



Attachment 1

BPU Supplemental Info

Board of Public Utilities

Offshore Wind Transmission Proposal Data Collection Form

September 17, 2021

Photo credit: Siemens AG

TABLE OF CONTENTS

- Attachment 1 BPU Supplemental Info 1**
- Section 1 Executive Summary 1**
 - 1.1 Overview..... 2**
 - 1.2 Summary of NEETMA Proposals 2**
 - 1.3 Conclusion..... 4**
- Section 2 Project Proposal ID..... 5**
 - 2.1 Proposing Entities Information 6**
- Section 3 Project Summary..... 8**
 - 3.1 Narrative Description of Proposed Project(s) 9**
 - 3.2 Project Optionality, Flexibility, and Modularity 11**
 - 3.3 Interdependency of options..... 11**
 - 3.4 Overview of Project Benefits..... 14**
 - 3.5 Overview of Major Risks and Strategies to Limit Risks 14**
 - 3.6 Overview of Project Costs, Cost Containment Provisions, and Cost recovery proposals..... 14**
- Section 4 Proposal Benefits..... 15**
 - 4.1 Reliability Benefits 16**
 - 4.2 Public Policy Benefits..... 16**
 - 4.3 Market Efficiency Benefits..... 17**
- Section 5 Proposal Costs 18**
 - 5.1 Additional Cost Information Including Ongoing Capital Expenditures 19**
 - 5.2 Cost Estimate Classification..... 19**
 - 5.3 Estimated Energy Losses 19**
 - 5.4 The Physical Life and/or Economic Life of The Facilities 20**
 - 5.5 Cost Structure Proposed Including Cost Containment Mechanisms and Cost Recovery Approach 20**

| | |
|---|-----------|
| Section 6 Project Risk..... | 22 |
| 6.1 Project’s Plan for Site Control..... | 23 |
| 6.2 Issuance of a Right-of-Way, Right of Use and Easement, Project’s Plan and Timetable for Obtaining Authorization | 23 |
| 6.3 Stakeholder Engagement..... | 23 |
| 6.4 Construction Techniques That May Result in Project Delays or Cost Overruns..... | 23 |
| 6.5 Potential Time of Year Restrictions on Construction Activity | 24 |
| 6.6 Impact of Supply Chain Constraints or Material Procurement Risks | 24 |
| 6.7 Project Risks related to Timing or Completion..... | 24 |
| 6.8 Proposed Contractual Language for Project Schedule Guarantees | 24 |
| 6.9 Additional Risk Associated with Project..... | 25 |
| 6.10 Compensatory Mitigation Estimate for Wetland Impacts and Potential Risk | 25 |
| Section 7 Environmental..... | 26 |
| 7.1 Environmental Protection Plan | 27 |
| 7.2 Anticipated Environmental Benefits of a Particular Transmission Proposal | 27 |
| 7.3 Fisheries Protection Plan | 28 |
| 7.4 Environmental and Fisheries Stakeholders Outreach..... | 28 |
| 7.5 Analysis Showing That Project Infrastructure Will Not Impact Communities | 29 |
| 7.6 Applicant’s Permitting Plan..... | 29 |

LIST OF TABLES

| | | |
|-------------|--|----|
| Table 1.2-1 | Proposed Injection and Corresponding Upgrade Proposal..... | 3 |
| Table 3.1-1 | Upgrade Costs | 10 |
| Table 3.3-1 | Proposed Injection and Corresponding Upgrade Proposal..... | 13 |
| Table 5.3-1 | Estimated Losses | 19 |



Section 1

Executive Summary

Photo credit: Siemens AG

1.1 Overview

NextEra Energy Transmission MidAtlantic Holdings, LLC (NEETMA) is pleased to submit these proposals to finance, develop, build, own, operate, and maintain the New Jersey Seawind Connector (NJSC). These solutions have been developed to support New Jersey on the path to 100% clean energy by 2050 and meets the objectives for offshore wind development by providing New Jersey with the ability to:

- Interconnect up to 11,700 MW of offshore wind, for a total of 12,758 MW
- Mix and match 31 different combinations via multiple transmission proposals
- Deliver cost-effective and cost-contained solutions for New Jersey rate payers

1.2 Summary of NEETMA Proposals

NEETMA believes that an integrated approach to transmission is the most cost effective and least environmentally impactful way to deliver offshore wind to New Jersey. Through NEETMA's unparalleled capabilities in engineering, procurement and construction, NEETMA is able to develop, build, operate and maintain cost-effect utility-scale offshore collection and conversion platforms that will deliver tremendous value to the State and its ratepayers.

