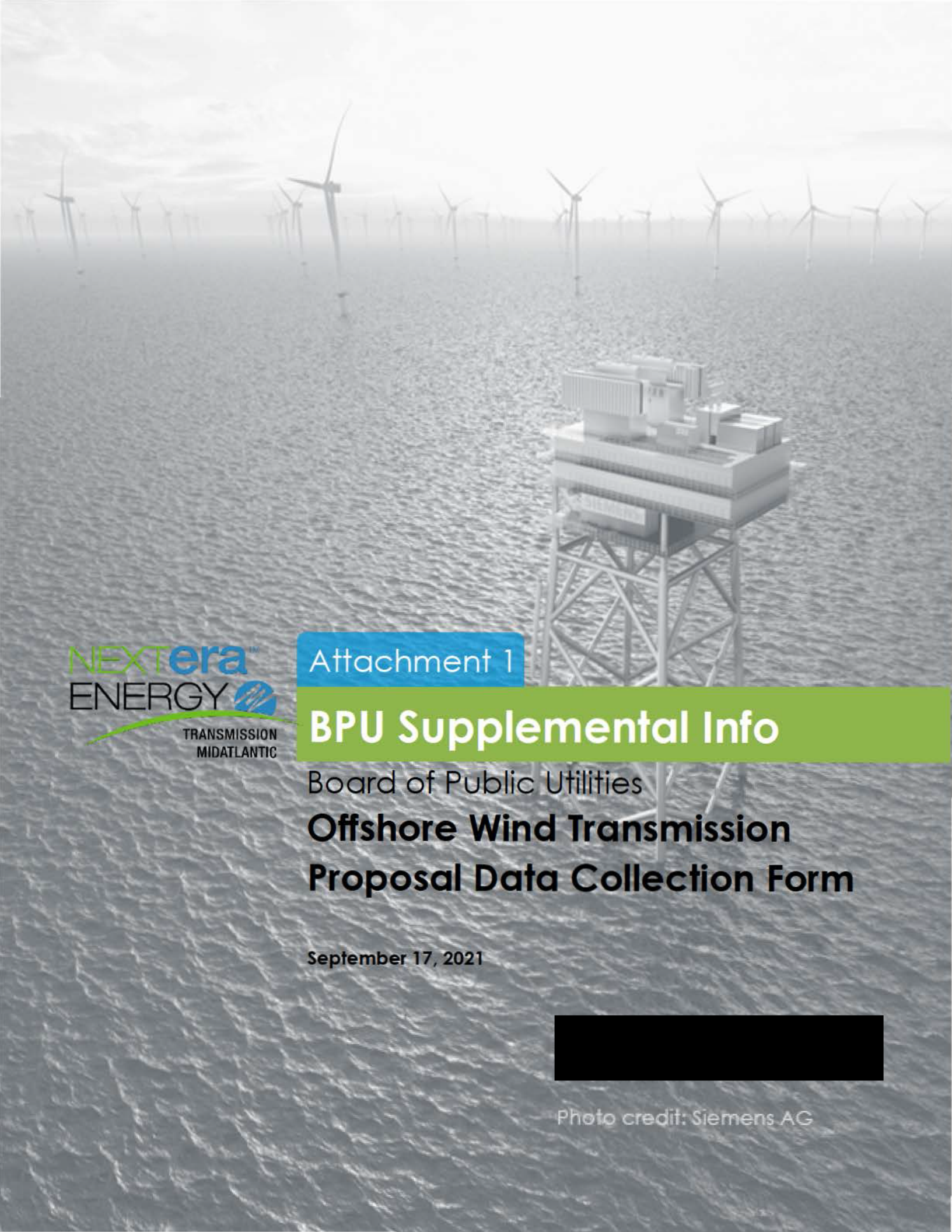

NEXTera ENERGY TRANSMISSION MIDATLANTIC

Attachment 1

BPU Supplemental Info

Board of Public Utilities

Offshore Wind Transmission Proposal Data Collection Form

September 17, 2021

[redacted]

Photo credit: Siemens AG

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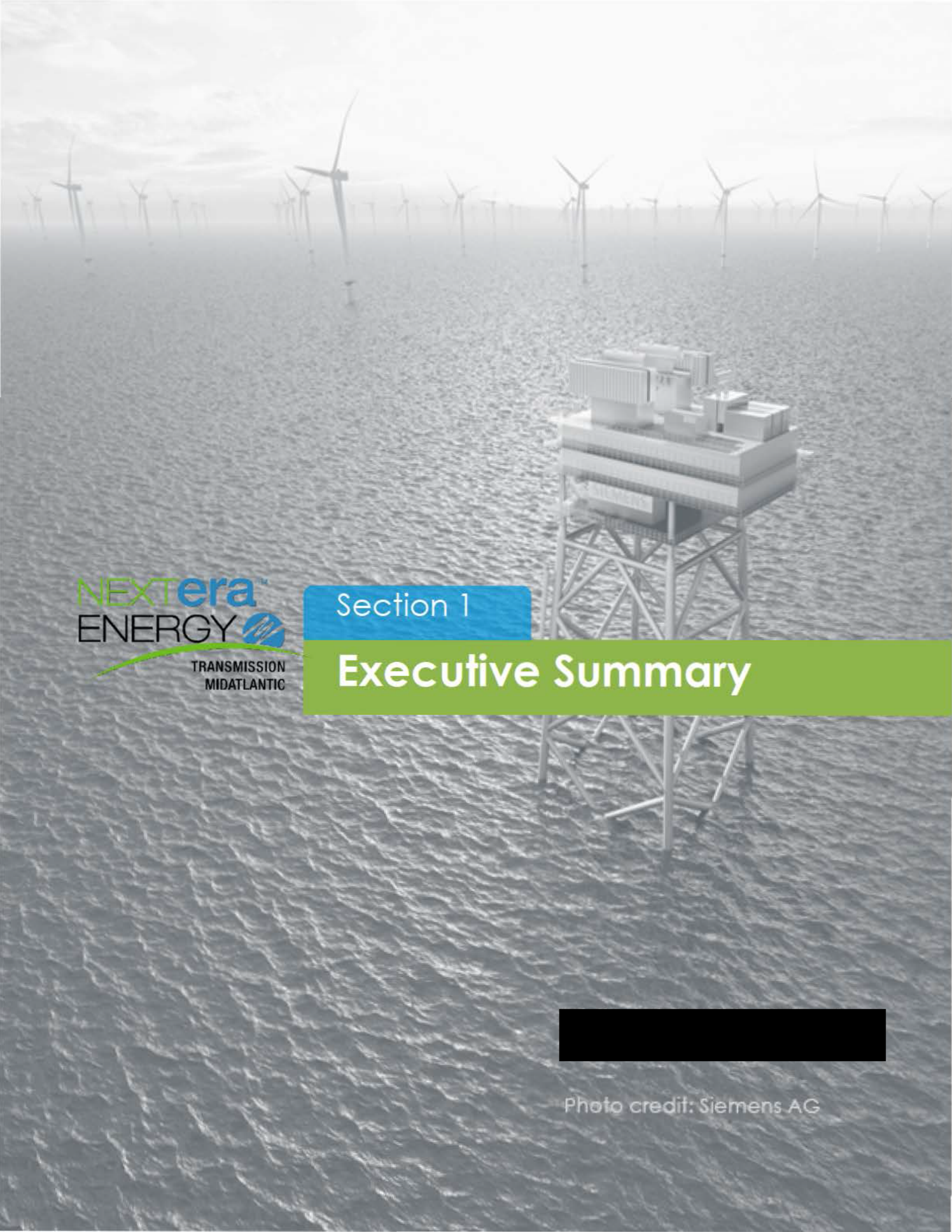

NEXTera ENERGY TRANSMISSION MIDATLANTIC

Section 1

Executive Summary

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Photo credit: Siemens AG

1. EXECUTIVE SUMMARY

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

NEETMA is an indirect, wholly-owned subsidiary of NextEra Energy, Inc. (NextEra). Headquartered in Juno Beach, Florida, NextEra is a leading clean-energy company and one of America's largest infrastructure capital investors in any industry.

~54,727 MW
generating capacity
as of year-end 2020

$128 B
in total assets as
of year-end 2020

~$100 B
infrastructure capital
deployed since 2011

~87,610 miles
of transmission &
distribution lines

~14,900
employees as of
year-end 2020

$18 B
operating revenues
in 2020

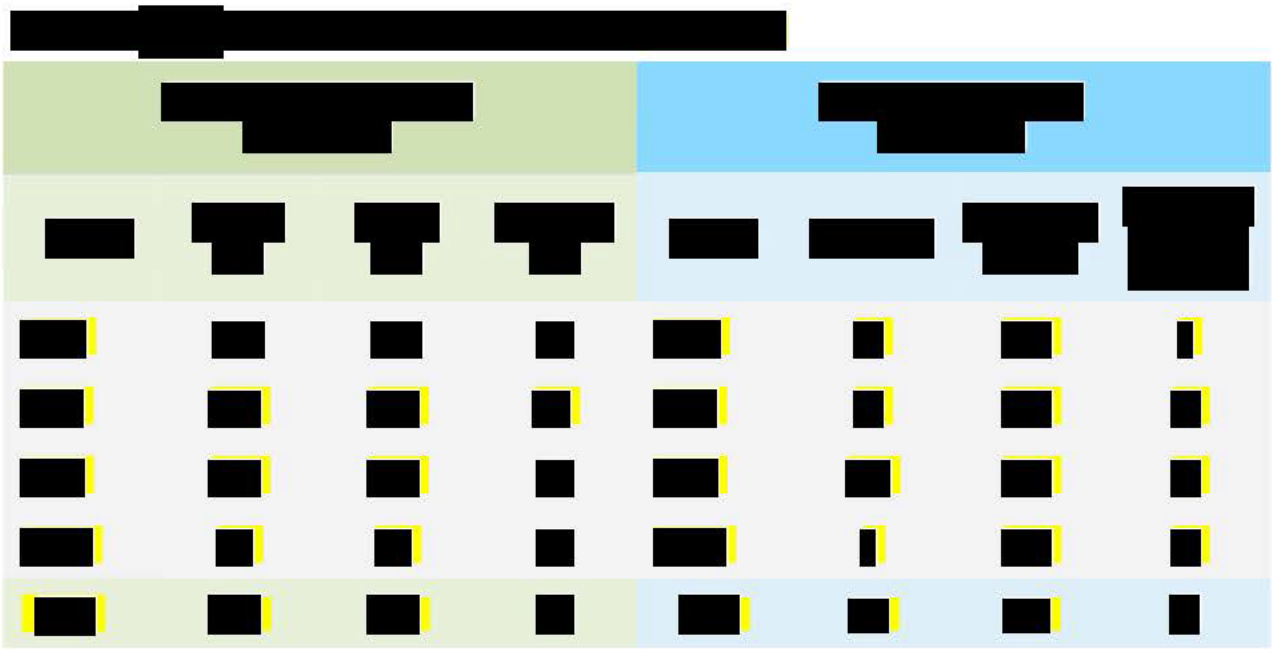
49 states
with operations and
development projects

4 provinces
in Canada with operations
and development projects

NextEra owns Florida Power & Light Company, which is the largest rate-regulated electric utility in the United States and serves more than 11 million residents across Florida with clean, reliable and affordable electricity. NextEra also owns a competitive clean energy business, NextEra Energy Resources, LLC (NEER), which, together with its affiliated entities, is the world's largest generator of renewable energy from the wind and sun and a world leader in battery storage. A Fortune 200 company and included in the S&P 100 index, NextEra has been recognized often by third parties for its efforts in sustainability, corporate responsibility, ethics and compliance, and diversity.

NextEra's financial strength and experience in building large infrastructure projects positions it to be the best partner for New Jersey to deliver these projects on-time and on-budget. NextEra is committed to financial discipline and maintains the strongest balance sheet in the industry. As a demonstration of balance sheet strength, NextEra has an A- credit rating from Standard & Poor's. NextEra will utilize its balance sheet strength to ensure the success of the New Jersey Seawind Connector project.

As the fifth largest infrastructure builder in the United States, not only is NextEra able to deliver on large infrastructure projects, but our track record of delivering significant projects on-time and on-budget is unparalleled in the industry. From 2003 through year-end 2020, NextEra subsidiaries have constructed over $59 billion and 263 new, stand-alone infrastructure projects with every project including a transmission component. An additional strength is the NextEra procurement process and team which manages vendor relationships, leverages economies of scale and secures the most favorable terms. NextEra supply chain capability procures for an approximate $11 billion annual capital program which provides NextEra significant buying power and strong relationships with top vendors in the industry. These relationships during the COVID-19 pandemic enabled NextEra to continue to deliver during times when others had supply chain disruptions. Through NextEra's robust construction and procurement execution track record, NEETMA can offer guaranteed cost and schedule for the NJSC.



To make this project a success for New Jersey customers, NEETMA has provided a robust package of low-cost financing, aggressive cost containment and ability to capitalize on the proposed transmission investment tax credit.

NextEra is regularly in the financial markets and year-to-date has raised more than $9 billion in new capital on very favorable terms. [redacted]

NextEra's confidence in providing this Project at the cost and financing structure has been reflected through an aggressive cost containment structure. [redacted]

[redacted]

NEETMA's unique ability to be a long-term partner is further proven by having demonstrated experience in operating HVDC submarine cable systems. NEET has current investment in 3 out of the 4 HVDC submarine cable systems in operation today in the U.S:

- Owner and operator of Trans Bay Cable (TBC), the world's first commercially operated Modular Multilevel Converter (MMC) Voltage Source Converter (VSC) HVDC technology. TBC provides 40% of San Francisco's power needs on a daily basis.

- 49% stake in PowerBridge, the developer and operator of two HDVC submarine and underground systems. The Neptune project connects New Jersey to New York's Zone J and Hudson project connects New Jersey to New York's Zone K.

No one has the demonstrated experience and expertise to rival NextEra on HVDC submarine system in the U.S. market, including NJ and NY. For more information please see **Attachment 17**.

Finally, NEETMA went through a meticulous effort to ensure the proposals provided viable and flexible solutions for New Jersey. To ensure all possible combinations were explored, the evaluation combed through all possible interconnections and identified 19 potential locations. Based on initial powerflow studies and desktop analysis the 19 locations were prioritized to 10 top injection points. An extensive analysis ensued that ranked the injections sites based on the BPU selection criteria. This included thousands of planning studies and their related upgrade cost and in-person field visits. This process allowed NEETMA to identify Cardiff, Oceanview and Deans as the preferred set of solutions. These solutions provide significant savings and are less impactful to the environment versus building individual generation tielines for each New Jersey wind solicitation. Further information on the study process is included in Section 1.2 and discussion on Project benefits is included in Section 4.

After the proposals were designed to meet all applicable PJM reliability criteria, NEETMA went through a ranking process using BPU's key selection criteria, to propose the most impactful and cost-effective Projects. As an example, NEETMA has eliminated AC injection proposals due to the environmental and cost impacts of AC construction as further described in Section 3.1. The resulting Projects were extremely robust and meet the following BPU key criteria:

Cost	• Extremely cost effective versus individual gen-ties • Low cost structure and financing strategy • Aggressive cost containment measures • The ability to achieve investment tax incentives
Constructability	• HVDC design is used around the world • Utilizes construction techniques permitted by DEP • Utilizes site control and primarily public land for rights-of-way • Routes vetted through field visits, DEP and municipal consultation
Schedule	• Optimized schedules to maximize construction efficiency • Commitments from key vendors supporting project schedule • Schedule in advance of BPU solicitation dates • Meaningful schedule guarantees
Optionality	• Three injection points optimized for cost and injection levels • Solutions can be mixed and matched • Varying levels of injection capabilities • The ability to exceed New Jersey's offshore wind targets
Environmental	• HVDC reduces environmental impacts verses AC design • Incorporated feedback from Federal and State consultations • Single construction periods can achieve high injection levels
Benefits	• Schedule significantly reduces project-on-project risk • Market analysis indicates capacity and energy benefits in excess of the transmission cost

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.

NEETMA has identified the platform and injection combinations by site. Table 1.2-1 summarizes the proposals, platforms locations and technology for each proposal. Figure 1.2-1 contains a map of the platforms and routes.

