should be included in the SGD to support the design and timely construction of the Prebuild Infrastructure. Please provide any recommendations for specification of these requirements.

First, given the early stage of the development on the Prebuild Infrastructure, the BPU should allow developers flexibility in their offerings to accommodate project development challenges that could arise at later stages of maturity, such as specific routing, technical or environmental factors that may constrain the Prebuild Infrastructure. Such flexibility will benefit New Jersey’s ratepayers by allowing for a larger number of bids, with more options, and encouraging higher levels of project viability.

Second, to ensure a like-for-like comparison on proposals, the BPU should include in the SGD certain performance-based standards for Prebuild Infrastructure. Performance-based standards that are defined upfront, along with a specific approach for evaluation/verification, will provide greater consistency among proposals, allowing for a more transparent selection process. Examples of helpful performance standards include:

- Specification of the specific number of offshore wind projects that must be accommodated in the Prebuild Infrastructure, and any required technical characteristics (e.g., separate circuits, each capable of transmitting at least 1,200 MW, at a minimum voltage of 230 – 275 kilovolts)
- Specification of a required design life, based on a standard that reflects at least 40 years of useful life (assuming a staggered interconnection by offshore wind farms) upon completion.
- Specification that civil and electrical designs provide for sufficient spacing (e.g., multiple clear shore landing locations with a spacing of no less than 60 feet between each circuit) and/or insulation within the Prebuild Infrastructure so each circuit would not thermally interfere with the operation of any adjacent circuit(s).
- Requirement that each Prebuild Infrastructure proposal include an “every-link-in-the-chain” analysis of its proposed route that demonstrates (a) required site control, (b) environmental constraints and mitigation plans and (c) technical constraints and plans for accommodating all proposed circuits and other infrastructure, consistent with the other performance specifications.
- Specification of sufficient workspace secured in easements (e.g. adequate to enable each developer to pull-in and connect their project), and redundant duct banks to accommodate all construction and maintenance requirements by future interconnecting offshore wind developers.
- Specified requirement for HDD, and no option for open cut trench, for all shore landings of subsea cables, such that environmental impacts and public use impacts can be minimized.
- Specified power quality, safety and system control requirements based on recognized industry standards (e.g., IEEE, NESC, etc.)
- Requirement for capacity and system model (e.g., PSSE, PSCAD) characteristics developed at bus positions for each future awardee to connect

2. Are there major challenges or significant limitations to installing up to four circuits for independent projects in a common ROW? If yes, please summarize the nature of these challenges/limitations.

The feasibility (or lack thereof) of siting up to four circuits in a common Right of Way (ROW) will depend on a number of factors, including the following:

1. Whether all easements for such ROW provide sufficient width throughout its entire route to enable:
 - Cable lay and burial of each offshore circuit to be performed independently, with minimal risk to adjacent cables
 - Installation and maintenance of each onshore circuit to be performed independently, with minimal risk to adjacent cables
 - Each cable circuit to be sufficiently separated such that no single circuit would thermally interfere with the operation of another circuit
 - Each cable circuit would be separated sufficiently within the ROW, such that any damaged circuit could be repaired by installation of replacement cable and splices without interfering with another circuit
 - Avoidance or minimization of impacts to environmental factors within, or conflicting uses of, the ROW.
2. Whether the length of the export cable, the thermal resistivity of the soils, the proximity of other cables, and other technical factors would necessitate a project to add power conditioning equipment to conform to PJM's interconnection specifications.
3. Whether the common ROW would traverse areas that would require cable burial depths that would thermally limit cable capacity over other routes that might be available.
4. How PJM's rules regarding single contingencies will apply to multiple gigawatt-scale facilities being located within a single corridor.

These factors will not likely be knowable with a high degree of certainty until considerable data collection and engineering has been completed for the ROW and connecting offshore wind projects.

Cost Recovery Structure for Costs Associated with the Prebuild Infrastructure

3. Board Staff expects to require applicants to submit separate an OREC schedule for their offshore wind project with and without the Prebuild Infrastructure included. Over what period of years should the cost of the Prebuild Infrastructure be recovered?