NEETMA is submitting multiple proposals with various injection points and injection amounts to provide PJM and New Jersey Board of Public Utilities (BPU) maximum flexibility and optionality in determining the best transmission proposal to satisfy New Jersey's offshore wind goals. NEETMA believes this can be best achieved by using primarily High Voltage Direct Current (HVDC) Voltage Source Converter (VSC) technology and Symmetrical Monopole cables. The advantages of HVDC utilizing symmetrical monopoles when compared to an AC cable alternative include: significant cost savings, significantly fewer cables required which means less environmental impacts and onshore cable crossings, lower losses, improved stability and reactive power support capabilities, and the ability to construct 1,500 MW or 1,200 MW blocks at different times. Using HVDC technology, NEETMA has identified three viable injection sites to achieve New Jersey's offshore wind goals:

| | |
|--|--|
| Deans 500 kV Injections | This proposal utilizes a single injection point to meet and exceed BPU’s offshore wind goals at 3,000 MW, 4,500 MW, and 6,000 MW utilizing 1,500 MW HVDC systems. |
| Oceanview 230 kV Injections | This proposal offers a cost-effective way to inject offshore wind at 1,500 MW, 2,400 MW, and 3,000 MW utilizing 1,500 MW or 1,200 MW HVDC systems. |
| Cardiff 230 kV Injections | NEETMA is proposing a more cost-effective alternative to the Ocean Wind 2 and Atlantic Shores projects interconnections which is less environmentally impactful. |

For each proposal, NEETMA has identified a set of required system upgrades that will allow each proposed MW injection to reliably deliver offshore wind energy to the PJM system, while providing significant market benefits to New Jersey.

Table 1.2-1 Proposed Injection and Corresponding Upgrade Proposal

| Problem Statement 2 Injection Proposal | Problem Statement 1a Upgrade Proposal | Problem Statement 1a Peach Bottom Upgrade Proposals |
|---|--|---|
| 2-D60 | 1A-D60 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-D45 | 1A-D45 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-D30 | 1A-D30 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-O30 | 1A-O30 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |

| Problem Statement 2 Injection Proposal | Problem Statement 1a Upgrade Proposal | Problem Statement 1a Peach Bottom Upgrade Proposals |
|--|---|---|
| 2-O24 | 1A-O24 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-O15 | 1A-O15 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-C27 | 1A-C27 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| Combinations where total OSW Injection equals or exceeds 8300 MW (inclusive of Ocean Wind 1) | Corresponding Upgrade Proposals PLUS 1A-8300 | 1A-WILEY3 |

NEETMA's proposals can be blended in different combinations to provide PJM and BPU flexibility in achieving different offshore wind injection capabilities. For example, a Deans 3,000 MW Injection can be combined with an Oceanview 1,500 MW Injection. Additionally, the modular nature of HVDC means that the entire project does not have to be constructed at once and can be constructed in stages. This allows BPU to determine the best combination of proposals to meet or even exceed New Jersey's Offshore Wind goals.

1.3 Conclusion

NEETMA understands the complexities and challenges in executing this project and the benefits it will bring to New Jersey including clean energy, jobs, economic benefits while minimizing environmental impacts. NEETMA is a reliable and experienced partner that can help New Jersey achieve its offshore wind energy goals. NEETMA benefits from the extensive, enterprise-wide financial resources of its indirect parent company, NextEra. With NextEra, New Jersey will find a reliable and committed partner to support a project of this scope and scale.



Section 2

Project Proposal ID

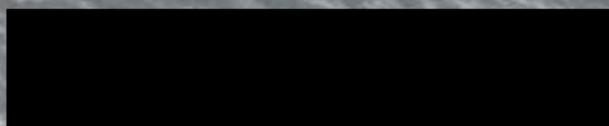


Photo credit: Siemens AG

2.