Table 1.2-1 Summary of NEETMA Proposals

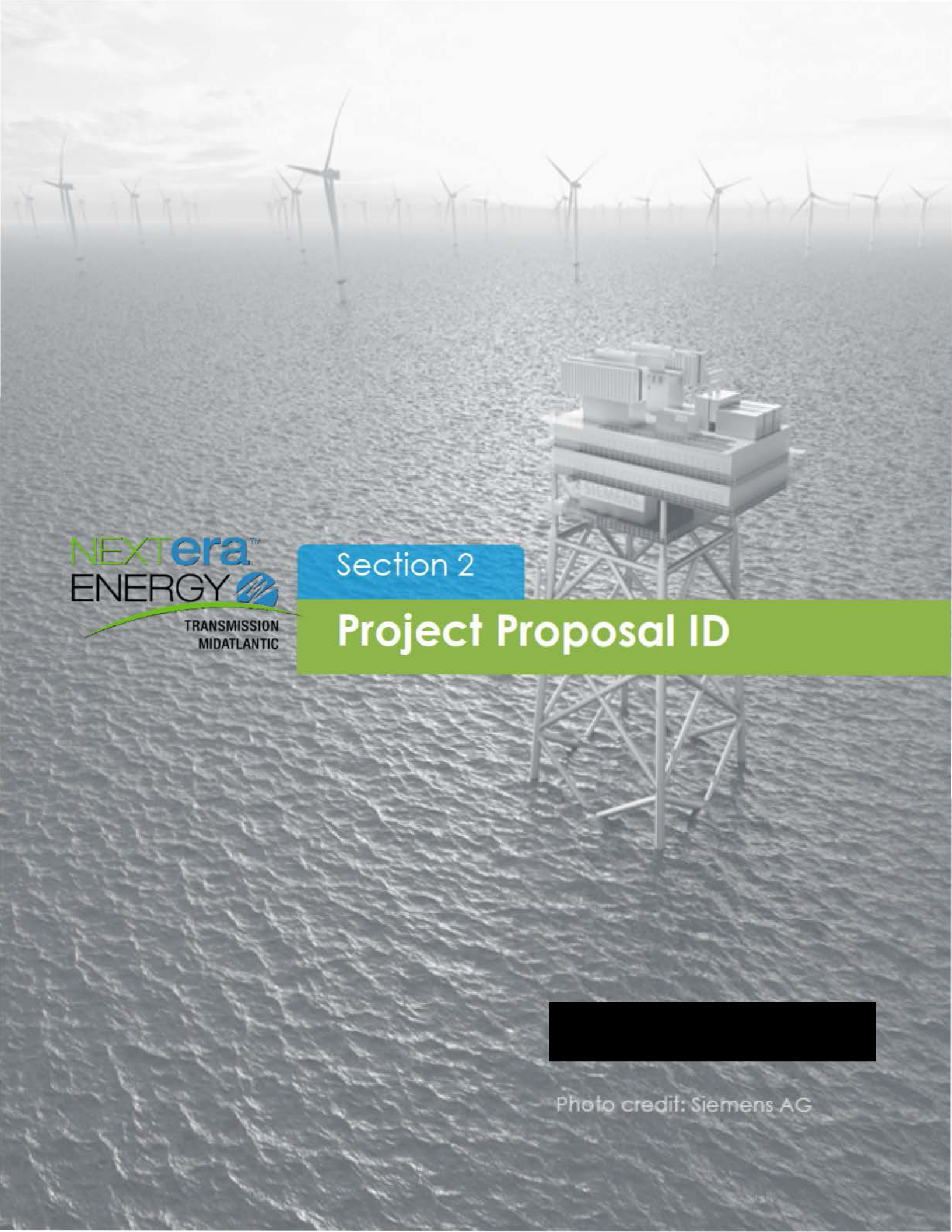
Proposal	Injection Location	Injection Amount (MW)	Potential Offshore Platform Pairings	Project Description
2-D60	Deans 500 kV	6,000	Hudson South Platforms A, B, C, D	Four 1,500 MW HVDC symmetrical monopoles
2-D45	Deans 500 kV	4,500	Hudson South Platforms A, B, C	Three 1,500 MW HVDC symmetrical monopoles
2-D30	Deans 500 kV	3,000	Hudson South Platforms A, B	Two 1,500 MW HVDC symmetrical monopole
2-O30	Oceanview 230 kV	3,000	Hudson South Platforms A, B	Two 1,500 MW HVDC symmetrical monopole
2-O24	Oceanview 230 kV	2,400	Hudson South Platforms A, B	Two 1,200 MW HVDC symmetrical monopole
2-O15	Oceanview	1,500	Hudson South Platform A	One 1,500 HVDC symmetrical monopole
2-C27	Cardiff 230 kV	3,000	New Jersey Coast Platforms E, F	One1,200 MW HVDC symmetrical monopole and one 1,500 MW HVDC symmetrical monopole

Figure 1.2-1 NEETMA Proposals

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.



NEXTera ENERGY TRANSMISSION MIDATLANTIC

Section 2

Project Proposal ID

[redacted]

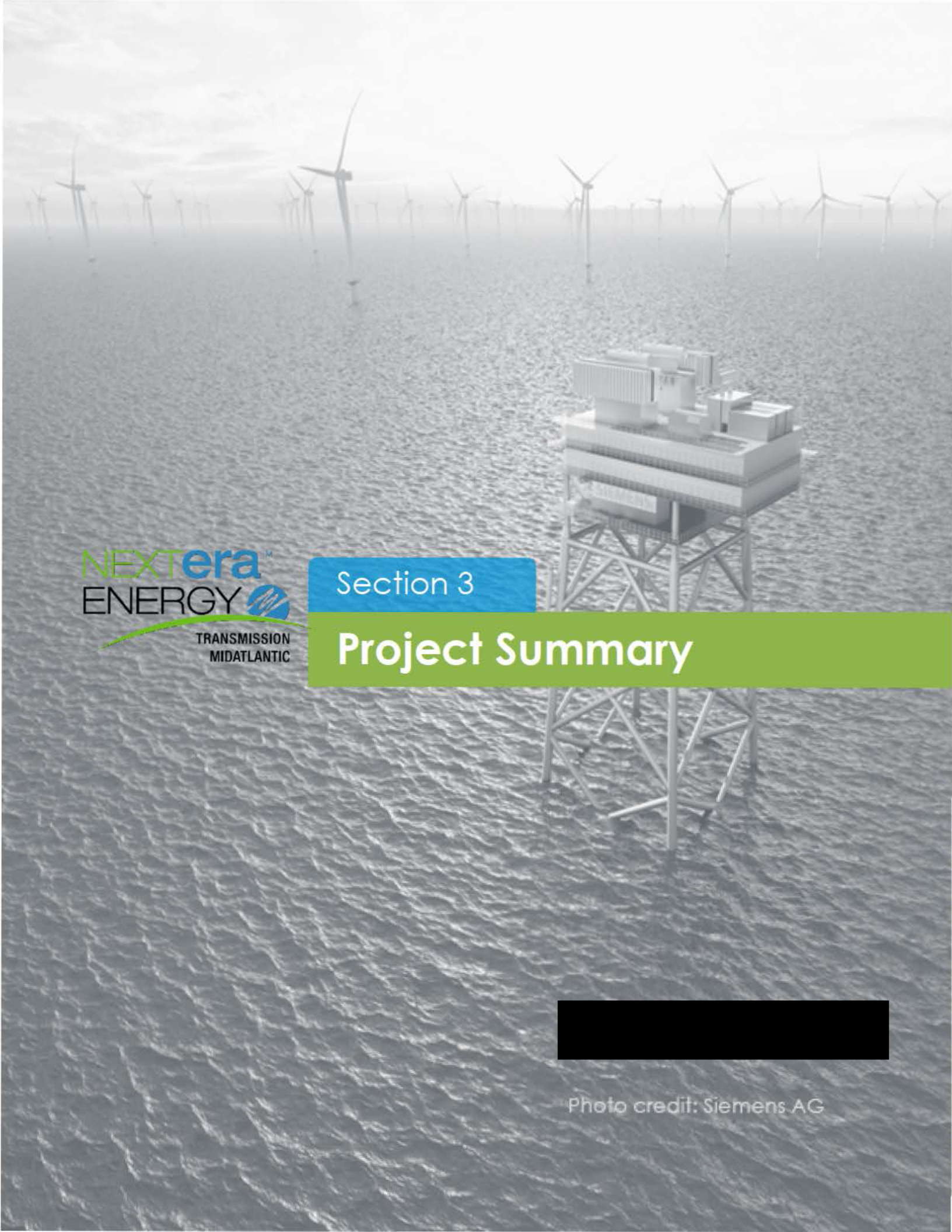
Photo credit: Siemens AG

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:	**2-D60**
	2-D45
	2-D30
	2-O30
	2-O24
	2-O15
	2-C27
Project Title:	**Deans 6,000 MW Project**
	Deans 4,500 MW Project
	Deans 3,000 MW Project
	Oceanview 3,000 MW Project
	Oceanview 2,400 MW Project
	Oceanview 1,500 MW Project
	Cardiff 2,700 MW Project
PJM Proposal ID:	**2021-NJOSW-250** (for 2-D60) **2021-NJOSW-860 (for 2-D45)** **2021-NJOSW-461 (for 2-D30)** **2021-NJOSW-15 (for 2-O30)** **2021-NJOSW-298 (for 2-O24)** **2021-NJOSW-27 (for 2-015)** **2021-NJOSW-604 (for 2-C27)**



NEXTera ENERGY TRANSMISSION MIDATLANTIC

Section 3

Project Summary

[redacted]

Photo credit: Siemens AG

3. PROJECT SUMMARY

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's Deans HVDC 4,500 MW proposal (also referred to herein as "2-D45") provides a unique solution to the PJM Problem Statements because it offers the state of New Jersey the opportunity to exceed its policy objective of procuring 7,500 MW of OSW through one injection site while avoiding the need for beach landings. The Deans site was chosen through meticulous planning scenarios which indicate that the site is capable of large injections with minimal upgrades to the existing system. Unlike other landing sites near the Hudson South lease area, Deans is unique in its ability to handle large injections in a cost-effective manner because of its connection to the 500 kV system. In addition to its 4,500 MW proposal, NEETMA is providing two additional options for Deans, which leverage capability: 1) 6,000 MW and 2) 3,000 MW. Additionally, NEETMA has analyzed and can offer an alternative HVDC design at 1200 MW; however, a 1200 MW design is ultimately less cost effective on a dollar-per-MW basis, while having the same land and right-of-way requirements.

The 2-D45 proposal will utilize a single injection point at Deans 500 kV substation. The 2-D45 proposal is the second largest single injection NEETMA proposes in its suite of offerings. This proposal:

- Exceeds New Jersey's target of 7,500 MW offshore wind goal by enabling the procurement of 4,500 MW of OSW from a single site, which results in a potential total procurement capability of 8,258 MW
- Significantly minimizes environmental and marine impacts by avoiding a beach landing and requiring only one landing
- Utilizes 100% public right of way to minimize impacts to private landowners and provide certainty of constructability
- Minimizes community impacts by only requiring one construction period for terrestrial routes utilizing a single duct bank to contain multiple HVDC monopole systems

[redacted]

NEETMA chose to utilize DC technology to minimize environmental, community, cost and constructability challenges. The most significant differences between DC and AC technologies were the cables and the reactive support required. The AC cable requirements would have required significantly wider ROWs, which would have resulted in increased disruption of communities during the terrestrial routing as well as environmental disturbances. The AC cable requirements also would have required multiple beach landings as the cables cannot transfer as much power as a DC line, and therefore, also would have required more cable landings. The table below outlines the benefits of using DC technology over AC construction for a 4,500 MW installation:

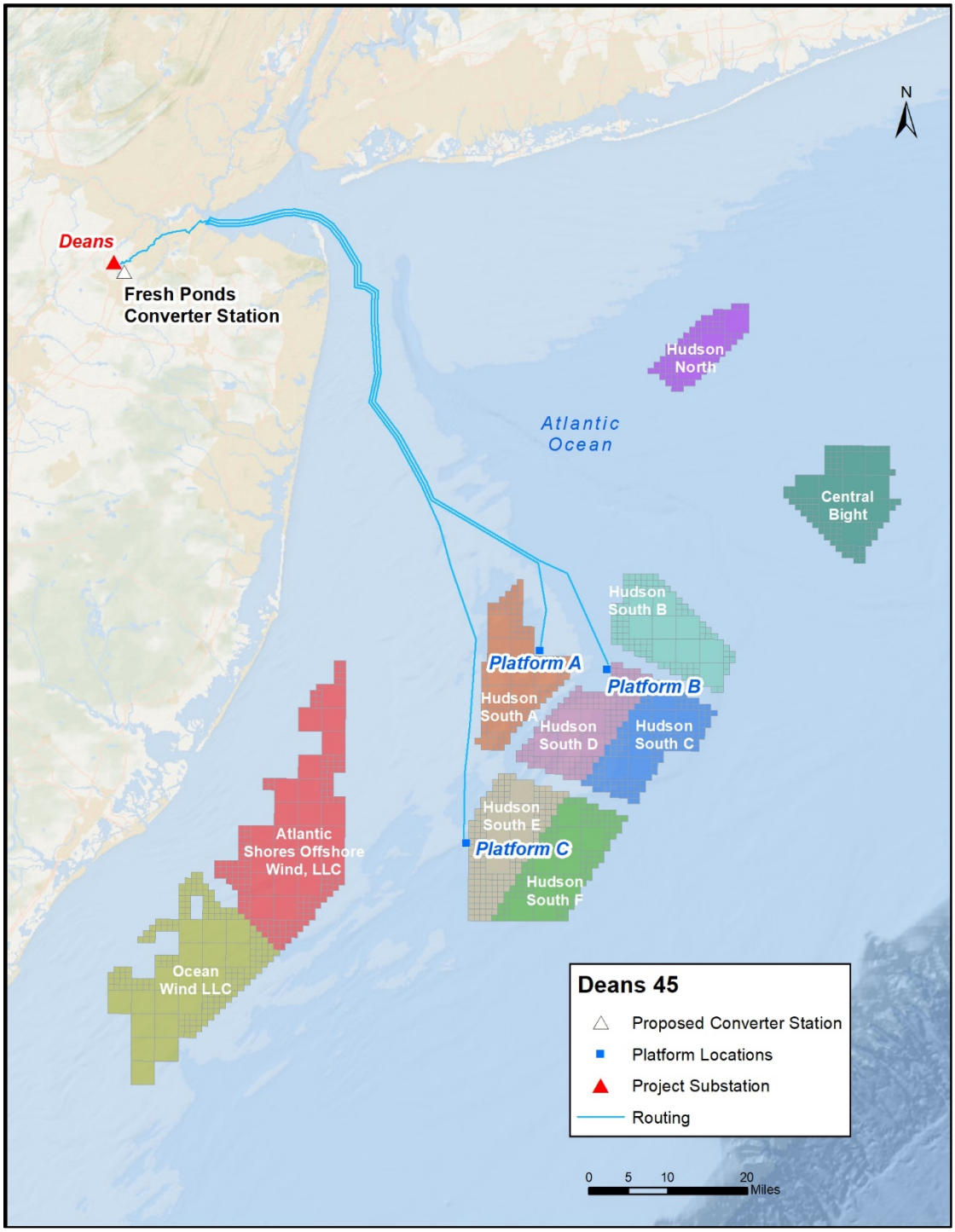
Table 3.1-1 Benefits of Using DC Technology

	DC Technology	AC Technology
Cables Required	3 Symmetrical Monopoles	12 230 kV Tri-Core Cables
Offshore trenches required to install cables	3	12
Typical Offshore ROW required	~150 meters	~600 meters

From the Hudson South lease area, the platforms and routing were designed to minimize environmental impacts and provide close interconnection locations for wind developers to minimize the cost of future wind connections. NEETMA conducted an environmental desktop study as part of the site selection and routing study to identify potentially sensitive resources to avoid and to minimize impacts from routing and offshore site selection.

NEETMA has identified required system upgrades in proposal 1A-D45 that are required to reliably inject 4,500 MW at Deans into the PJM system. A list of all upgrades identified are included in **Attachment 2D**.