It would not be unreasonable for the costs to be paid over the same OREC schedule of the offshore wind project constructing such infrastructure (e.g., to match the anticipated useful life as noted in response to Question #1 above).

Construction and Operating Considerations for the Prebuild Infrastructure

Awardees in future New Jersey offshore wind solicitations (and other awardees in the Third Solicitation, if multiple projects are selected) will be required to utilize the Prebuild Infrastructure. As part of project construction efforts, awardees would be required to install their transmission cables in the Prebuild Infrastructure, utilizing the prebuilt duct banks and cable vaults designated to their project. To the extent possible, please consider these questions from the perspective of both the entity that constructs the Prebuild Infrastructure and an entity that will utilize the Prebuild Infrastructure.

4. What terms and conditions for construction of the Prebuild Infrastructure between the Board and constructor should be specified in the SGD?

Although the cost of the Prebuild Infrastructure is relatively minor compared to the total cost of an offshore wind farm, its vital role in delivering the production of the offshore wind farm to the POI, and therefore generating revenue, make it a significant project risk factor for developers, equity investors, and banks. As such, the BPU should ask prospective constructors to provide commitments, as part of the agreement governing the construction of the Prebuild Infrastructure, which would be intended to enhance the “bankability” (i.e., the ability to secure project finance) of the offshore wind projects that make use of the Prebuild Infrastructure. Examples of such commitments include:

- **Guaranteed Scope:** As discussed in our response question #1 above, the BPU should establish performance-based standards that guide the design, engineering, and construction of the Prebuild Infrastructure. To effect such standards, the BPU should also require the constructor to guarantee that the Prebuild Infrastructure will conform to those specifications and other features of its proposal, and provide for a clearly defined process for an independent third party to confirm such standards and features have been achieved once construction is completed. The agreement should require that the constructor promptly cure any deficiencies identified by such independent third party.
- **Guaranteed Local Content:** The BPU should provide specific requirements for local content and workforce development, conforming to all state equal opportunity and union requirements, and require the constructor to agree to abide by them.
- **Guaranteed Schedule:** The BPU should require the constructor to propose specific milestones for the Prebuild Infrastructure and require that the agreement stipulate conformance with the same. This should include definition of conditions precedent for the Prebuild Infrastructure to be deemed placed “in-service” for purpose of the agreement.
- **Schedule Liquidated Damages:** Given the criticality of the Prebuild Infrastructure to the future offshore wind farms that plan to make use of it, the BPU should stipulate that the agreement will include punitive liquidated damages for failure to achieve the Guaranteed Schedule.
- **Capped Cost, with Shared Savings:** The BPU should require the constructor commit to a firm, fixed cap on the cost of Prebuild Infrastructure, and also that the agreement establish equitable share-savings mechanisms to allow ratepayers to benefit from reductions in construction costs.
- **Market-Standard Terms:** In addition to the foregoing, the BPU should provide with the OREC Solicitation a form of agreement for the Prebuild Infrastructure that includes market-standard construction security mechanisms including insurance requirements, step in rights, bonds, and others, to incentivize on-time/on-budget completion and mitigate the risk of delays/cost overruns.

5. What terms and conditions for operation of the Prebuild Infrastructure between the Board, constructor and future users should be specified in the SGD?