PROJECT PROPOSAL IDENTIFICATION

2.1 Proposing Entities Information

Proposing Entities shall include the following information in the BPU Supplemental Offshore Wind Transmission Proposal Data Collection Form

| | |
|-------------------------------|--|
| Proposing Entity Name: | NextEra Energy Transmission MidAtlantic Holding, LLC (NEETMH) |
| Company ID: | 1A-D60 1A-D45 1A-D30 1A-O30 1A-O24 1A-O15 1A-C27 1A-8300 |
| Project Title: | Upgrades for Deans 6000 MW Injection Upgrades for Deans 4500 MW Injection Upgrades for Deans 3000 MW Injection Upgrades for Oceanview 3000 MW Injection Upgrades for Oceanview 2400 MW Injection Upgrades for Oceanview 1500 MW Injection Upgrades for Cardiff 2700 MW Injection Upgrades for 8300 MW Injection |

| | |
|-------------------------------|--|
| Proposing Entity Name: | NextEra Energy Transmission MidAtlantic Holding, LLC (NEETMH) |
| PJM Proposal ID: | 2021-NJOSW-651 (for 1A-D60) 2021-NJOSW-315 (for 1A-D45) 2021-NJOSW-44 (for 1A-D30) 2021-NJOSW-331 (for 1A-O30) 2021-NJOSW-878 (for 1A-O24) 2021-NJOSW-520 (for 1A-015) 2021-NJOSW-793 (for 1A-C27) 2021-NJOSW-158 (for 1A-8300) |



Section 3

Project Summary



Photo credit: Siemens AG

3.1 Narrative Description of Proposed Project(s)

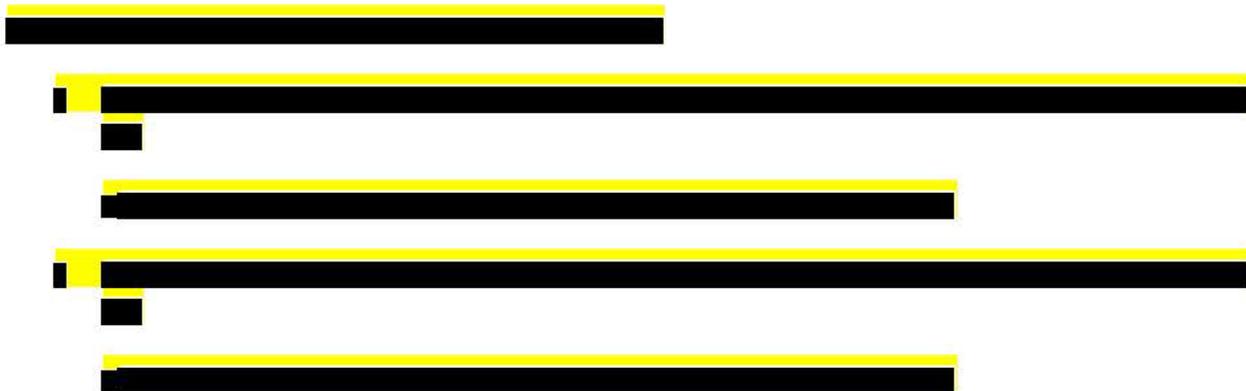
Provide a narrative description of the project(s) proposed in response to the PJM Problem Statements describing primary technical features, interconnection points (default or alternative POIs) and the associated transfer capability, timeframe for development, and how the project(s) will support New Jersey's policy to cost-effectively develop 7,500 MW of offshore wind.

NEETMA has identified unique sets of upgrades after performing reliability analyses as provided in Attachment 2A, to determine what is required to inject offshore wind into New Jersey reliably. These upgrades include reconductors, adding new line to existing transmission circuits, rebuilding existing transmission lines, adding new transformers or phase angle regulators to existing substations, expanding existing substations to accommodate new line terminations, or reconfiguring towers within existing rights-of-way (ROW) to make room for an additional circuit. NEETMA has attempted to identify low cost, low impact upgrades to the extent practicable.

NEETMA is providing a summary of all the upgrades required for each of the injection points. This includes two sets of upgrades:

- **Upgrades included in Problem Statement 2:** These are upgrades necessary to physically connect to the existing transmission grid. For example, where NEETMA is installing a new converter station, there need to be connections to tie into the existing grid. NEETMA is providing a summary here to show a complete picture.
- **Upgrades included in Problem Statement 1A:** These are upgrades downstream of the interconnection point, necessary to reliably deliver offshore wind to the PJM grid.

A summary of the upgrades associated with the project is provided below. Table 3.1-1 also provides estimated costs for all upgrades, inclusive of both Problem Statement 1 and 2 upgrades.