Figure 3.1-1 Deans Project Location



[redacted]

[redacted]

[redacted]

- Mitigates cost and risk uncertainty for future OSW developers by eliminating the need to permit and construct new and lengthy transmission lines, thereby resulting in a more streamlined development and interconnection process

[redacted]

- Allows the state of New Jersey to sooner realize the benefits of participating in energy and capacity markets

Under our proposal, each subsequent 1,500 MW will be placed in-service approximately 6 to 8 months following completion of the previous segment. NEETMA believes this to be the most cost-effective approach because it will allow construction crews to work continuously from one platform to the next and install the terrestrial cables simultaneously. NEETMA submits that this approach maximizes construction synergies and reduces project-on-project risk through the construction of a robust transmission backbone to which interconnections can be made to meet OSW developer needs. NEETMA commits to work with BPU to ensure that the proposed in-service date of each 1,500 MW HVDC symmetrical monopole system aligns with BPU's needs and will modify the proposed in-service schedule, as necessary, to align with future OSW solicitations. Additionally, if NEETMA is awarded multiple projects, NEETMA will revise its proposed schedule to match BPU's needs for the additional projects. A detailed schedule for the proposal has been provided in **Attachment 11**.

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 provided a total of 8 different injections levels at three different injection points for PJM and BPU's consideration. The various injection levels include the following interconnection points: The Deans 500 kV, Oceanview 230 kV and Cardiff 230 kV systems. In addition, NEETMA has also identified six offshore platform locations targeting the New Jersey Coast and Hudson South BOEM lease areas.

Targeting the three key injection points has allowed NEETMA to provide 31 different combinations that cost-effectively meet or exceed New Jersey's OSW goals. NEETMA's proposal provides flexibility to mix and match the injection options and offshore platform locations to create different combinations to satisfy varying levels of injection capability – for example, combining Deans 6,000 MW, Oceanview 3,000 MW and Cardiff 2,700 MW (2-D60, 2-O30, 2-C27) for a total of 11,700 MW of injection capability. Additionally, NEETMA has tested and provided the study results, as detailed in Section 3.3, that demonstrate that the outlined upgrades to the existing transmission system can accommodate all the combinations.

As discussed in the Section 5, each of the individual costs of each proposal would be added to determine the total cost under that scenario. As a result of expected efficiencies to be gained through constructing multiple projects, NEETMA proposes to apply a 5% discount to the total cost, which would serve to reduce NEETMA's proposed cost cap by 5%.

NEETMA has studied and recommends two potential combinations as a result of the reliability needs they will address and the market benefits they will provide. The two combinations are:

- **Combination:** 2-D45, 2-C27, and 1A-WILEY3: This project combines two different injection points, 2-D45 and 2-C27, (as well as necessary upgrades as discussed in section 3.3.)
- **Combination:** 2-D30, 2-O15, 2-C27 and 1A-WILEYY3: This project combines two different injection points, 2-D30, 2-O15 and 2-C27, (as well as necessary upgrades as discussed in section 3.3.)

The resulting proposed cost cap of the combination projects, projected revenue requirements, reliability benefits, and market benefits are provided in **Attachment 18**.

The combination of potential options is provided below:

Table 3.2-1 Matrix of Total MW Injection Capability of Different NEETMA Proposal Combinations

		Deans Options							
		-	2-D30	2-D45	2-D60	-	2-D30	2-D45	2-D60
Oceanview Options	-	0	3,000	4,500	6,000	2,700	5,700	7,200	8,700
	2-O15	1,500	4,500	6,000	7,500	4,200	7,200	8,700	10,200
	2-O24	2,400	5,400	6,900	8,400	5,100	8,100	9,600	11,100
	2-O30	3,000	6,000	7,500	9,000	5,700	8,700	10,200	11,700
		-	-	-	-	2-C27	2-C27	2-C27	2-C27
		Cardiff Options							

As demonstrated above, the state of New Jersey can significantly exceed its OSW goals by choosing multiple proposals. For example, under the Dean's 6,000, Oceanview 3,000 and Cardiff 2700 combination, NEETMA can provide 11,700 MW of offshore wind capability, and when combined with the Ocean Wind 1 award, New Jersey could obtain 12,800 MW of OSW which is 5,300 MW more than the current goal. These combinations also allow New Jersey to maximize the availability of OSW in the Hudson South BOEM lease area by bringing 9,000 MW of OSW from an area capable of 10,000 MW. As discussed further in the benefits section, 9,000 MW of OSW capability is projected for peak hours. The remaining 1,000 MW could be used to increase the utilization of the transmission system during non-peak hours.

Option 3 Sequencing

Through these proposals, New Jersey is provided the option of sequencing the various proposals. Through the Notice to Proceed (NTP) provisions offered by NEETMA, the BPU has the option to begin construction at a time that aligns with its needs. For example, if BPU chose both the Oceanview and Deans solutions, the Deans timing could be delayed allowing the Oceanview solutions to be procured first. As discussed in **Attachment 9**, a slight annual escalation would be applicable to the cost cap for a shift in the NTP.

Option 4 Redundancy Through Platform Connections

As part of Problem Statement 3, NEETMA has offered connections between platforms to improve redundancy in a cost-effective manner. As shown in Figure 3.2-1 below, the connections will interconnect the platforms in the ocean providing a redundant path to reroute power in the event of an outage of one of the HVDC symmetrical monopole systems to Deans, Oceanview, or Cardiff. Additional details are provided in NEETMA proposal 3-PC for Problem Statement 3.

Option 5 Adjustments to Platforms

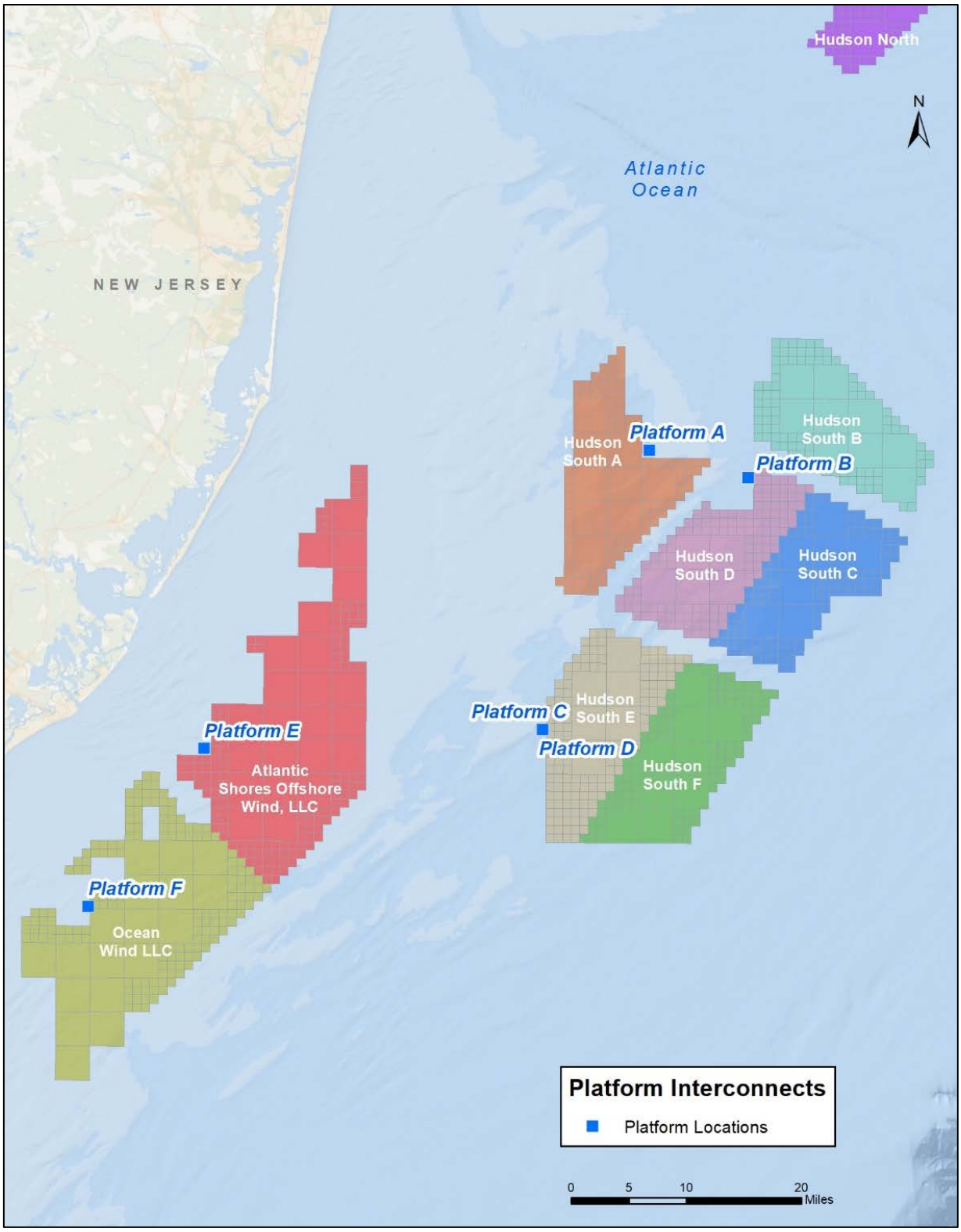
The current selection of platforms locations included in this proposal were designed to reach the most OSW with the closest interconnections. This option allows the location of the offshore wind platform locations to be adjusted based on the BPU procurement selections. NEETMA believes the most cost-effective option is to locate the offshore converter station platform as close to the BOEM lease areas to minimize costs for OSW developers which in turn benefits New Jersey customers. Since it is not known which lease areas will be selected by BPU in future offshore wind solicitations, NEETMA anticipates that final location of the offshore platform can be further optimized based on New Jersey's selections.

For example, NEETMA for its Oceanview 1,500 MW project, has assumed that the project would connect to platform A as identified in Figure 3.2-1 below. It is possible that BPU awards an offshore wind project that is much closer to Platform D. As a result, leaving the proposed Oceanview 1,500 MW design to connect to Platform A results in an inefficient design since the generator will have to route and permit multiple, longer gen-ties to connect to Platform A. This means more costs and marine impacts of not having the platforms optimally placed.

[redacted]

Additionally, NEETMA points out that Platforms E and F, which are proposed in conjunction with the Cardiff 2700 MW proposal, are located near the New Jersey Coast lease area. This is because those platforms are located specifically to address the recent awards for Atlantic Shores and Ocean Wind 2 projects. While not much public information has been made available of the designs of those projects, the platform locations can be further optimized in conjunction with the generation developers to optimize routing, permitting, and costs for the benefit of New Jersey.

Figure 3.2-1 New Jersey Offshore Platform Interconnects



Construction Modularity

Finally, NEETMA's proposal offers modularity in that the proposed 1,200 MW or 1,500 MW HVDC systems can be installed in phases. This is because each of NEETMA's proposed injection sites share a common terrestrial route. For example, a Deans 6,000 MW injection would require four 1,500 MW symmetrical monopoles, but all four pairs of cables could be installed in the same duct bank. While it is more cost-effective to install all four pairs of cables at the same time the duct bank is installed, which is what the proposal considered, NEETMA could install only a pair of cables, energizing only one 1,500 MW HVDC system initially. With the duct bank installed, and designed to handle additional cables, NEETMA would be able to come in later and pull a second, third, or fourth cable through the duct bank with minimal construction disruption. At the same time as the cable is pulled through the terrestrial duct bank, NEETMA would install both the offshore second, third, or fourth offshore cables and onshore/offshore converter stations. This allows BPU flexibility to choose an installation schedule that does not require construction of all the HVDC systems concurrently. While extending the schedule does result in construction inefficiencies, which increases the overall cost of the project, it also means that BPU can defer large capital expenditures until BPU determines the number of offshore wind generation projects it will pursue.

This flexibility is also inherent in the Oceanview and Cardiff proposals, each of which includes a terrestrial route that can accommodate multiple HVDC cables in the same duct bank. Currently, NEETMA has proposed that each 1,200 MW or 1,500 MW system be installed in series, approximately 6 to 8 months apart to provide maximum savings to New Jersey in the form of construction efficiencies. However, NEETMA is open to modifying this proposed schedule if requested by BPU.

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** upgrade proposals are specific proposals which address the thermal near the Peach Bottom – Conastone 500 kV substation, Furnace Run 230 kV substation, and Hope Creek 230 kV substation.

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. NEETMA has identified two potential combinations and provides further discussion in **Attachment 18**.

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.

NEETMA's Deans 4,500 MW option provides significant benefits to New Jersey customers. From a customer cost perspective, Deans provides a competitively priced option to deliver OSW under a schedule that exceeds New Jersey's current goals. As discussed further in Section 5, NEETMA designed the revenue requirement to maximize the savings to retail customers by providing competitive cost of capital parameters and cost containment. NextEra's financial strength and the ability to construct, operate and deliver these benefits to New Jersey is unparalleled in the industry.

The overall Project was designed to maximize wind injection at the lowest cost, provide reliable service and minimize environmental and community impacts. Several key design decisions were made to accomplish those goals including those shown in the table below:

Table 3.4-1 Several Key Design Decisions

1	Plan construction sequencing that maximizes construction synergies and minimizes environmental and community impacts
2	Utilize HVDC technology for construction and reliability benefits
3	Locate platforms near BOEM offshore wind areas to reduce OSW developer costs of building generation ties to the platforms
4	Locate platform connections near the BOEM lease areas to minimize cost while providing reliability

There are also significant benefits of Deans 4,500 MW, which is only one project, when compared to the alternative of constructing three different gen-tie solutions. From this perspective, Deans 4,500 offers the following benefits:

- A landing that does not require crossing a beach
- One landing as opposed to three different landings which minimizes the impacts to beaches, communities and the environment
- Reduces the interconnection risks to cost and schedule for potentially three different OSW developers which results in reduced cost for New Jersey in soliciting OSW

[redacted]

- The ownership of the gen-ties stays with the generators whereas the SAA approach provides this transmission capacity to the state of New Jersey for future solicitations. [redacted]

[redacted]

- By utilizing platform connections, the transmission system can be optimized to limit the impact to wind farms for outages in a way that cannot be achieved by a single gen-tie. For example, the Deans 4,500 MW solution would allow one converter to be a planned outage while the other two converters and cable paths would remain available. The outages could be timed to coincide with lower offshore wind time periods so that little or no OSW curtailment would be required.

- Reduced construction risk of having one construction period with one developer verses three different construction projects with potentially three different OSW developers

- Maximized use of New Jersey land as a result of siting all converter stations on a single parcel

- Maximized usage of an interconnection point that requires minimal upgrades and therefore reduces potential cost overruns on upgrades to the existing transmission network

- Lower environmental impacts, community impacts and construction carbon footprint due to the efficiencies of performing the terrestrial duct bank installation

- As discussed in Section 3.1, utilizing DC reduces the cable size significantly as compared to AC. If three different OSW developers used AC, the amount of land and ocean disturbances could potentially increase by 3 times. DC provides significant benefits related to construction risk and reducing environmental impacts.

[redacted] Reducing this project-on-project risk will reduce risk for OSW developers and result in more competitive offerings to New Jersey. This design also allows a significant amount of phasing of wind generation. As connecting to the grid is usually a critical path item during construction, eliminating that constraint allows wind plants to begin to connect as they are available. Wind can begin to connect as groups of plants become available. These factors should accelerate New Jersey's ability to procure OSW.

Deans provides a reliable design by utilizing HVDC VSC technology and proposing upgrades to allow 4,500 MW of injection. The upgrades are described in Section 4.2. One of the key design features of the Project was utilizing DC instead of AC. HVDC VSC adds to the reliability and operability of the PJM system by having the capability of providing reactive support, have significantly fewer losses compared to an AC cable, therefore ensuring the deliverability of more renewable energy to New Jersey and a higher level of control over power and reactive needs for the overall system.