As discussed in question #4 above, siting multiple independently-owned transmission facilities within a single corridor that is owned by a third party will require the bidders to make assumptions regarding a number of commercial factors which have, to the best of our knowledge, not previously been addressed in offshore wind project development. Given the unprecedented nature of the Prebuild Infrastructure, the BPU should provide clear guidance on commercial factors regarding its use and maintenance, which include:

- Following the completion of the construction of the Prebuild Infrastructure, which entity will own it?
- Which entity will be responsible for maintaining the Prebuild Infrastructure, and how will responsibility be shared between the owner of the Prebuild Infrastructure and the offshore wind facilities making use of it?
- What agreement(s) will exist between the owner of the Prebuild Infrastructure and each of the offshore wind facilities making use of it? The BPU should not only define these agreements, but also provide a form of agreement and collect comments on the same from both prospective Prebuild Infrastructure constructors, as well as users of such Prebuild Infrastructure. Such agreements should, at a minimum, address the following:
 - The standards of performance that will be required of the constructor and/or operations & maintenance (“O&M”) provider of the Prebuild Infrastructure as it relates to availability, maintenance, compliance, site access and other operational factors.
 - The level of warranty and performance guarantee that will be required of the constructor and/or O&M provider of the Prebuild Infrastructure, to be provided to the future interconnecting offshore wind developers who make use of the Prebuild Infrastructure.
 - The form, and magnitude, of credit support that will be required from the constructor and/or O&M provider of the Prebuild Infrastructure to provide assurances to the future interconnecting offshore wind developers who rely on such Prebuild Infrastructure.
 - Other market-standard commercial terms and security mechanisms including insurance requirements, step in rights, bonds, and liquidated damages.

6. Are there any potential challenges for cable installation in the Prebuild Infrastructure for future solicitation awardees? If yes, how might they be mitigated?

There are multiple categories of challenges:

- (1) Development and Construction Challenges – see our response to question #4.
- (2) Operations and Maintenance Challenges -- see our response to question #5.
- (3) Regulatory Compliance Challenges – developing, constructing, operating and maintaining multiple gigawatt-scale, independently-owned transmission facilities within a common corridor is without precedent. As part of the OREC solicitation, the BPU should specify (a) the regulatory compliance requirements and (b) which entities will be responsible for ensuring compliance (and liable for non-compliance) with each such requirement.



7. Please identify any potential adverse cost or schedule implications ascribable to the Prebuild Infrastructure as it relates to awardees of future New Jersey offshore wind solicitations. How might these impacts be mitigated?

As noted above, the development, construction, operations and maintenance of Prebuild Infrastructure brings unique challenges.

As it relates to development and construction, delays in completing the Prebuild Infrastructure will lead to adverse impacts to cost and schedule on future offshore wind awardees. The BPU can and should address these risks contractually with the constructor of the Prebuild Infrastructure, as detailed in our response to question #4.

As it relates to operations and maintenance, the interaction between multiple independently-owned transmission facilities within a common corridor could adversely affect the feasibility of future offshore wind facilities to secure financing. The BPU can and should address these risks contractually with the constructor of the Prebuild Infrastructure, as detailed in our response to question #5 above.

Separately, as a further mitigant of these risks, the BPU should allow developers to propose secondary POIs to help diversify POI risk. Doing so allows offshore wind developers to interconnect components of their project to other POIs – minimizing project-on-project risk. See discussion on question #14 for further details.

Enabling Potential Future Development of a Mesh Network

A mesh network is an offshore transmission configuration in which the offshore substations for individual offshore wind projects are linked by connecting several offshore platforms. Board Staff is considering requiring projects bidding in the Third Solicitation to be built with design elements that will enable future connection to a mesh network.

8. Do you have any general recommendations regarding how preparation for a future mesh network can be implemented in the Third Solicitation?

No comment.

9. What additional equipment would need to be specified and installed at the time of project construction in order to enable future connectivity to a mesh network, as opposed to equipment that would not need to be installed until the mesh network is implemented?

No comment.

10. What physical requirements would enable the offshore substation to support the additional equipment, including additional platform space?

No comment.

11. How would your suggestions regarding what engineering, operational and/or regulatory information should be specified in the SGD to support a future mesh network differ if the mesh network includes (i) only New Jersey projects, (ii) New Jersey and other PJM states' projects, or (iii) New Jersey, other PJM states' and downstate New York projects?

No comment.

12. What might be the advantages or disadvantages associated with the Board's adoption of the mesh network framework put forth by NYSEDA in ORECRFP22-1?