[Redacted text block]

Table with 4 columns and 10 rows, containing redacted data. The table is divided into two main sections by a vertical line. The left section has a light gray background, and the right section has a light green background. Each cell contains redacted text.

3.2 Project Optionality, Flexibility, and Modularity

Describe the optionality, flexibility, and modularity offered by the proposed projects, including: ability of project proposals to achieve efficient outcomes through combinations of solutions for Options 1a, 1b, 2 and 3 needs, or ways in which proposed solutions, or portions of proposed solutions, can be combined, integrated, and sequenced to more cost effectively achieve the State's overall public policy and risk mitigation objectives; ability of the proposed solution to accommodate future increases in offshore wind generation above current plans; innovative solutions that yield a transmission investment schedule that is optimally aligned with the planned schedule of offshore wind generation procurements.

NEETMA has identified the transmission upgrades that are necessary to reliably connect NEETMA's Injection Proposals to the PJM transmission grid and deliver wind energy. These upgrades are generally identified and described in response to Problem Statement 2 and described more fully in Attachment 2C, which provides a detailed list of the proposed transmission upgrade and the issue it is addressing. NEETMA has identified these upgrades based on limited information made available by the existing transmission owners. Therefore, it is possible there is a more cost-effective upgrade that could replace NEETMA's proposed upgrades to allow its Injection Proposals for Problem Statement 2 to reliably connect to the grid.

For example, if NEETMA has identified a 20-mile reconductor to increase the rating of a particular line in order to address a thermal overload, it is possible that the overload could be addressed by with a less expensive fix. The rating of the line could be increased by replacing terminal equipment, replacing certain towers that result in a de-rate of the transmission line due to line clearances, or other transmission facility details that are not made available to developers.

NEETMA can work with both PJM and the incumbent transmission owners to optimize transmission upgrades necessary to allow NEETMA's Injection Proposals to reliably deliver offshore wind energy.

3.3 Interdependency of options

Describe any interdependence issues or benefits associated with any other proposal also submitted by your company. Namely, describe whether selection of another specific proposal will impact this proposal, and if so – how. Describe whether your project is severable, and the conditions that would be associated with selection of this single proposal (i.e. one option 1b proposal for one POI). Describe any benefits to cost, cost-containment mechanisms, phasing, or other relevant elements of the proposal that would stem from co-selection of other proposals. Explain any benefits from selection of multiple proposals that may not be available if a single proposal is selected.

NEETMA's proposal was designed to allow PJM and BPU to pair any of our offerings with other developer offerings. For example, our proposals for Problem Statement 2 can be combined with

another developer's proposals for Problem Statement 1a or potentially Problem Statement 3. To provide complete solutions for New Jersey, NEETMA's proposals are designed to address all reliability issues caused by the injection levels proposed. NEETMA's proposals for Problem Statement 1A and Problem Statement 2 are intended to be combined to achieve solutions that optimally upgrade the existing transmission network in conjunction with the injections as described below.

- **Problem Statement 2** proposals include delivering offshore wind from an ocean platform and injecting power into a specific location on the transmission grid
- **Problem Statement 1a** proposals address onshore reliability issues that are caused by the injection of offshore wind
- **Problem Statement 1a Peach Bottom** - proposals are specific proposals which address the thermal overloads near Peach Bottom

Each injection proposal by NEETMA will need to be paired up with a corresponding upgrade proposal. Table 3.3-1 demonstrates the required pairing using the Company Proposal IDs provided by NEETMA. A complete proposal would include an injection proposal, an upgrade proposal, and one of the three Peach Bottom upgrade proposals.

Table 3.3-1 Proposed Injection and Corresponding Upgrade Proposal

| Problem Statement 2 Injection Proposal | Problem Statement 1a Upgrade Proposal | Problem Statement 1a Peach Bottom Upgrade Proposals |
|--|--|---|
| 2-D60 | 1A-D60 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-D45 | 1A-D45 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-D30 | 1A-D30 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-O30 | 1A-O30 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-O24 | 1A-O24 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-O15 | 1A-O15 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| 2-C27 | 1A-C27 | 1A-WILEY1, 1A-WILEY2, or 1A-WILEY3 |
| Combinations where total OSW Injection equals or exceeds 8300 MW (inclusive of Ocean Wind 1) | Corresponding Upgrade Proposals PLUS 1A-8300 | 1A-WILEY3 |

Moreover, the pairings carry through if multiple Injection Proposals are combined. For example, if 2-D30 and 2-O15 are selected, the associated Upgrade Proposals of 1A-D30 and 1A-O15, and one of the three Peach Bottom Upgrade Proposals would be required in order to reliably interconnect both Injection Proposals. Where combinations are equal to or greater than 8,300 MW (inclusive of Ocean Wind 1), the Upgrade Proposal 1A-8300 is required in addition to the corresponding Upgrade Proposals.