Other benefits afforded by the project include:

- A route that utilizes 100% publicly owned property which reduces schedule risk of condemning property and community impacts of utilizing residential or commercial properties
- Construction and operations jobs for New Jersey
- Ability to construct in phases, to mix and match amongst NEETMA's proposal to achieve varying levels of offshore wind injection, further discussed in Section 3.2
- Market benefits as described in Section 4.3

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 is committed to the Project's success [redacted]

[redacted]

Upon award, NEETMA will immediately work with the BPU to hedge equipment and materials pricing. Through NextEra's long-standing relationships with vendors, NEETMA can lock in pricing and set procurement schedules. NEETMA will work with the BPU to define any schedule or project changes and procure the equipment such that major project costs are locked in as soon as practicable. Additionally, NEETMA is prepared to take other steps upon award to ensure efficient project execution:

- Confirm with Board of Public Utilities on any proposed design or schedule changes desired of the proposal
- Work with incumbent transmission owners to coordinate design requirements and required transmission outages in order to reliably connect the proposed project
- Work with offshore wind developers to ensure offshore platform design and location is optimized
- Coordinate closely and regularly with state and federal agencies to ensure timely approval of required permits to minimize project on project risk
- Expand public outreach and communications efforts to all interested and impacted stakeholders

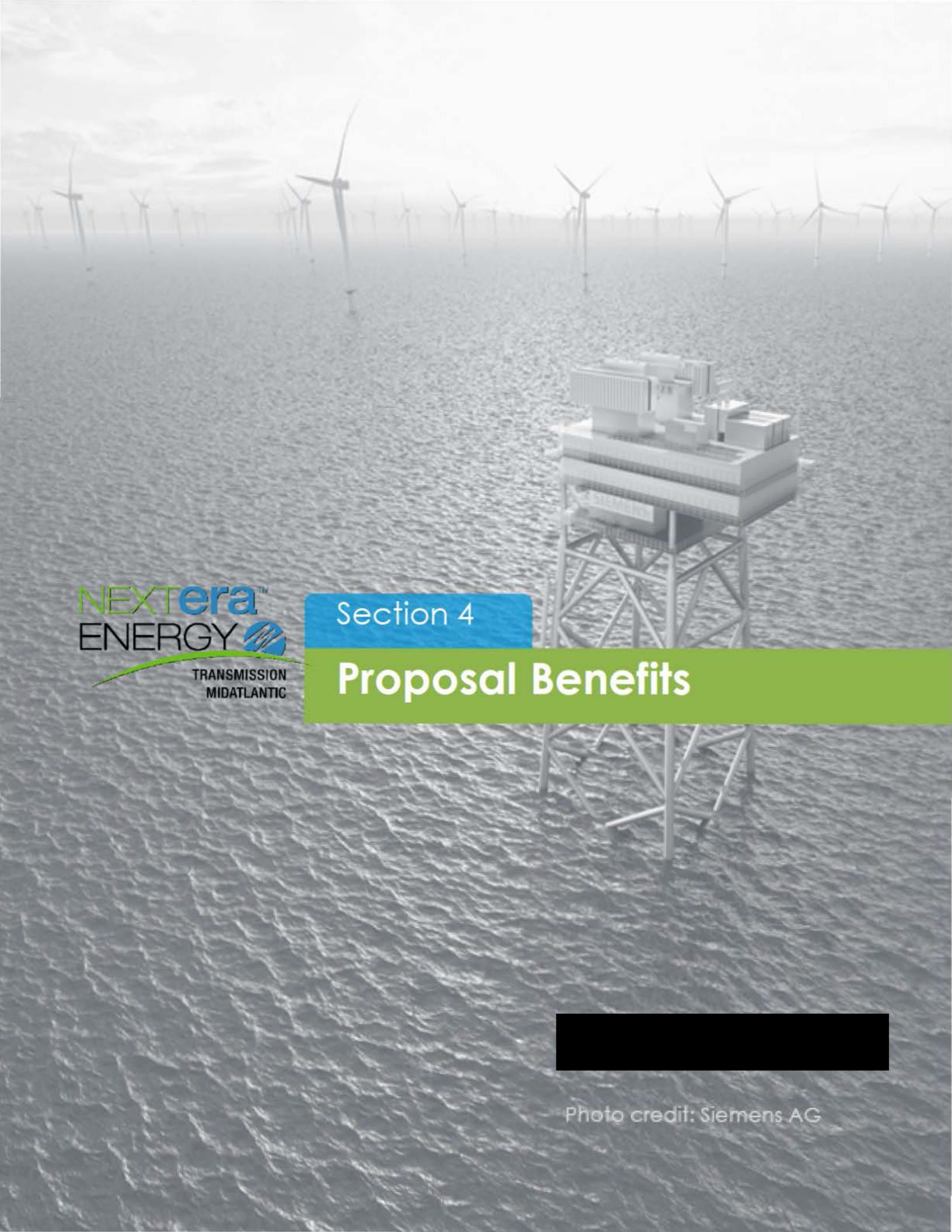
NEETMA has provided a more detailed project risk matrix as **Attachment 13**.

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.

NEETMA is proposing a cost cap and cost containment provisions that will minimize impacts to New Jersey customers. The proposed cost containment language that NEETMA is committing to include in PJM's Designated Entity Agreement, if selected to construct the project, is provided as **Attachment 9**. The proposed containment provisions NEETMA will guarantee is as follows:

[redacted]



NEXTera ENERGY TRANSMISSION MIDATLANTIC

Section 4

Proposal Benefits

[redacted]

Photo credit: Siemens AG

4. PROPOSAL BENEFITS

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's proposals have been developed to ensure that each injection can be reliably interconnected to the grid. NEETMA conducted multiple reliability studies to identify necessary upgrades to allow each proposal to be injected reliably. The corresponding upgrades and how they pair up with NEETMA's proposed injection locations is discussed in Section 3.3, Interdependency of Options. In addition, the list of upgrades associated with this proposal is provided as **Attachment 2C**, which also identifies the flowgate issue the upgrade is addressing. A detailed report of the studies conducted and the results of the studies is provided in **Attachment 2A**. A summary of the studies is provided below in Table 4.1-1 and 4.1-2:

Table 4.1-1 Analysis Performance

Study	Gen Deliv			2035			N-1-1 (TVMT, VDT)				N-1 &FERC 715			Stability		Short Circuit	Must-Run Unit impact	Generator Deliverability 100% and 125% Sensitivity	Load Deliverability Test (CETL)
Matrix Reference	S	W	L	S	W	L	S	W	S	W	S	W	L	S	L				
2-D60	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
2-D45	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
2-D30	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
2-O30	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
2-O24	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
2-O15	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
2-C27	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
2-DC 45-27	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
2-DOC 30-15-27	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	C	C	C
S	Summer																		
W	Winter																		
L	Light Load																		
√	Meets PJM Generator Deliverability Criteria and network upgrades proposed in document 1A																		
✓	Any overloads identified and network upgrades proposed in document 1A																		
C	Analysis completed and values repored in attachment 2A																		
TVMT	Thermal and Voltage Magnitude Test N-1-1 study per PJM Manual 14B																		
TVMT	Thermal and Voltage drop test N-1-1 study per PJM Manual 14B																		

Table 4.1-2 Reliability Benefits Metrics

Matrix Reference	Reduction in Must Run by	special operating procedures	Common Mode	Islanding	Power Quality degradation
2-D60	●	●	✓	●	●
2-D45	●	●	✓	●	●
2-D30	●	●	✓	●	●
2-O30	●	●	✓	●	●
2-O24	●	●	✓	●	●
2-O15	●	●	✓	●	●
2-C27	●	●	✓	●	●
2-DC 45-27	●	●	✓	●	●
2-DOC 30-15-27	●	●	✓	●	●
●	Expect no adverse impact				
✓	Meets ommon mode studied per PJM Gen Deliv criteria				

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 overall Project was designed to maximize wind injection at the lowest cost, including reducing the total overall cost of both the transmission and generation interconnection facilities for offshore wind. In addition, the proposal allows BPU to exceed its offshore wind goals in a cost effective and environmentally efficient manner. Several key design decisions were made to accommodate those goals including:

- Three 1,500 MW HVDC symmetrical monopole systems that have flexible construction sequencing that will maximize construction synergies and minimizes environmental and community impacts.
- Utilizing HVDC technology for construction and reliability benefits.
- Locating platforms near BOEM offshore wind areas to reduce OSW developer costs of building generation ties to the platforms
- Locating the platform connections near the BOEM lease areas to minimize cost while providing reliability
- Constructing one landing as opposed to three different landings which minimizes the impacts to beaches, communities and the environment.
- Reduces the interconnection risks and cost uncertainties for potentially three different OSW developers which results in reduced cost for New Jersey in soliciting OSW.
- Reduces construction risk associated with three different construction projects with potentially three different developers.
- Maximizes use of New Jersey land by putting all converter stations on a single parcel.
- Maximizes usage of an interconnection point that requires minimal upgrades and therefore reduces potential cost overruns on upgrades to the existing transmission network.

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 performed extensive analysis to identify the benefits of the proposed project, which are summarized in Table 4.3-1 below. The savings in the table below are measured in comparison to a scenario where only Ocean Wind 1 is delivering power to New Jersey. NEETMA has also included the benefits of two potential combinations of NEETMA's proposals. Additional details of studies performed as well as the benefits for each proposal can be found in **Attachment 2A**.

[redacted]

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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Section 5

Proposal Costs

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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

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[redacted]	[redacted]
[redacted]	[redacted]

[redacted]

NEETMA has provided additional cost detail in **Attachment 8** and **Attachment 10.**

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 uses a standardized, thorough methodology for calculating constructions costs. Estimates are based on its significant construction knowledge, extensive database of supplier costs, and close relationships with vendors.

Market conditions and commodity pricing are consistently changing. Through NEETMA's culture of constantly capturing lessons learned and implementing improvements, the company has incorporated construction knowledge gained through decades of experience, enabling it to deliver projects on budget and on time.

For this power transmission project scope, main installation elements are included when developing project costs. These elements included, but are not limited to items such as, land clearing, foundation, and structure installation, stringing of overhead conductors, trenching, duct bank installations, laying and horizontal installations in subsurface or subsea conditions. Other special scope items included may consist of items such as crossings of water, rail, road, pipeline, and other existing infrastructure. Route definition and certainty determine the complexity of the installation. Installations in remote and/or environmentally sensitive areas present additional challenges for the project. Subsea installation adds additional layers of engineering, such as bathymetric and met-ocean studies, and specialized equipment and sea vessels. Prior to any construction, inputs from all stakeholders will need to be incorporated into the project scope. These are usually later defined after project award and agreements can be executed with the external stakeholders.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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)		Total HVDC converter losses (MW)		Total cable losses (MW)	
	SUM	WIN	SUM	WIN	SUM	WIN
2-D60	130.5	272.9	120.0	96.0	4.0	16.2
2-D45	98.7	225.0	90.0	72.0	3.0	12.1
2-D30	68.8	164.8	60.0	48.0	2.0	8.1
2-O30	87.3	155.3	60.0	48.0	1.2	4.8
2-O24	74.0	140.3	48.0	38.4	1.8	7.0
2-O15	49.0	96.7	30.0	24.0	0.6	2.4
2-C27	64.3	99.6	54.0	43.2	0.5	1.9
Combination : 2-D45 2-C27	145.6	262.0	144.0	115.2	3.1	12.3
Combination : 2-D30 2-O15 2-C27	156.1	270.8	144.0	115.2	3.5	14.0

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

[redacted]

[redacted]

[redacted]

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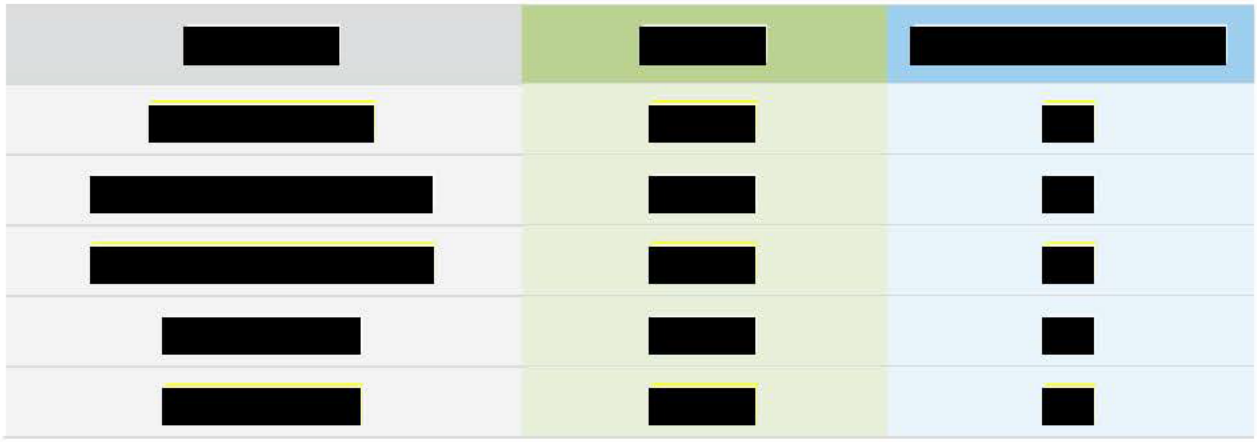

5.5 Cost Structure Proposed Including Cost Containment Mechanisms and Cost Recovery Approach

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

New Jersey customers. The proposed cost containment language that NEETMA is committing to include in PJM's Designated Entity Agreement, if selected to construct the project, is provided as **Attachment 9**. Further, NEETMA is defining the Cost Cap as follows: The construction cost estimate in current year dollars that NEETMA is establishing for its scope of work related, which any amount above the Cost Cap would be considered cost overruns. The proposed containment provisions NEETMA will guarantee is as follows:

Additionally, NEETMA has provided Injection Proposals that can be combined in a number of different ways. Should multiple NEETMA Injection Proposals be selected for development and construction, Table 5.5-1 provides an example of how NEETMA's proposed Cost Cap would be adjusted as a result of multiple selections. A schedule of NEETMA's proposed Cost Caps for each of its projects, and two potential combinations is provided in **Attachment 10**.

[redacted]

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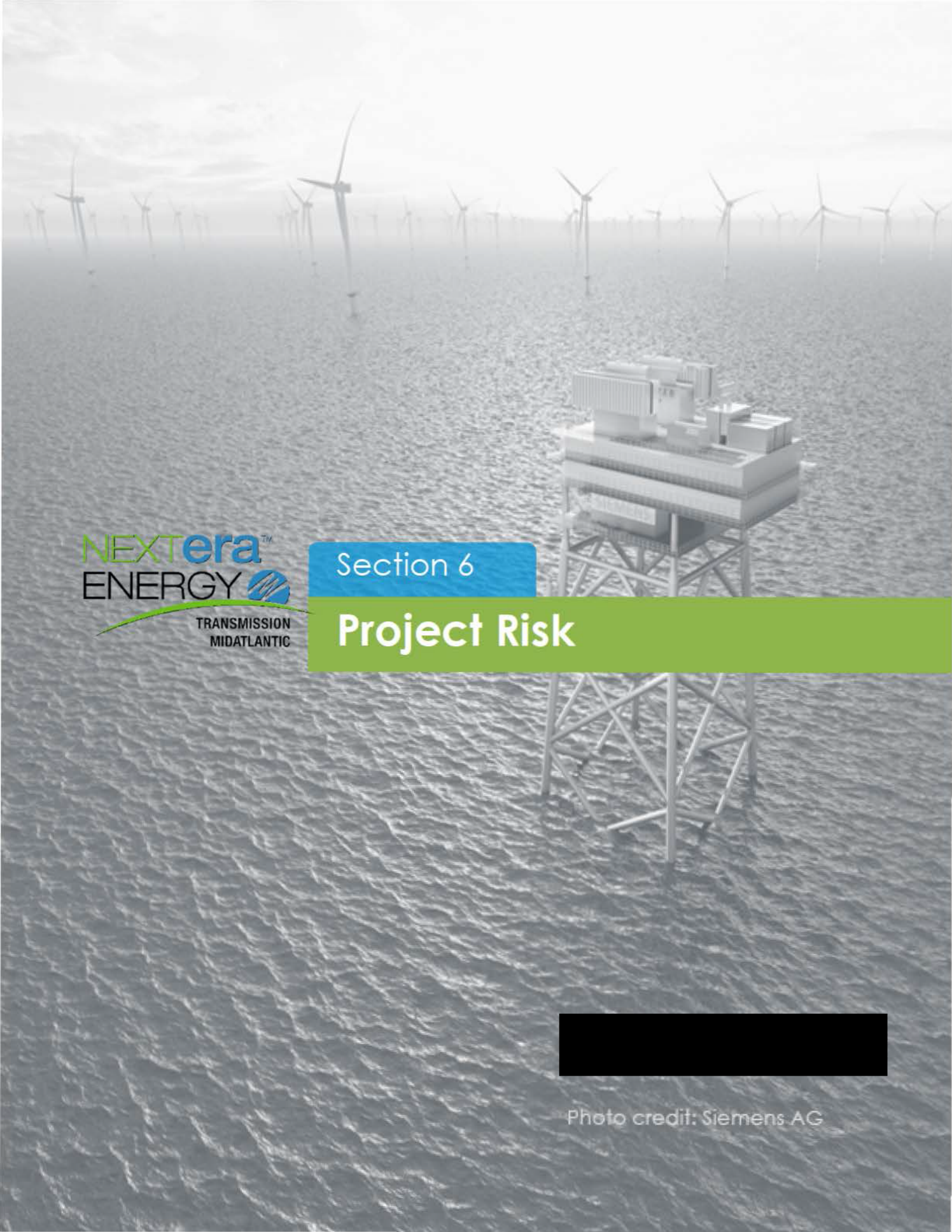

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Section 6

Project Risk

[redacted]

Photo credit: Siemens AG

6. PROJECT RISKS AND MITIGATION STRATEGY

6.1 Project's Plan for Site Control.

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

NEETMA is proposing a route to the Deans 500 kV substation using 100% publicly owned property and rights of-way. NEETMA will work with appropriate authorities to obtain the necessary permits and approvals detailed in **Attachment 22**.