No comment.

13. What voltage would you recommend for the future mesh network and why? Other

No comment.

Other

14. Please provide any additional information that you would like Board Staff to consider in development of the SGD

Rise offers two additional concepts for consideration by the BPU.

First, in addition to requiring that bidders in future offshore wind solicitations, including the upcoming Third Solicitation, offer proposals that utilize the Prebuild Infrastructure and connect to the LTCS, the BPU should also allow offshore wind developers to propose secondary POIs. Such secondary POIs could take multiple forms:

- (1) **Complementary to the LTCS** – The BPU should allow bidders to offer project configurations that include use of both the LTCS and an additional POI in order to deliver capacity in increments that align with the size of the offshore wind leases in the New York Bight. To provide competitive OREC prices, offshore wind developers need to maximize the total energy capacity from their lease area – spreading the lease cost across the highest possible number of megawatts. However, none of the offshore lease areas is completely divisible by 1,200 MW – the target capacity for each circuit connecting into the LTCS (corresponding to converter station and HVDC export cable capacities). An offshore wind developer that can supplement the LTCS POI with a secondary POI will be better able to maximize total energy capacity and avoid being forced to allocate the cost of the unused lease areas to the megawatts sold. This construct is being pursued by Ocean Wind 1, which has 2 POIs.
- (2) **Smaller Alternative to the LTCS** – The BPU should also allow stand-alone proposals for projects with an alternative POI that have a nameplate capacity lower than the target capacity (i.e., less than 1,200 MWs) for each circuit connecting into the LTCS. With room for up to 4 circuits, injection capacity on each circuit to the LTCS should be maximized. Based on commercially available technologies, each circuit would likely be sized to ~1,200 MW (corresponding to converter station and HVDC export cable capacities). Given the sizes of the offshore wind leases, limiting offshore wind developers to the LTCS POI would prevent them from providing the most competitive OREC price as none of the offshore wind lease areas are divisible by 1,200 MW.

The BPU should specify the circumstances and criteria under which secondary POIs could be offered during the ongoing stakeholder process for the Third Solicitation. The stakeholder process should also establish the criteria under which the BPU will evaluate proposals with secondary POIs, which should include their overall ability to reduce community disruption, environmental impacts, and customer costs, while minimizing risks.

Allowing for proposals that contemplate secondary POIs offers the State and its Ratepayers several benefits:

- **Minimizes Cost to Ratepayers**. The NY Bight Lease auction saw record prices for offshore wind lease areas. As such, the cost of the underlying leases will constitute a significant portion of each project's overall costs, and correspondingly, its OREC price. Giving offshore wind developers flexibility on project capacity sizes leads to the lowest OREC prices.
- **Maximizes Capacity of the LTCS and Prebuild Infrastructure**. Enabling offshore wind developers to propose a secondary POI maximizes the capacity of the LTCS and Prebuild Infrastructure – spreading the cost across the highest possible number of megawatts.
- **Reduces Risk of Delays to Delivering Offshore Wind**. Interconnecting into the LTCS requires developing and constructing a ~12-mile onshore route – which presents its own unique risks.



Offshore wind developers with secondary POI may provide an opportunity to interconnect projects into New Jersey’s grid sooner – particularly if the POI is close to the shore. Offshore wind developers will view this as a risk mitigating mechanism as interconnection risks are not concentrated to a single POI.

- Accelerates New Jersey’s Progress Towards 11 GW Offshore Wind Goal. Utilization of the LTCS, by its design, requires sequential deployment through the Prebuilt Infrastructure and LTCS interconnection. By enabling consideration of secondary POIs that meet the criteria established by the BPU, including environmental and ratepayer protections, the BPU preserves the opportunity to take advantage of opportunities to increase procurements beyond the current projected 1,200 MW in each solicitation.

Second, the BPU should give additional scoring credit to proposals that demonstrate certain features that will help advance other State policies. As a potential example of one such beneficial feature, [REDACTED]

[REDACTED]