3.4 Overview of Project Benefits

Describe the benefits that the project offers in support of New Jersey's policy goals to reduce customer costs, advance offshore wind, maintain reliability, mitigate environmental impacts, and achieve other policy goals as outlined above. Explain how any project options or alternatives offered may create value in furtherance of the BPU's stated policy goals as described above.

The proposed system upgrades allow NEETMA's corresponding Problem Statement 2 proposals to inject offshore wind into the PJM grid reliably. NEETMA has identified an optimal set of transmission upgrades based on limited information of the existing transmission facilities. The upgrades identified are primarily reconductors, reconfigurations of existing substations, additions within the fence line of the existing substation, or transmission line loop-ins that require an insignificant amount of new ROW.

3.5 Overview of Major Risks and Strategies to Limit Risks

Identify and describe project-related risks, such as: (a) uncertainties that may cause timeline delays or budget increases; (b) uncertainties that may reduce or delay the benefits to New Jersey customers; and (c) project-on-project risks that may exist between this project and other transmission or offshore wind projects. Describe the strategies that will be utilized to limit these risks and the impacts to New Jersey customers.

NEETMA will not be responsible for developing, permitting, engineering, procuring, and constructing the proposed transmission facilities identified in proposals 1A-D60, 1A-D45, 1A-D30, 1A-O30, 1A-O24, 1A-O15, 1A-C27 and 1A-8300. However, NEETMA will coordinate with BPU, PJM and incumbent transmission owners to ensure the upgrades are constructed in a manner that avoids delaying the interconnection of offshore wind transmission facilities

3.6 Overview of Project Costs, Cost Containment Provisions, and Cost recovery proposals

Summarize the project cost, any cost containment provisions that will be utilized to limit cost impacts on New Jersey customers, and the cost recovery approach.

Because NEETMA is not responsible for construction of these facilities, NEETMA cannot propose any cost containment provisions for these transmission facilities.



Section 4

Proposal Benefits

Photo credit: Siemens AG

4.1 Reliability Benefits

-
- Please explain the proposed project's ability to satisfy any applicable reliability criteria that may impact the evaluation of the project even if it was not explicitly stated as part of the original problem statement.
 - Please explain the proposed project's ability to provide additional benefits associated with reliability criteria, including reduce the need for must-run generation and special operating procedures, extreme weather outages and weather-related multiple unforced outages, reduced probability of common mode outages due to electrical and non-electrical causes, islanding, power quality degradation.
-

NEETMA has provided a report showing the results of the proposed upgrades in combination with the proposed Injection Proposal as identified in Section 3.3. See Attachment 2A for more details.

4.2 Public Policy Benefits

-
- Please explain the proposed project's ability to maximize the energy, capacity, and REC values of offshore wind generation delivered to the chosen POIs, including reduce total costs of the offshore wind generation facilities (including generator leads to the offshore substations), mitigation of curtailment risks, and the level and sustainability of PJM capacity, congestion, or other rights created by the proposed solution that increase the delivered value of the wind generation or provide other benefits.
 - Please explain the proposed project's ability to accommodate future increases in offshore wind generation above current plans.
-

The primary benefit with identifying onshore system upgrades is that it allows for a more coordinated approach to planning; meaning that onshore upgrades can be designed more efficiently to achieve New Jersey's offshore wind energy goals. Under the conventional interconnection process, upgrades are only identified for those generators that are currently going through a facilities study. Generator developers have no incentive to pay for system upgrades that go above and beyond their desired injection amount. NEETMA has comprehensively designed a set of injections as well as identified necessary reliability upgrades that will allow New Jersey to meet or exceed its goals, while minimizing costs, environmental impacts, and community impacts.

4.3 Market Efficiency Benefits

Please explain for each item below the proposed project's ability to provide additional onshore-grid-related benefits that improve PJM market performance and provide New Jersey ratepayer cost savings.