[redacted]

[redacted]

Table 6.1-1 Summary of Onshore Land Ownership

ROW Labels	Sum of Route Mileage	Percent of Route Mileage
Public - County	0.2746	1.78%
Public – Local	0.5904	3.83%
Public – State	1.2537	8.13%
Public - Water Crossing	0.0606	0.39%
Railroad	0.0185	0.12%
Road ROW	13.2142	85.74%
Grand Total	**15.4121**	**100.00%**

* All mileage is determined by the length of route. Portions of the route with multiple adjacent cables are counted the same as lengths of the route with a single cable.

For NEETMA's detailed Site Control Plan, including route calculations, ownership characteristics, and potential forms of agreements, please see **Attachment 22**. In addition, see **Attachment 12** for a description of NEETMA's public outreach efforts to-date.

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.

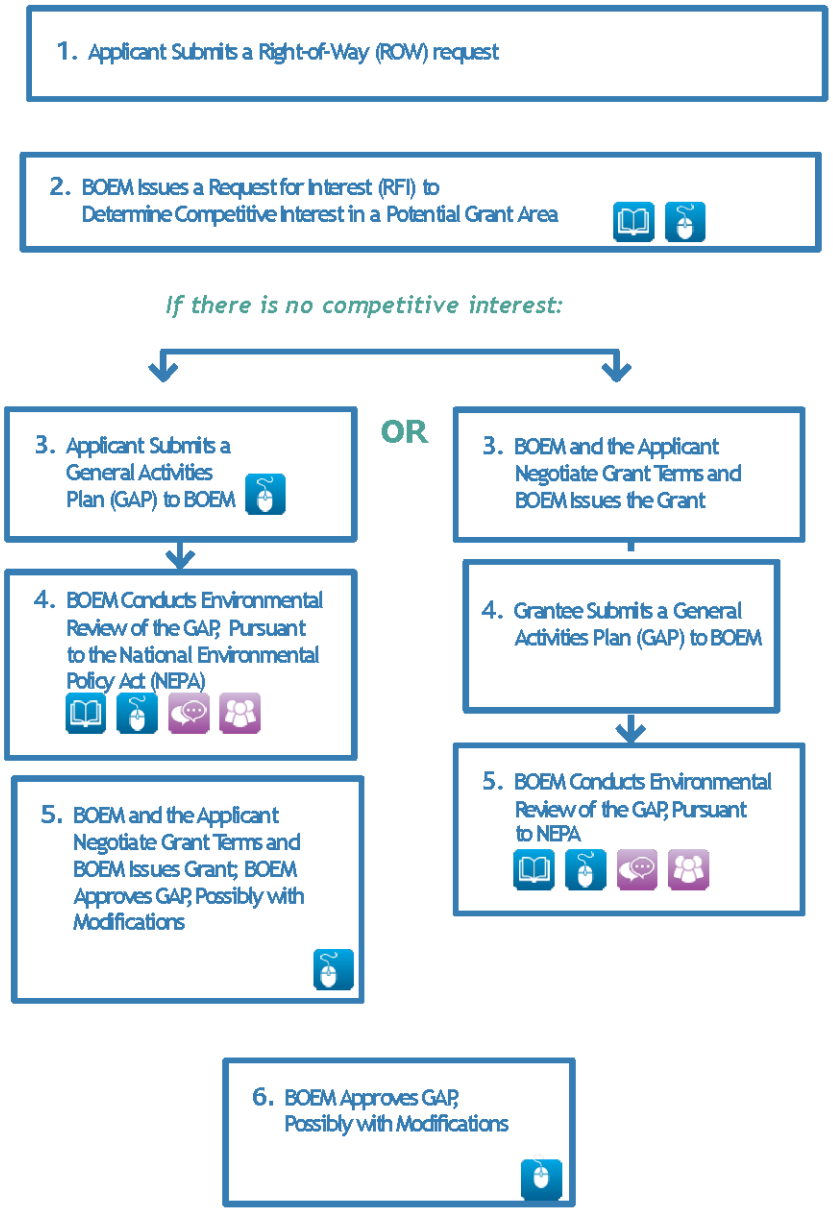
NEETMA has developed a Permitting Plan, **Attachment 20**, which summarizes the Federal, State and local permit approvals for Project approval. The NEETMA team has extensive experience working and permitting submarine, overhead and underground transmission projects within New Jersey. NEETMA has coordinated and met with BOEM, NJDEP and USACE districts as well as local municipalities to confirm regulatory requirements and process and will continue to engage with these stakeholders even after the bid is submitted on September 17th.

As the Project includes components on the outer continental shelf, state waters and in multiple municipalities, permitting this project is complex. It is critical to understand the coordination and timing of each permit and how each approval builds upon each other, therefore, NEETMA has developed Federal, State and local permitting timelines and included them in the overall schedule. The timelines can be found in both the Permitting Plan, Attachment 20 and the Project Schedule, Attachment 11. NEETMA anticipates a three-year permitting timeline. This timeline includes the development of the General Activities Plan (GAP), BOEM NEPA and the process for acquiring federal permits. The timeline was also confirmed by Federal and State agencies during proposal development. Based on coordination with the agencies and project development schedule (i.e. conducting surveys early and sufficient detail for GAP submittal), this is a reasonable and achievable timeline.

BOEM may also issue two types of grants associated with renewable energy projects: (1) a Right-of-Way grant (ROW) or (2) a Right-of-Use and easement grant (RUE) A ROW grant authorizes the installation of cables, pipelines, and associated facilities that involve the transportation or transmission of electricity or other energy produced from a renewable energy project that is not located on the OCS. A RUE grant authorizes the construction and maintenance of facilities or installations that support the production, transportation, or transmission of electricity or other energy produced from a renewable energy project in the OCS.

NEETMA is in the process of qualifying with BOEM for a right-of-way and/or a right of use grant so that we can begin the grant application process per 30 CFR Subpart C §585.300. NEETMA will apply for a joint ROW/RUE grant for the development of the offshore platform and the submarine cable route in federal waters. Upon receiving the grant, NEETMA will develop, construct and operate the project per BOEM grant conditions. Per 30 CFR Subpart C §585.640, NEETMA will conduct project specific studies and surveys and develop a GAP so that BOEM can initiate its NEPA process. The GAP describes how the lessee/grantee will construct and operate renewable energy facilities on a limited lease or ROW/RUE grant. The GAP includes a description of construction activities for all planned facilities, associated activities, and conceptual decommissioning plans. BOEM must approve the GAP before the lessee can install facilities or conduct activities described in the GAP. Below is a summary of the ROW/RUE grant process (Renewable-energy-program/KW-CG-Broch).

Figure 6.2-1 ROW/ROU Grant Process



Given the precise geographic nature of ROW grant applications, BOEM finds it unlikely that ROW proposals would be overlapping and subject to competition. However, if there is competitive interest, BOEM will undertake a competitive process for authorizing a ROW grant.

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.

NEETMA understands the concerns that public groups such as fisheries and coastal communities may have regarding the Project and is committed to partnering with them throughout all phases of the Project. It is no question that coastal and fishing communities – both commercial and recreational – are vital to New Jersey's culture and economy. As these communities have valid concerns about potential negative effects – such as visual impacts, we have taken that into account during the routing and siting process especially for offshore platform locations to minimize potential impacts.

In preparation for the Project, NEETMA developed a Fisheries Protection Plan (**Attachment 21**) [redacted]

[redacted]. Instead, engagement must be woven through all facets. NEETMA's subject matter experts are excited to work closely with representatives from these communities from the start of the Project through a stakeholder taskforce. Through regular meetings and a dedicated channel between these communities, NEETMA can work to identify potential impacts and concerns early on. Partnering closely with these stakeholders through a taskforce will allow NEETMA to identify mitigation measures that meet the communities' needs. During project development, NEETMA will also be conducting a visual impact assessment and will enhance engagement efforts with specific populations based on the findings. While all impacts may not be avoided, thorough and empathetic engagement through all stages of the Project can help NEETMA develop the Project into one that reflects the needs of the diverse public and stakeholder communities in the area. **Attachment 12** provides a narrative description of NEETMA's phased communications and outreach plan.

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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.

NEETMA has been working closely with the selected vendors to put in developing a preliminary construction plan for the project. Supplemental drawings can be found in **Attachments 5 and 6**, and a crossing matrix and proposed construction crossing techniques are provided in and matrix can be found in **Attachment 7**.

- **Offshore DC Converter Station Platforms** – NEETMA is proposing a new offshore platform that includes an HVDC VSC converter station. The platform will also include a 66 kV switchyard that will allow developers to interconnect to the platform. Additionally, 230 kV terminations will be available to allow for platform-to-platform AC connections. Auxilliary power to the offshore stations will be supplied by diesel generators. Due to the size of the offshore HVDC platforms, it is likely more cost effective to manufacture, assemble, and ship these facilities from Europe.

  The platform foundation will be installed in the seabed prior to sailing out the platform. The platform foundation would likely consist of either monopile or piled jacket foundations. Monopiles will be pile driven to the appropriate depth. Installation of piled jacket foundations may require site preparation including leveling, removal of obstructions, or installation of stabilization for the jacket feet. Following preparation, the piled jacket foundation would be lowered to the seafloor and piles would be driven through each jacket foot, or the piles may be installed, and the jacket feet attached to the piles.

NEETMA will also consider installation of scour protection based on an assessment of sea conditions.

The converter station will be fabricated, assembled, at facilities in Europe. Once the platform is complete it will be delivered and installed on the foundation. The estimated time to engineer, design and construct the offshore platform and converter stations at facilities in Europe is approximately four years. [redacted]. Due to the limited number of vessels that can accommodate loads of this size and the worldwide demand for these vessels, NEETMA will look to secure a vessel well in advance of installation dates and work closely with the vendors to work through any schedule adjustments that may be required if permitting or other delays push back the installation date.

- **Subsea Cable** – The project is expected to use 2000 mm2 HVDC cables in a symmetrical monopole configuration. NEETMA will typically use a jet plow to the extent possible in order to create a trench to bury the cable at least 4 feet below the seabed. A pair of HVDC cables will be laid in one trench. Where multiple cables share the same ROW, NEETMA will lay the cables approximately 50 meters apart from each other.

  Offshore transmission cables will connect to onshore transmission cables at landfall areas for each cable. Landfall would be made via HDD, bore, or open cut to bring the subsea cable to shore. Landfall would require onshore workspace to accommodate the drill, bore or open cut, sufficient space for the cable transition vault, and laydown area for ductwork. NEETMA has conducted field assessments of the proposed landfall sites for all of its proposals through field visits and is confident that there is enough space to accommodate NEETMA's proposed construction plan.

  NEETMA has also identified cables or other infrastructure that will be impacted by NEETMA's proposed route. NEETMA will work with the owner to secure crossing agreements. Matting will be used as required to avoid damage to any cable being crossed and NEETMA will meet requirements specified by owner of the relevant infrastructure being crossed, including any applicable code requirements.

- **HDD (Horizontal Directional Drill)** - HDDs will typically be used to minimize the impacts at beach landings as well as for major crossings. The drillers will setup a rig at the proper approach angle to achieve the required depth and will control the direction and speed of the HDD to exit in the planned location. The first pass to create a bore hole is usually performed with a smaller diameter bit and the hole is subsequently reamed to size. Once the hole is the correct size, a casing is installed, and the area is prepared for cable pulling. The hole will be stabilized with drilling fluid throughout the entire HDD operation.

  When installing an HDD there is the risk of inadvertent return, which is the loss of integrity of the hole where drilling fluid can escape into the surrounding environment. This risk can be minimized with proper planning and care. NEETMA understands that this is a risk and has performed site visits to all the HDD locations to ensure that adequate precautions can be taken to prevent inadvertent returns.

- **Ductbank (Terrestrial Cable Installation)** – The ductbank will be primarily located within public roads. The construction will typically consist of four spreads and is typically occur in segments of approximately 100' to 200' of duct bank at a time. The following spreads will progress in sequence

  - Excavation – the surface of the road will be cut, and the subsurface material will be removed to the ductbank dimensions. Excavations will need to be adjusted around crossings and proper protection of the crossings will be put in place during construction. Because of the dense population in the work area spoils will be hauled away from the work area and disposed of appropriately.
  - Conduit & Concrete installation – After excavating the trench the ductbank will be formed including all required reinforcing, conduit and poured concrete. The ductbank height and width will vary based on several criteria such as the number and configuration of the conduits, subsurface material or utilities being crossed. A design of the proposed duct banks is provided in **Attachment 6.**
  - Backfill – Once the concrete for the ductbank has cured, a crew will backfill the trench.
  - Restoration and Paving – The last step of the duct bank installation is to repave over the ductbank and surrounding areas. NEETMA will ensure that restoration is performed to the equal or better of conditions prior to duct bank installation work.

  Approximately every 2000' along the alignment splice vaults will be installed. The splice vaults will include manholes for access and will house the HVDC cable splices.

  Road construction in such densely populated areas runs the risk of disrupting traffic and will require careful consideration and traffic management and control plans in coordination with key stakeholders. NEETMA has started engaging stakeholders to identify requirements and risks of impacted communities.

  Where multiple circuits are installed in one ductbank, the ductbank will be constructed with the future conduits installed. Once the ductbank is installed, the installation of additional cables through the conduits can be staged in any order.

  Finally, NEETMA will make sure any crossings of infrastructure are in accordance with any crossing agreements, permit requirements, and applicable codes and standards.

- **Onshore Cable Pulling** – The onshore cable is expected to be 6,000kcmil cable. When the onshore ductbank is completed the onshore cable can be pulled through the conduit in the ductbank. Cable reels will be manufactured to the correct length and delivered to the site. The cables will be pulled between splice vaults and spliced.

For the purposes of this proposal, NEETMA has assumed that all cables are installed at the same time as the duct bank installation. This is the most cost-effective method as it takes advantage of construction synergies and efficiencies. However, as discussed in Section 3.3, if desired, a different schedule for cable installation can be worked out but will likely result in increased costs. As long as the duct bank is installed with spare conduits, NEETMA can come back at a later time and pull cable through the conduits with significantly less construction impacts than the original duct bank installation.

The transition from the offshore cable to the onshore cable will be made in a splice vault near the shore located above the high-water mark. Before splicing, the offshore cable will be anchored and the waterproof shielding will be removed. The onshore cable will be terminated into the onshore HVDC converter stations either underground or on riser structures.

- **Onshore HVDC Converter Station** – Construction of the onshore HVDC converter stations will begin after a graded pad is installed along with any required access. After the site is prepared and access is available, foundations will be put in place and equipment transported and installed. Auxiliary power is expected to be supplied to the onshore stations via local distribution power.

Risks identified for the construction methods above and associated costs are described in the Project Risk Register (**Attachment 13**).

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.

NEETMA has developed a detailed project schedule and construction sequencing plan for both the onshore and offshore construction and can be found **Attachment 11**. The schedule was built to include typical state and federal time of year restrictions (i.e., fish spawning, fish migration, nesting birds and marine mammal presence) associated with flora and fauna listed species, species of concern and/or managed species. Typical onshore and offshore time of year restrictions for pile driving, tree clearing and construction were based on existing permits and coordination with regulatory agencies. Potential time of year restrictions are associated with the following:

Table 6.5-1 Potential Time of Year Restrictions

Species	Time of Year	Applies to
Winter flounder (Pseudopleuronectes americanus)	January 1 - May 31	In water construction (i.e. dredging) in state waters including back bays.
Anadromous fish	January 1 - May 31	All regulated waters identified as anadromous migratory pathways including Unimpeded tidal regulated waters open to the Atlantic Ocean or any coastal bay
Blue crab (Callinectes sapidus)	April 1 - June 30	In water construction (i.e. dredging) in state waters including back bays.
Horseshoe crab (Limulus polyphemus)	May 1 - Sept 1	In water construction (i.e. dredging) in state waters including back bays.
Sandbar shark (Carcharhinus plumbeus)	May 1 - Sept 1	In water construction (i.e. dredging) in state waters including back bays.
North Atlantic Right Whale	November 1 – April 30	Vessel speed restrictions. Annual Seasonal Management Area (SMA) and/or Dynamic Management Area (DMA)
Osprey	April 1 – August 31	Within 300 meters of any active osprey nest activities that would produce excessive noise
Submerged Aquatic Vegetation	April 15 - Sept 30	In water construction (i.e. dredging) in state waters including back bays.

Species	Time of Year	Applies to
Nesting birds/shoreline birds	March 15 - August 31	At landfall areas that are known for nesting.
Northern Long-eared Bat	April 1 - September 30	Forested areas near onshore construction including transmission cable and converter station
Indiana Bat	April 1 - September 30	Forested areas near onshore construction including transmission cable and converter station

In addition, based on coordination with local stakeholders, NEETMA has incorporated a time of year restriction to limit impacts to beach and coastal communities during Memorial Day to Labor Day. As the project develops, NEETMA will coordinate with local municipalities regarding what activities would take place during the summer months.

6.6 Anticipated Construction-Related Outages

Identify anticipated construction-related outages and expected duration on existing PJM transmission facilities.

NEETMA Proposal	Proposed Language
Deans Proposals	NEETMA has developed a detailed project schedule and construction sequencing plan for both the onshore and offshore construction. At this time NEETMA does not anticipate any construction related outages during the installation of the on shore and offshore transmission scope. The offshore platforms will be tested and commissioned in Europe prior to being barged to the final platform location. Once the offshore platforms are installed in their final location, they will be retested and commission by diesel generators offshore. The onshore converter stations will also be commissioned by diesel generators prior to being connected to the grid. Once all systems have been tested and commissioned for operability, [redacted]

6.7 Impact of Supply Chain Constraints or Material Procurement Risks

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

NEETMA will utilize its extensive experience with transmission and substation projects to finalize specifications, obtain competitive bids, award contracts, and ensure delivery of the equipment to the project site locations. There is adequate time for obtaining all long-lead equipment and material, as indicated in the project schedule.

NEETMA has relationships with many equipment and material suppliers, as its affiliates are constantly in the mode of designing and constructing transmission and substation facilities throughout North America. Accordingly, NextEra has significant resources and robust processes devoted to procurement of equipment and material. Experienced procurement agents would manage the process from the PJM/BPU solicitation stage onwards, initially soliciting vendor proposals and providing commercial bid evaluations. Technical evaluations of future vendor bids will be performed by NextEra in-house subject matter experts and engineering consultants.

Final negotiations over pricing and terms and conditions of contracts are performed by the NextEra Integrated Supply Chain (ISC) and management.

The strengths of NextEra affiliates in material equipment and procurement include:

- Experienced in-house procurement staff with the ability to work from bid through vendor selection;
- Long-standing relationships with vendors and significant buying power that allows access to better pricing from reputable suppliers, as well as expedited purchasing and delivery during critical times;
- Established procurement processes that incorporate quality, cost, reliability, financial stability, delivery, field support, safety track record, commitment to continuous improvement, and innovation; and
- Pre-agreed terms and conditions with suppliers to streamline bid-review-award process.

Procurement Process

The majority of material and equipment procurement will be performed by the substation and transmission line contractors per the specifications developed by the engineer of record and NEETMA subject matter experts. NEETMA typically directly procures long lead time items such as power transformers, reactors, high voltage breakers, conductor, transmission line structures, conductors, and sub-marine cables.

NextEra's ISC department will coordinate all delivery to the site, monitor vendor progress, and expedite delivery of materials to maintain schedule. The contractors will be responsible for the procurement of all materials in their individual scope and will be required to coordinate delivery, monitor vendor progress, and expedite delivery of materials as needed to maintain the Project schedule.

[redacted]

NEETMA shall ensure the offshore submarine cabling material shall be ordered consistent with delivery requirements identified in the project schedule. Submarine cable manufacturing capacity is typically reserved years in advance for offshore projects. NEETMA has a relationship with the submarine cable manufacturers which have strategic alliances with multiple submarine cable manufacturing plants and installation vessels to ensure the cable is delivered and installed on time.

NEETMA has taken steps to mitigate supply chain and material procurement risks by aligning itself with the materials manufacturer and the general contractor for below grade (trench and trenchless) construction activities. This will allow NEETMA to mitigate any schedule risk of critical onshore supply chain and execution of construction activities.

As indicated throughout our proposal, NEETMA anticipates continuing to project execution with the members of our proposal team. These contractors represent the best in the industry, and each brings with it an extensive experience executing projects of similar scale and scope. However, to ensure that the PJM/BPU rate payer receives the best value, NEETMA reserves the right to check the market for engineering and construction costs to validate that our team members remain competitive.

The overall procurement process plays an important role in controlling capital costs through specific Scope of Work (SOW) documents, which include specifications and contractual terms and conditions (T&Cs) made between NEETMA, its equipment suppliers, and engineering and construction contractors. The SOW spells out the technical and performance requirements that the contractor will address in the contract. The legally binding T&Cs ensure that NEETMA, its suppliers, and its contractors understand the division of responsibility, contracted price, invoicing terms, payment date requirements, contract scope, change process, and scheduled due dates.

6.8 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.

NEETMA recognizes that there is potential for project-on-project risk with the development and construction of the transmission and generation separated. [redacted] For 2-D45 the in-service schedule versus the BPU schedule is shown below.

Solicitation	Estimated Commercial Operation Dates	[redacted]
3	2030	[redacted]
4	2031	[redacted]
5	2033	[redacted]

Notwithstanding the advance schedule, NEETMA has outlined the risk to OSW generators and the mitigation NEETMA has performed to reduce this risk:

Risk	Mitigation
Offshore wind turbine permitting, procurement and construction will be quicker than the transmission facilities; BPU proposed offshore wind procurement solicitation may desire earlier in-service dates than what is currently posted on BPU's website	[redacted]
Windfarms that have already filed a Construction and Operations Plan (COP) may get delayed in order to	[redacted]

[redacted]

accommodate a new transmission line design	[redacted]
The location of offshore platforms can have an impact on how offshore wind generation projects bid into BPU solicitations	[redacted]
Transmission line offshore platforms and onshore permitting will be more complicated to permit and have longer equipment lead times; meaning transmission line construction may delay delivery of offshore wind generation	[redacted]
Delays in either the transmission or generation projects may cause significant cost overruns and cause a developer to walk away from the project	[redacted]

6.9 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.

NEETMA has provided contractual language in **Attachment 9** regarding financial commitments and assurances regarding the Project. If NEETMA is selected to develop and construct one or more projects proposed, the language in **Attachment 9** will be included in PJM's Designated Entity Agreement, which is a formal agreement between PJM and the developer to develop and construct the project, and ultimately filed with FERC. In other words, **Attachment 9** is binding in the event NEETMA is selected.

6.10 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 has developed a Project Risk Register as **Attachment 13**.

6.11 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.

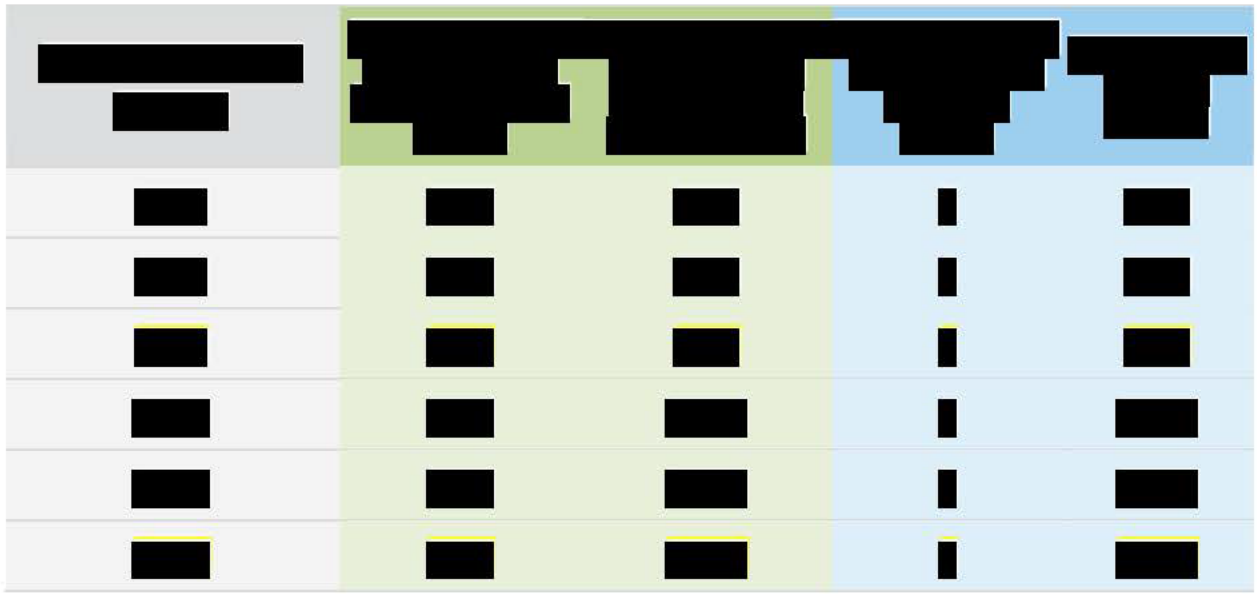
The NJDEP Division of Land Resource Protection (formerly Land Use Regulation) holds jurisdiction over freshwater wetlands, state open waters and their associated buffers – wetland transition areas and riparian zones. Tidal wetlands are regulated by both the NJDEP and USACE. Therefore, impacts to wetlands, transition areas and riparian zones and the subsequent enforcement of compensatory mitigation are also under the jurisdiction of these agencies. The statutory basis for this jurisdiction is the Freshwater Wetlands Protection Act, the Clean Water Act, and the Flood Hazard Area Control Act. NJDEP Land Resource Protection allows for different amounts of impacts to occur to regulated areas before mitigation is required based on the types of activities being conducted, the ecological value of regulated area that is affected, and types of permit required.

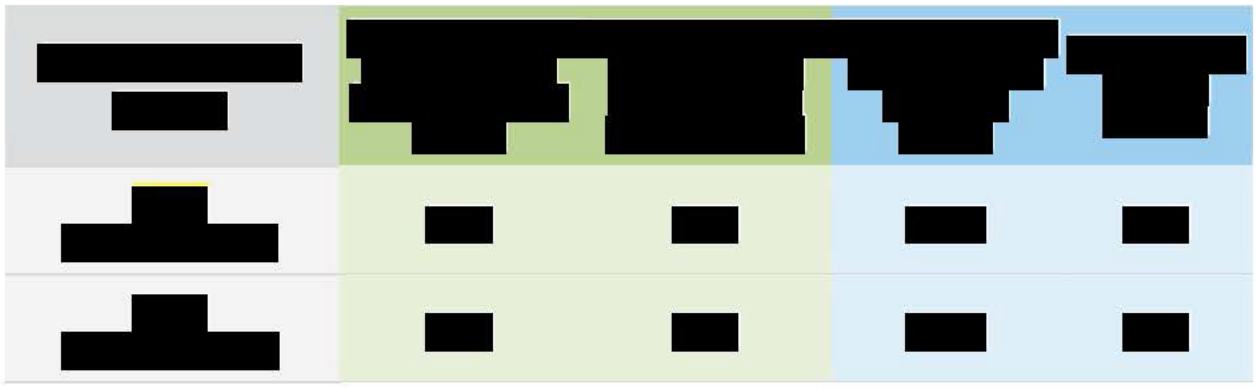
Impacts to wetlands are mitigated through three options: restoration, creation, and enhancement. Each of these options carries with it a mitigation ratio. For each acre of wetland impact for which mitigation is needed, the creation, restoration, or enhancement of a certain acreage of wetlands is required as compensation. The ratio is dependent on the ecological uplift provided by that proposed mitigation option. Similarly, riparian zones can also be mitigated through restoration and enhancement options. Mitigation alternatives for wetland and riparian zone impacts are reviewed and approved by the NJDEP in accordance with a mitigation

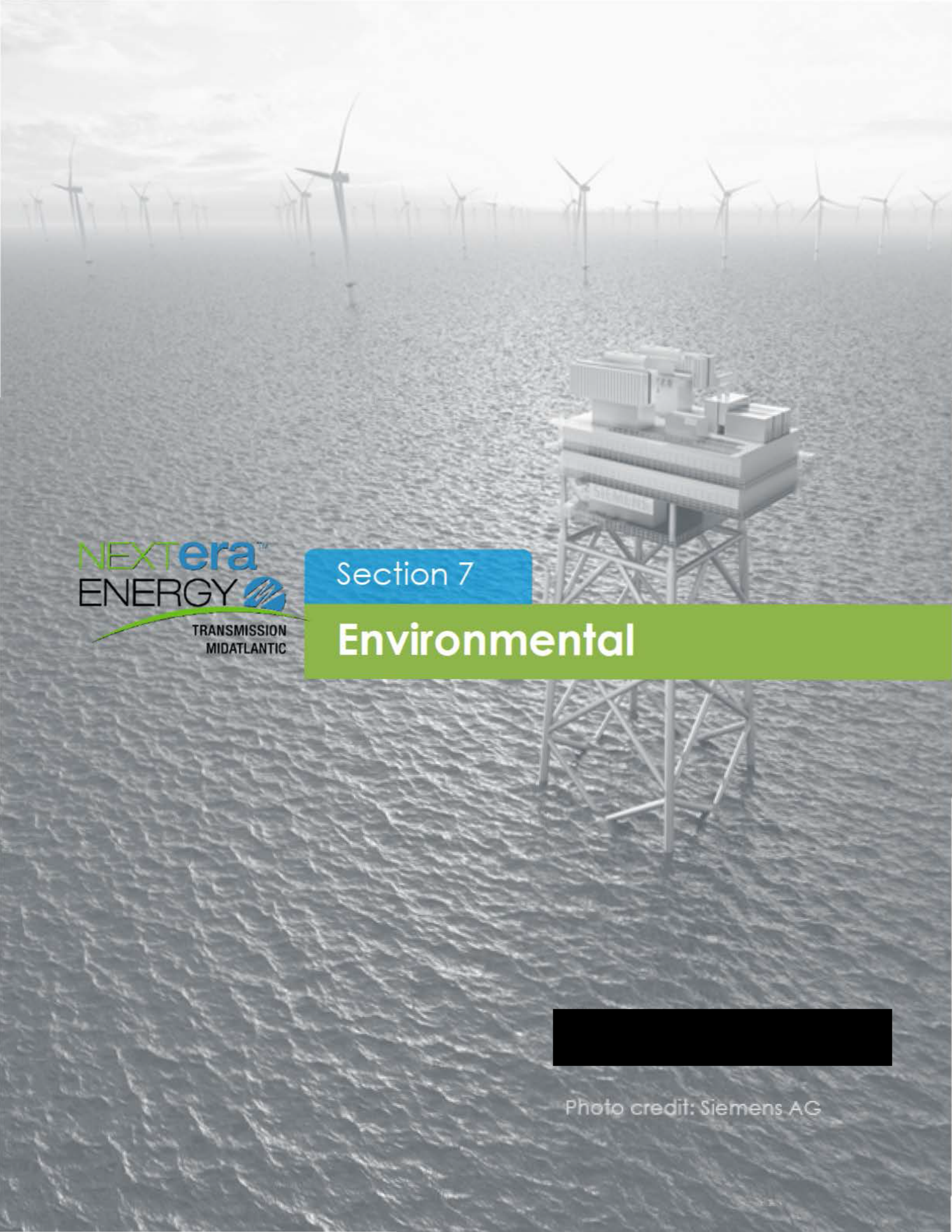
hierarchy where the NJDEP prefers mitigation of impacts to occur in the following order: 1) restoration, creation, or enhancement on the project site; 2) offsite in the same watershed management area as the project area; 3) purchase of credits from a mitigation bank servicing an area that includes the project area; 4) payment to the NJDEP's In Lieu Fee Program; and 5) through upland preservation. This hierarchy presents challenges, first with finding appropriate onsite or offsite mitigation options within the watershed management area. When those options are not available wetland mitigation banks are the next option, but credits are not always available. Mitigation banks consist of "service areas" which are based on watershed management areas where permittees can purchase sell wetland mitigation credits to fulfill their mitigation requirements. However, there are portions of the state not covered by wetland mitigation bank service areas. Large portions of coastal Ocean County are not served by a mitigation bank, nor are areas of Essex, Union, and Middlesex Counties.