- Energy market benefits, such as ratepayer cost savings (the primary evaluation metric); production cost savings; or other benefits:
 - Transmission system benefits, such as synergies with transmission facilities associated with ongoing OSW procurements, replacement of aging transmission infrastructure, and other transmission cost savings to New Jersey customers:
 - Capacity market benefits, that may give rise to New Jersey ratepayer cost savings (which is the primary evaluation metric), including through CETL increases, improved resiliency/redundancy, avoided future costs (such as future reliability upgrades or aging facilities replacements):
 - Other benefits, including State energy sufficiency, reduced emissions, less dependence on fossil-based thermal resources, improvements in local transmission and distribution outages, improvements in local resiliency:
 - Please attach any relevant supporting analyses and benefits quantifications (including assumptions and analyses, if any) to support the benefits described above that have not been already submitted through the PJM submission forms.
-

NEETMA has provided a report showing the results of the proposed upgrades in combination with the proposed Injection Proposal as identified in Section 3.3. See **Attachment 2A** for more details.



Section 5

Proposal Costs

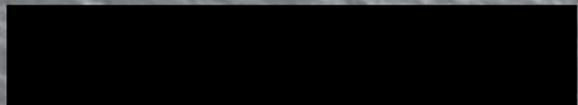


Photo credit: Siemens AG

5.

PROPOSAL COSTS, COST CONTAINMENT PROVISIONS, AND COST RECOVERY

5.1 Additional Cost Information Including Ongoing Capital Expenditures

Any additional cost information not included in PJM's submission forms, including ongoing capital expenditures

No additional information is being provided.

5.2 Cost Estimate Classification

For the cost estimates submitted via PJM's submission forms, the cost estimate classification and expected accuracy range consistent with AACE International standards

NEETMA has provided a Class V estimate.

5.3 Estimated Energy Losses

The estimated energy losses of the proposed facilities.

The losses for each DC converter station is 1%, and for the DC cables are less than 1% and varies depending on how much current is flowing through the cable and the cable length. NEETMA has provided a table of estimated losses for all of its proposals. The losses are calculated according to PJM's dispatch of 60% offshore wind during the winter models, and 30% offshore wind capacity during the summer models.

Table 5.3-1 Estimated Losses

| INJECTION PROPOSAL ID | Losses calculated on total design capacity | |
|-----------------------|---|-------|
| | Reduction in overall system losses with upgrades (MW) | |
| | SUM | WIN |
| 1A-D60 | 130.5 | 272.9 |
| 1A-D45 | 98.7 | 225.0 |
| 1A-D30 | 68.8 | 164.8 |

| INJECTION PROPOSAL ID | Losses calculated on total design capacity | |
|---|---|-------|
| | Reduction in overall system losses with upgrades (MW) | |
| | SUM | WIN |
| 1A-O30 | 87.3 | 155.3 |
| 1A-O24 | 74.0 | 140.3 |
| 1A-O15 | 49.0 | 96.7 |
| 1A-C27 | 64.3 | 99.6 |
| Combination: 1A-D45 1A-C27 1A-8300 | 145.6 | 262.0 |
| Combination: 1A-D30 1A-O15 1A-C27 1A-8300 | 156.1 | 270.8 |

5.4 The Physical Life and/or Economic Life of The Facilities

The physical life and/or economic life (i.e., length over which the facility will request cost recovery) of the facilities

Not applicable, as the projects will be constructed by Incumbent Transmission Owners.

5.5 Cost Structure Proposed Including Cost Containment Mechanisms and Cost Recovery Approach

A description of each cost structure proposed for the project, including cost containment mechanisms and cost recovery approach

If a fixed revenue requirement is being requested, files specifying the annual revenue requirements over the economic life of the proposal. Similar to the proposed cost cap mechanisms submitted to PJM, please include proposed contractual revenue requirement commitment language to be included in the Designated Entity Agreement. The Contractual

revenue requirement commitment language must be identical to that submitted in the PJM Competitive Proposal Template.

- Please explain how the costs of the proposed projects may be impacted by selection of a subset of the options versus the entire proposed project
 - Please explain any additional cost control mechanisms provisions for the BPU to consider that were not included in the PJM submission forms
-

NEETMA is not proposing any cost containment since the project will be constructed by incumbent transmission owners.



Section 6

Project Risk

Photo credit: Siemens AG

6.1 Project's Plan for Site Control.

Discuss the project's plan for site control and the ability to achieve site control.

The proposed upgrades use existing rights-of-way or easements that the incumbent transmission owner currently utilizes.

6.2 Issuance of a Right-of-Way, Right of Use and Easement, Project's Plan and Timetable for Obtaining Authorization

Identify whether the project will require the issuance of a right-of-way, a right of use and easement, or similar authorization from the U.S. Bureau of Ocean Energy Management ("BOEM"), and the project's plan and timetable for obtaining such any required authorization.

Identify whether the project will require the issuance of a right-of-way, a right of use and easement, or similar authorization from the U.S. Bureau of Ocean Energy Management ("BOEM"), and the project's plan and timetable for obtaining such any required authorization.

The proposed upgrades do not require any rights-of-way, rights of use and easement or other authorization from BOEM.

6.3 Stakeholder Engagement

Discuss the project stakeholder engagement plan's ability to minimize public opposition risk from the fishing industry, coastal and beach communities, and other stakeholder groups.

As the project will be the responsibility of the incumbent transmission owner, NEETMA has not identified a stakeholder engagement plan.

6.4 Construction Techniques That May Result in Project Delays or Cost Overruns

Identify any construction techniques that will be needed – benthic substrate, long HDD spans, existing cables, pipelines or other infrastructure, sandwaves/megaripples, contaminated sediment, dredging, or onshore waterbody crossings – that may result in project delays or cost overruns.

As the project will be the responsibility of the incumbent transmission owner, NEETMA has not identified what construction techniques the incumbent transmission owner will use to upgrade their system.

6.5 Potential Time of Year Restrictions on Construction Activity

Identify known or potential time of year restrictions on construction activity, particularly related to listed species or beach restrictions.

As the project will be the responsibility of the incumbent transmission owner, NEETMA has not identified any time of year restrictions on construction activity.

6.6 Impact of Supply Chain Constraints or Material Procurement Risks

Identify supply chain constraints or material procurement risks that may impact the project.

Outages at substations will be required to add new line terminations, add new phase angle regulators, transformers or reconfigure existing substations. Outages will also be required to reconductor or rebuild existing transmission lines.

6.7 Project Risks related to Timing or Completion

Identify project-on-project risks related to the timing or completion of other transmission and offshore wind projects built to achieve the New Jersey public policy requirement.

As the project will be the responsibility of the incumbent transmission owner, NEETMA has not identified supply chain constraints or risks. However, the proposed upgrades include common equipment and materials and are not likely to be at risk so as to delay the proposed construction and in-service date of the projects.

6.8 Proposed Contractual Language for Project Schedule Guarantees

Describe and provide proposed contractual language for any project schedule guarantees, including but not limited to guaranteed in-service date(s), financial assurance mechanisms, financial commitments contingent on meeting targeted commercial online dates, and delay damage or liquidated damage payment provisions, that have been proposed.

There should be minimal project-on-project risk since the proposed upgrades should have less complicated permitting and procurement processes than the proposed offshore wind transmission facilities. These upgrades can also be constructed in advance of any offshore wind projects and should pose minimal project-on-project risk.

6.9 Additional Risk Associated with Project

Identify any additional risks associated with the project that could lead to increased costs, reduced project benefits (reliability, market efficiency, and/or public policy), or delayed development and delivery of the proposed offshore wind generation.

NEETMA is not responsible for constructing these projects and cannot offer any in-service date guarantees for the project.

6.10 Compensatory Mitigation Estimate for Wetland Impacts and Potential Risk

Identify compensatory mitigation estimates needed for wetland impacts and any potential risk with availability of wetland credits.

NEETMA is not responsible for constructing these projects and has not identified additional risks.



Section 7

Environmental

Photo credit: Siemens AG

7.1 Environmental Protection Plan

Please provide an Environmental Protection Plan which describes all associated onshore and/or offshore environmental impacts from the planning, construction, and operation phases of the project

NEETMA is not responsible for constructing these projects and has not developed an Environmental Protection Plan. However, since the projects are primarily upgrading existing transmission facilities or utilizing existing rights of way, few environmental impacts are anticipated.