[redacted] As we further refine the specific project footprint, this value may be less because we are avoiding and minimizing impacts to the greatest extent practicable with the final design. NEETMA, along with our NJ wetlands consultants, will continue to coordinate with NJDEP as designs are finalized, specific acreage of impacts are calculated and number of credits needed identified. As described above, we will work with NJDEP to identify the appropriate mitigation strategies be they onsite restoration, creation or enhancement, offsite restoration, creation or enhancement, mitigation bank credits, payment into NJDEPs in-lieu fee program, or acquisition and/or preservation of additional habitat. At this time, NEETMA does not see availability of wetlands credits as a risk as Projects are being developed to avoid and minimize impacts to wetlands and the NJ allows for multiple ways to mitigate impacts to wetlands. NEETMA will develop a specific mitigation plan prior to construction describing wetlands mitigation activities, including the monitoring and maintenance that will be required following construction. A description of wetland resources for the project is provided in **Attachment 19, Section 4.2.1**.

[redacted]







NEXTera ENERGY TRANSMISSION MIDATLANTIC

Section 7

Environmental

[redacted]

Photo credit: Siemens AG

7. ENVIRONMENTAL IMPACTS AND PERMITTING

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 and its parent NextEra Energy continues to be an industry leader in environmental stewardship and continues to demonstrate that commitment. We invest in low- and zero-emissions generation and support environmental conservation and research. On all projects, we engage with environmental and government agencies and local stakeholders. We adhere to our corporate Environmental Policy that includes strategies to prevent pollution, minimize waste and conserve natural resources and habitats where we develop, construct and operate projects.

A number of environmental impact analyses have already been performed off the coast of New Jersey by BOEM, the state of New Jersey and offshore wind developers. In 2010, NJDEP published their baseline survey assessment for the development of offshore wind off of New Jersey, in 2012, a Finding of No Significant Impact (FONSI) was issued for BOEM's environmental assessment to develop Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic OCS Offshore New Jersey, Delaware, Maryland, and Virginia. (77 FR 5560) and in 2020, New Jersey published the offshore wind strategic plan which provides a regional analysis of potential environmental impacts associated with regional offshore wind development including transmission and recommendations for collaboration and avoidance and minimization of environmental impacts. NEETMA has used these existing studies to inform their desktop study and to route and site Projects in areas that are of lower overall environmental susceptibility and minimizes impacts to commercial and recreational fishing.

As part of the integrated routing and siting process, NEETMA conducted an environmental desktop study as the first Phase of project development. The desktop analysis identified and reviewed readily available data for biological, geological, cultural, and anthropogenic resources within the Project Study Area and included analysis of the resources to identify potential opportunities and constraints offshore and onshore. The overall objectives of this study were to:

- Inform the routing and siting;
- Identify potentially sensitive resources to avoid and minimize impacts during route and site selection;
- Identify data gaps or areas of additional study that will be needed for NEPA and permitting;
- Identify the types of environmental permits needed; and
- Inform strategic planning for stakeholder outreach and the permitting program.

In response to this solicitation, NEETMA has developed an Environmental Protection Plan (EPP) (See BPU Supplemental **Attachment 19**) which summarizes existing conditions, identifies potential impact producing factors, describes potential impacts and provides preliminary best management practices to mitigate potential impacts that could not be avoided.

As the Project is still in early stages of design, project impacts cannot be quantified at this time. NEETMA, through coordination with regulatory agencies and stakeholders, will develop site specific surveys to fill in data gaps and will quantify potential impacts during GAP and permit application development. At that time, appropriate mitigation measures will be developed. Table 7.1-1 below summarizes potential impacts and it is anticipated that the majority of the impacts are local and temporary in nature during the construction of the facilities. The installation of offshore platforms and their foundations is a benefit as it creates structure habitat for species.

Table 7.1-1 Summary of Potential Impacts (not mitigated) associated with Construction, Operations and Maintenance and Decommissioning for Deans Injection Proposals

Resources	Project Components				
	Offshore Platform	Offshore Cable	Landfall/ HDD	Onshore Cable	Converter Station
Physical Resources					
Geology	L	M	L	L	M
Water Quality	L	L	M	L	L
Air Quality	M	M	L	L	M
Biological Resources					
Wetland and Water Resources	N	N	L	L	L
Coastal and Terrestrial Habitat	L	L	L	L	L

Resources	Project Components				
	Offshore Platform	Offshore Cable	Landfall/ HDD	Onshore Cable	Converter Station
Terrestrial Wildlife	N	N	L	L	M
Avian and Bat	L	N	M	L	M
Benthic	M	M	L	N	N
Shellfish	M	M	L	N	N
Finfish	L	M	L	N	N
Marine Mammals and Sea Turtles	M	L	L	N	N
Cultural Resources					
Marine Archaeology	L	M	L	N	N
Terrestrial Archeology	N	N	L	L	L
Built-Environmental Historic Properties	N	N	N	L	L
Socioeconomics Resources					
Land Use and Zoning	N	N	MH	MH	N
Existing Infrastructure	N	M	L	N	N
Demographic, Employment and Environmental Justice	N	N	L	L	L
Recreation and Tourism	L	M	L	N	N
Commercial and Recreational Fisheries	MH	MH	L	N	N
Navigation (i.e., Navigation Channels, Anchorages, Security and Safety Zones)	N	M	N	N	N
Visual Resources	L	N	L	L	M

Impact Definitions	
Potential Impacts	**Description**
High	Impacts to the resource would have substantial consequences, locally and/or regionally, to the resource. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would not be enough to reduce impacts and therefore, impacts to the resource would not be environmentally acceptable.
Moderate to High	Impacts to the resource would be locally and/or regionally significant. Impacts would be within regulatory standards; however, existing resource conditions are expected to be affected in the near-term, but not necessarily in the long term. Mitigation measures to reduce any potential adverse impacts would be necessary.
Moderate	Impacts to the resource are expected to be moderate in the near-term and localized. Impacts would be within or below regulatory standards, as applicable, and the use of mitigation measures would reduce potential adverse impacts, if applicable.
Low	Impacts to the resource would either be negligible or, if detectable, have minor temporary impacts locally to the resource. The impacts would be well below regulatory standards, as applicable, and mitigation measures may be implemented to sustain low to no impact to the resource.
No Impact	There would be no impacts to the resource because the resource would not be affected.

- Based on readily available information, literature review, professional judgment and/or best business practices.
- Ratings do not include mitigation or best management practices.

Table 7.1-2 Solicitation Checklist

BPU Supplemental Solicitation Requirements	Section Reference
Physical Resources- air quality, electric and magnetic fields (EMF), geological resources, airborne sound, water quality, underwater acoustics, wetlands, and waterbodies.	**Attachment 19, Section 4.1**
Biological Resources- avian and bat species, benthic and shellfish, coastal and terrestrial habitat, finfish and essential fish habitat, marine mammals and sea turtles, terrestrial wildlife	**Attachment 19, Section 4.2**
Cultural Resources- above-ground historic properties, marine archaeology, terrestrial archaeology	**Attachment 19, Section 4.3**
Socioeconomic Resources- visual resources, commercial and recreational fisheries, commercial shipping, environmental justice, land use and zoning, existing cables, tourism, public health & safety, workforce, economy, demographics	**Attachment 19, Section 4.4**
GIS Desktop Study of potential impacts to sensitive resources including tabular summaries of acreage and distance calculations	**Attachment 19, Section 4.3.1**
Shapefiles of cable routes, landfall locations, offshore platforms, and onshore interconnection points that show: • Width of individual cable routes or shared power corridors • Footprint of onshore substation including expansion needed and acreage calculations of habitat disturbance, especially related to wetlands, forested areas, or other sensitive habitats • Descriptions of cable installation methods with locations identified • General footprint and extent of Horizontal Directional Drilling (HDD) boreholes and cable landings • Footprint and extent of associated pre-construction and construction activities	**Attachment 4, Attachment 19**
Projected vessel traffic and/or vehicles needed for project surveys, construction, operation, and project closeout including emissions estimates from vessel and/or vehicle activity	**Attachment 19, Section 4.1.3, 4.4.6**
Any needed exclusion zones around project infrastructure including offshore platforms	**Attachment 19**

BPU Supplemental Solicitation Requirements	Section Reference
Plan to address the identified impacts described above, including innovative measures to avoid, minimize or mitigate impacts.	**Attachment 19, Section 3.1.1**
How does the project reduce environmental impacts to fisheries, habitat, and sensitive resources in comparison to radial lines?	**Section 7.2**
What is the reduction in impacts (approximate area) compared to radial lines, temporary and permanent?	**Section 7.2**
A description of whether and how the project infrastructure, including offshore platforms, could provide direct ocean and ecological observations throughout the water column	**Section 7.2**
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	**Section 7.4**
Provide an analysis showing that project infrastructure will not impact overburdened communities in a disproportionate fashion.	**Attachment 19, Section 3.1.1**

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. 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.

Environmental Impact

There are a limited number of robust interconnection points for connecting offshore wind to the grid onshore. New Jersey's onshore communities are highly developed and shoreline communities commonly include recreation and tourism uses that capitalize on the environmental resources and are susceptible to disruption. Sensitive and protected land uses are also susceptible to disruption, many of which have received investment through Green Acres or Blue Acres funding.

As the New Jersey wind industry develops, multiple projects connecting to the same interconnection points may result in multiple disruptions to the same environmental resources and communities and increasing constraints at landing sites and along transmission routes with each new project developed.

Development of the proposed projects would result in reduced cumulative impacts. Fewer cables would result in less disruption and impacts on the marine, coastal, and built environment and other marine and coastal uses, particularly with consideration for repeated impacts to the same areas to reach interconnection points. Fewer offshore platforms would result in less permanent impact to the seabed. Fewer cables would need to come onshore, which would result in fewer cable miles overall. Fewer cable miles would reduce environmental impacts. Fewer cable landfalls and onshore cables would reduce the repeated impacts that would occur to sensitive nearshore resources and communities as compared to each new wind farm repeating the impacts or each new wind farm impacting a new area. For example, fewer cable miles and fewer construction events would reduce impacts to commercial and recreational fisheries, as well as potential impacts to sensitive resources such as wetlands, SAV, shellfish beds, and nesting beaches. Fewer cable miles would result in reduced impacts to the marine environment and potentially submarine cultural resources from cable burial.

The projects would allow cable approaches to be grouped and efficiently access landfall and interconnection points, rather than being spread out as communication cables are in the area now. This would reduce impacts on environmental resources and other marine users.

Multiple potential interconnection sites are located in northern New Jersey, but Raritan Bay and the marine areas off northern New Jersey are constrained by deep draft navigation channels associated with New York/New Jersey harbors; navigation channels, danger zones, and anchorage areas in Raritan Bay; existing cables, pipelines and electrical transmission lines; commercial and recreational fisheries; shellfish; borrow areas; ocean disposal areas; and prime

fishing areas. navigation- more cables over time, repeated temporal impacts, more area with cable to be avoided. Not utilizing the constrained areas effectively risks limiting the opportunity to reach interconnection points efficiently, which potentially limits offshore wind development in New Jersey. The proposed Deans and Oceanview projects would allow multiple developers to utilize the transmission, which would reduce environmental impacts, risks associated with transmission development and would promote efficient offshore wind development.

In southern New Jersey the Carl N Shuster Horseshoe Crab Reserve, federal and state sand borrow areas, back bays with sensitive wetlands and submerged aquatic vegetation, prime fishing areas, marine protected areas, and recreational vessel traffic and fishing constrain transmission siting near shore. Similar to the Deans and Oceanview projects, the proposed Cardiff projects would allow multiple developers to utilize fewer transmission lines and platforms, which would reduce environmental impacts, impacts to coastal communities, risks associated with transmission development and would promote efficient offshore wind development. This represents careful and responsible development as requested by New Jersey stakeholders.

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.

Commercial and recreational fisheries are culturally and economically significant to the State of New Jersey. NEETMA is committed to minimizing impact on these important resources throughout all phases of the development of the offshore transmission infrastructure. This will be achieved through careful review of existing fisheries resource data, fishing activity datasets, and stakeholder engagement to inform the project siting and design. NEETMA understands that early, active, and

ongoing engagement with commercial and recreational fishing stakeholder is of critical importance to a successful Project outcome. BPU Supplemental **Attachment 21** provides a narrative description of NEETMA's Fisheries Protection Plan.

Table 7.3-1 Summary of Fisheries Protection Plan

BPU Supplemental Solicitation Requirements	Section Reference
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	**Attachment 21, Section 2; Attachment 19, Section 4**
A scientifically rigorous plan to detect impacts to marine resources, including biota and recreational and commercial fisheries	**Attachment 21, Sections 2; Attachment 19, Section 4**
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	**Attachment 21, Sections 2.2, 2.3, 3, 4; Attachment 19, Section 3.1**
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	**Attachment 21, Sections 2.2, 2.3, 3, 4; Attachment 19, Section 3.1.**
An explanation of how the Applicant will provide reasonable accommodations to commercial and recreational fishing for efficient and safe access to fishing grounds	**Attachment 21, Section 5**
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	**Attachment 21, Section 5**

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.

Environmental, commercial, and fishery stakeholders are integral to all phases of the Project. NEET's communications team has already begun developing a phased communications and outreach plan (**Attachment 12**) in order to establish a roadmap for inclusive and transparent engagement. The current preliminary plan is designed to be a living document and will continue to summarize communications and engagement strategies as they evolve. The communications and outreach plan will serve to:

- Identify environmental NGOs who are focused on protecting New Jersey resources.
- Identify fisheries that have a history of fishing in or near the Project area. Contacts from these fisheries will serve as liaisons and inform the Project team on historic fishing techniques, needs, targeted species, and seasonality of fishing.
- Identify potential stakeholder concerns and develop strategies for preventing conflicts.
- Identify demographics of public and stakeholder groups in the Project area in order to develop inclusive and accessible outreach strategies.
- Address concerns about building offshore platforms and transmission cables through the identification of mitigation strategies.
- Plan for stakeholder workshops and meetings in order to review specific aspects of the Project (e.g. routing and siting) and collect input.
- Plan for inclusive public-facing information meetings in order to present Project details and allow for feedback through a number of channels including but not limited to: virtual meetings and in-person pop-up events.
- Plan for the Project's dedicated website through the development of Project description, FAQs, accompanying social media content, and user-friendly graphics.
- Plan for comment management database and protocols in order to track all stakeholder concerns, including their themes and responses.

As the plan evolves, its list of key stakeholders in fisheries and environmental NGOs will grow. In developing the plan thus far, our team has begun discussions with regulatory agencies and several key stakeholders. These discussions and outreach touchpoints are summarized in **Attachment 12**. In order to establish a solid channel of communication between fisheries and environmental stakeholders, points of contact have been identified and will serve as liaisons between their communities and NEET to help both disseminate information and generate feedback. These relationships will continue to be critical throughout all phases of the Project.

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.

New Jersey passed the Environmental Justice Law in 2020 (N.J.S.A. 13:1D-157), which requires NJDEP to evaluate the contributions of certain facilities to existing environmental and public health stressors in overburdened communities when reviewing certain permit applications. The law also directs the NJDEP to publish a list of overburdened communities and provide notice to the 331 municipalities in which those communities are located.

The Environmental Justice Law defines an Overburdened Community (OBC) as any census block group, as determined in accordance with the most recent United States Census, in which:

- at least 35 percent of the households qualify as low-income households (at or below twice the poverty threshold as determined by the United States Census Bureau);
- at least 40 percent of the residents identify as minority or as members of a State recognized tribal community; or
- at least 40 percent of the households have limited English proficiency (without an adult that speaks English "very well" according to the United States Census Bureau).