7.2 Anticipated Environmental Benefits of a Particular Transmission Proposal

Please provide a description of the anticipated environmental benefit of a particular transmission proposal in comparison to radial lines:

- How does the project reduce environmental impacts to fisheries, habitat, and sensitive resources in comparison to radial lines?
 - What is the reduction in impacts (approximate area) compared to radial lines, temporary and permanent?
 - A description of whether and how the project infrastructure, including offshore platforms, could provide direct ocean and ecological observations throughout the water column.
-

NEETMA's proposal offers a radial transmission design with the optionality to add cables to provide redundancy between platforms. This includes identifying the necessary upgrades in order to accommodate a particular interconnection. An integrated planning design offers multiple advantages over offshore wind developers designing individual radial lines for their windfarms.

The most recent award to Ocean Wind 2 and Atlantic Shores exemplifies the challenges offshore wind developers must deal with through the interconnection process and the upgrades required to reliably interconnect to the grid. A coordinated planning approach reveals that both Ocean Wind 2 and Atlantic Shores can both connect to the same location, as evidenced by NEETMA's Cardiff proposal. However, because of the uncertainty associated with system upgrade costs and the interconnection queue system, developers are hesitant to interconnect into a point that may be closer and less environmentally impactful. Moreover, even if two developers were to connect to the same point, they may develop and permit two different routes to get to the same point. However, when permitting and routing of both lines resides with a single entity, a coordinated approach to installation means fewer beach landings are required, fewer marine impacts can be achieved, and community impacts are minimized by utilizing a common duct bank for the installation of multiple terrestrial cables constructed in a single campaign.

7.3 Fisheries Protection Plan

Please provide a Fisheries Protection Plan that must include the following information:

- A scientifically rigorous description of the marine resources that exist in the Project area, including biota and commercial and recreational fisheries, that is informed by published studies, fisheries-dependent data, and fisheries-independent data, and identifies species of concern and potentially impacted fisheries;
 - A scientifically rigorous plan to detect impacts to marine resources, including biota and recreational and commercial fisheries;
 - Identification of all potential impacts on fish and on commercial and recreational fisheries off the coast of New Jersey from pre-construction activities through project close out;
 - A plan that describes the specific measures the Applicant will take to avoid, minimize, and/or mitigate potential impacts on fish, and on commercial and recreational fisheries;
 - An explanation of how the Applicant will provide reasonable accommodations to commercial and recreational fishing for efficient and safe access to fishing grounds;
 - A description of the Applicant's plan for addressing loss of or damage to fishing gear or vessels from interactions with offshore wind structures, array or export cables, survey activities, concrete mattresses, or other Project-related infrastructure or equipment.
-

The proposed upgrade projects will not impact any marine resources because none exist in the Project area.

7.4 Environmental and Fisheries Stakeholders Outreach

Please provide a description of how the Applicant will identify (or has identified) environmental and fisheries stakeholders, and how the Applicant proposes to communicate with those stakeholders during preconstruction activities through project closeout, as well as a plan for transparent reporting of how stakeholders' concerns were addressed.

NEETMA has not identified an outreach plan for environmental and fisheries stakeholders, as incumbent transmission owners will be responsible for permitting and constructing the project. Additionally, no fisheries stakeholders will be impacted by the proposed upgrades.

7.5 Analysis Showing That Project Infrastructure Will Not Impact Communities

Please provide an analysis showing that project infrastructure will not impact overburdened communities in a disproportionate fashion.

NEETMA has not performed an analysis showing the impact, if any, that the project may have on overburdened communities. However, NEETMA is proposing upgrades that utilize existing rights of way and involve reconductoring existing transmission lines or adding equipment to an existing substation.

7.6 Applicant's Permitting Plan

Please provide a description of the applicant's permitting plan that includes the following:

- Identify all local, State and/or Federal permits and/or approvals required to build and operate the Project and the strategy and expected time to obtain such permits and/or approvals;
 - Provide documentation of consultation with USACE beach replenishment projects and sand borrow areas, if applicable;
 - Identify all applicable Federal and State statutes and regulations and municipal code requirements, with the names of the Federal, State, and local agencies to contact for compliance;
 - Submit a land use compatibility / consistency matrix to identify local zoning laws and the consistency of applicant's activities in each local jurisdiction;
 - Identify each appropriate State or Federal agency the Applicant has contacted for land acquisition issues and provide a summary of the required arrangements;
 - Include copies of all submitted permit applications and any issued approvals and permits; and
 - Include copies of all filings made to any other regulatory or governmental administrative agency including, but not limited to, any compliance filings or any inquiries by these agencies.
-

NEETMA has not developed a permitting plan as NEETMA will not be responsible for permitting the proposed upgrade projects.