NJDEP has published geospatial data and a list of block groups identified as OBCs. In the vicinity of the proposed onshore interconnections Minority OBCs and Low Income and Minority OBCs have been identified.

The New Jersey Environmental Justice Law states that:

> *...no community should bear a disproportionate share of the adverse environmental and public health consequences that accompany the State's economic growth; that the State's overburdened communities must have a meaningful opportunity to participate in any decision to allow in such communities certain types of facilities which, by the nature of their activity, have the potential to increase environmental and public health stressors; and that it is in the public interest for the State, where appropriate, to limit the future placement and expansion of such facilities in overburdened communities.*

The law further defines "facility" to mean:

(1) major source of air pollution;

(2) resource recovery facility or incinerator;

(3) sludge processing facility, combustor, or incinerator;

(4) sewage treatment plant with a capacity of more than 50 million gallons per day;

(5) transfer station or other solid waste facility, or recycling facility intending to receive at least 100 tons of recyclable material per day;

(6) scrap metal facility;

(7) landfill, including, but not limited to, a landfill that accepts ash, construction or demolition debris, or solid waste; or

(8) medical waste incinerator; except that "facility" shall not include a facility as defined in section 3 of P.L.1989, c.34 (C.13:1E-48.3) that accepts regulated medical waste for disposal, including a medical waste incinerator, that is attendant to a hospital or university and intended to process self-generated regulated medical waste.

The components of the proposed projects do not qualify as a "facility" as defined by the New Jersey Environmental Justice Law.

Construction of the proposed projects would have beneficial short-term, direct effects on employment in the study area, including increased jobs. NEETMA anticipates between 60 and 80 onshore construction personnel during peak construction activities. Beneficial, short-term indirect effects in the study area would result from the project purchases of goods such as construction materials and induced effects would include employees spending on food, housing, and other services and materials. The increased employment is not expected to result in a change in demographics, as these counties have relatively large populations and established infrastructure to support additional temporary construction workers. The projects would add a small number of permanent workers to the counties in the study area. **Attachment 19** includes a socioeconomic assessment of the Projects. A summary of the key socioeconomic findings are below.

Deans	• Beneficial short-term, direct effects on employment in Middlesex County, including increased jobs during construction. NEETMA anticipates between 60 and 80 onshore construction personnel during peak construction activities. • Beneficial, short-term indirect effects in Middlesex County from the project purchases of goods such as construction materials. • Beneficial induced effects would include employee spending on food, housing, and other services and materials. • No change in demographics, as Middlesex County has a relatively large population and established infrastructure to support additional temporary construction workers. • Small increase in permanent workers in Middlesex County.

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's understanding of the required local, State, and Federal permits and approvals required to build and operate the proposed projects is based on familiarity with the regulatory framework required for constructing and operating offshore wind transmission facilities, review of applicable regulations, and information gained via agency coordination. BPU Supplemental **Attachment 20** provides a narrative description of NEETMA's permitting plan, a detailed permit matrix that identifies the various permits and approvals required for the proposed projects, and the projected local, State, and Federal timelines for seeking and obtaining required permits and approvals.

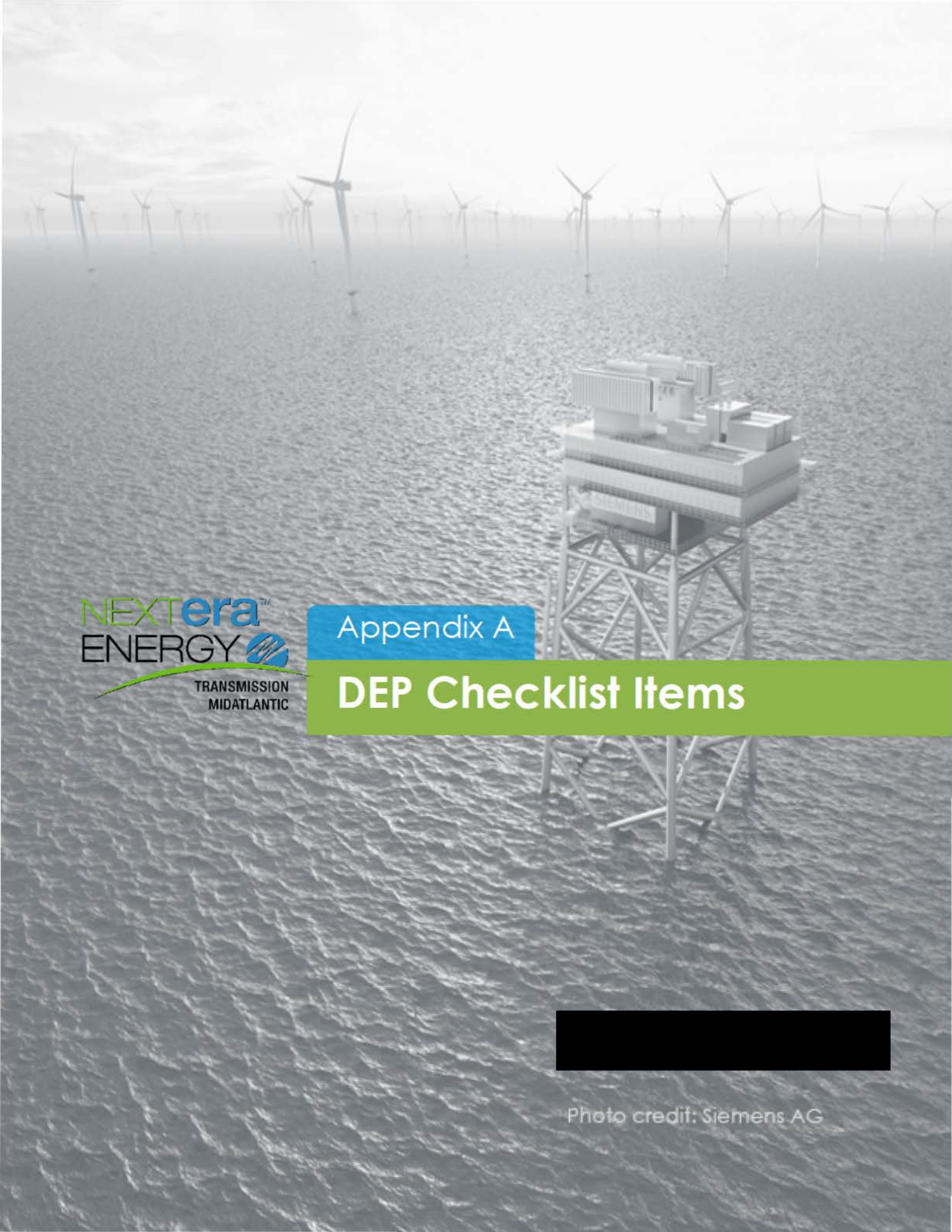
During the solicitation phase, NEETMA has coordinated and confirmed permitting process and requirements with BOEM, NJDEP and USACE districts. As a portion of the Project will be constructed on the outer continental shelf (OCS), BOEM will be the lead federal agency and the project will be developed per 30 CFR Part 585 which identified the process for issuing leases, right-of-way (ROW) grants, and right-of-use and easement (RUE) grant. As part of this process, NEETMA will be developing a General Activities Plan (GAP).

NEETMA understands that effective communication and collaboration with agencies at the local, State, and Federal levels is key to obtaining the required permits and approval and delivering the State of New Jersey reliable projects. Steps taken prior to responding to this solicitation to inform the permitting process include agency consultations and stakeholder outreach. Based on NEETMA's experience with comparable projects and these initial outreach efforts, NEETMA is confident in their ability to secure all applicable permits and approvals to construct and operate the proposed Projects.

NEETMA is dedicated to facilitating and ensuring compliance with all permits and approvals required to construct and operate the proposed projects; therefore, NEETMA will implement an effective regulatory compliance plan that ensures the proposed Projects are constructed, operated, and decommissioned per the laws, regulations, terms, and conditions detailed in the acquired permits and approvals. As design details are developed, NEETMA anticipates some acquired permits and approvals will no longer be applicable to the proposed projects and/or new permits will need to be added. NEETMA will establish a permit and approvals monitoring team to track and review changes in design and, potentially, the need for permit modifications and/or new permit applications. Copies of submitted permit applications and issued permits and approvals will be provided by NEETMA as they become available.

Table 7.6-1 Summary of Permitting Plan

BPU Supplemental Solicitation Requirements	Section Reference
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	Attachment 20 Section 3
Provide documentation of consultation with USACE beach replenishment projects and sand borrow areas, if applicable	Attachment 20 Section 5
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	Attachment 20 Section 3
Submit a land use compatibility / consistency matrix to identify local zoning laws and the consistency of applicant's activities in each local jurisdiction	Attachment 20 Section 4
Identify each appropriate State or Federal agency the Applicant has contacted for land acquisition issues and provide a summary of the required arrangements	Attachment 20 Section 4
Include copies of all submitted permit applications and any issued approvals and permits	Attachment 20 Section 5
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	Attachment 20 Section 5
An award to build a Qualified Project is contingent upon the successful Applicant obtaining all required local, State and/or Federal permits and/or approvals	Attachment 20 Section 5



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Appendix A

DEP Checklist Items

[redacted]

Photo credit: Siemens AG

Appendix A DEP Checklist Items

Prior to the Pre-Submission meeting with DEP, bidders should complete and submit to the NJDEP Appendix A of the BPU Offshore Wind Transmission Proposal Data Collection Form.

NEETMA conducted a routing and siting assessment to develop the proposed projects. Information based on desktop assessments, windshield reconnaissance surveys, and agency and stakeholder outreach informed the proposed project route selection, which aimed to avoid sensitive environmental resources and maximize opportunities (i.e. existing transmission lines, right-of-ways). If sensitive environmental resources could not be avoided, NEETMA developed proposed project routes to minimize impacts. NEETMA has developed BMPs to mitigate proposed project impacts. The KMZ files provided identify where the proposed projects would cross the resources identified in the NJDEP checklist.

To support the BPU's review of potential environmental impacts and, ultimately, the decision-making process to select optimal and reliable project sites, NEETMA has conducted a preliminary environmental impact analysis of the proposed projects, as described in the EPP (see **Attachment 19**). NEETMA's EPP provides a summary of existing conditions, potential impacts, and avoidance, minimization and mitigation measures for each resource potentially affected by the proposed projects during planning, construction, operation, and decommissioning.

Natural and Historic Resources

Is any portion of the project site on land owned or administered by the NJDEP?

If yes, please visit https://www.nj.gov/dep/greenacres/pdf/Request_to_Use_NJDEP_Property_2019.pdf for information on initiating a request to use NJDEP property. The submission of a request to use NJDEP property is a prerequisite to the scheduling of a pre-application meeting.

☒ Yes ☐ No

Green Acres Program

Is any part of the project site on land that is subject to a Green Acres restriction? If yes, please describe.

Yes, the proposed project route would cross land that is subject to a Green Acres restriction. NEETMA is coordinating with the NJDEP and the Green Acres program regarding potentially Green Acres encumbered parcels.

Does the project require the use of property funded with federal Land and Water Conservation Funding? If yes, please describe.

☐ Yes ☒ No

Does the project include activities that are under the jurisdiction of the Watershed Property Review Board? If yes, please describe.

☐ Yes ☒ No

Has the Watershed Property Review Board made a jurisdictional determination for the project site? If yes, please describe.

☐ Yes ☒ No

Does the project include a beach crossing? If so, please consult with the Green Acres program regarding potentially Green Acres encumbered parcels.

☐ Yes ☒ No

Office of Leases and Concessions

Is the temporary use of DEP lands administered by the Divisions of Parks & Forestry and/or Fish & Wildlife required for pre-construction, construction and/or post construction activities? If yes, please describe.

Yes, the proposed project would require the temporary use of DEP lands administered by the Divisions of Parks & Forestry and/or Fish and Wildlife during pre-construction, construction, and/or post construction. NEETMA will coordinate with NJDEP.

State Historic Preservation Office – SHPO

Is the site a Historic Site or district on or eligible for the State or National registry?

Yes, the proposed project route would cross a Historic Site or district on or eligible for the State or National registry. NEETMA will coordinate with SHPO. During project development, NEETMA will conduct a visual assessment to evaluate the potential visual effects of the proposed projects on historic properties.

Will there be impacts to buildings over 50 years old?

NEETMA will coordinate with SHPO. During project development, NEETMA will conduct a visual

assessment to evaluate the potential visual effects of the proposed projects on historic properties.

Are there known or mapped archeological resources (including submerged) within the Project Area?

During the routing and siting process, NEETMA selected proposed project routes to avoid known mapped archeological resources, including submerged resources. As part of the BOEM NEPA process a marine and terrestrial archeological resource assessment report will be developed. NEETMA will coordinate with BOEM and SHPO.

Division of Fish and Wildlife

Has the applicant utilized New Jersey's Landscape Project mapping (v3.3) to determine if their subject property or the land immediately adjacent contains any Rank 3, 4, or 5 polygons, Vernal habitat, or Freshwater mussel habitat? If yes, please identify the species which these habitats are valued for.

Yes, see Attachment 19 Section 4.2.2.

Has the applicant utilized the NJDEP – Surface Water Quality Standards (SWQS) to determine if their project footprint contains any (streams, brooks, or rivers) that are classified as Trout Maintenance or Trout Production or other surface waters that are trout stocked or inhabited by other fish species, including any migratory species that are regulated by the DFW? If yes, what Surface Water Quality Standard(s) or fisheries resources are identified on the site?

Yes, see Attachment 19, Section 4.12.

Has the applicant applied for a NJDEP, Office of Natural Lands Management (NLM) Natural Heritage Database data request for endangered and threatened species of flora and fauna? If yes, please include a copy of the NLM database response with this submission.

Yes, NEETMA coordinated with NJDEP. NEETMA will file a data request with the NJDEP NLM Natural Heritage Database for endangered and threatened species of flora and fauna.

Has the applicant consulted the DFW's Connecting Habitat Across New Jersey (CHANJ) project mapping available at https://www.nj.gov/dep/fgw/ensp/chanj.htm and considered designing the project in a manner that incorporates concerns regarding wildlife habitat connectivity?

Yes, see Attachment 19, 4.2.3.

Is the project located on a New Jersey Division of Fish and Wildlife, Wildlife Management Area (WMA)? A list as well as a map of WMAs can be found by going to the following link: https://www.nj.gov/dep/fgw/wmaland.htm

The proposed project route does not cross a New Jersey Division of Fish and Wildlife WMA.

If you have consulted with the New Jersey Division of Fish and Wildlife on the proposed use, please include any correspondence with this submission. *New Jersey's Landscape Project mapping (v3.3) and the Surface Water Quality Standards (SWQS) can be viewed for free by visiting the NJDEP – Geo Web, GIS interface. Failure to provide the information requested above may impact the DFW ability to provide formal consultation/comments regarding potential impacts to Threatened and Endangered Species.*

Yes, NEETMA coordinated with the NJDEP regarding the proposed project routes on June 7, 2021 and August 5, 2021.

Division of Land Resource Protection

Does the project involve development at or near, or impacts to the following; describe the type and extent of development in regard to location and impacts to regulated features:

- Water courses (streams)

  Yes, see Attachment 19, Sec. 4.1.2.

- State Open Waters?

  Yes, see Attachment 19.

- Freshwater Wetlands and/or freshwater wetland transition areas?

  Yes, see Attachment 19, Sec. 4.2.1.

- Flood Hazard areas and/or riparian buffers

  Yes, see Attachment 19.

- Waterfront development areas

  Yes, see Attachment 19, Sec. 4.4.1.

- Tidally Flowed Areas

  Yes, see Attachment 19, Sec. 4.2.1.

- Bureau of Tidelands Management

  Yes, see Attachment 19, Sec. 4.2.1.

- The CAFRA Planning Area?

The proposed project route does not involve development at or near, or impacts to the CAFRA Planning Area.

Division of Coastal Engineering

Will the project impact any Army Corp of Engineers beachfill projects or sand borrow areas either onshore, nearshore, or offshore?

The proposed project route is not anticipated to cross Army Corps of Engineers beachfill projects or sand borrow areas onshore, nearshore, or offshore.

Is the project being proposed in the vicinity of any shore protection structures such as jetties, groins, seawalls, revetments, bulkheads, reefs, or outfalls?

During the routing and siting process, NEETMA selected proposed project routes to avoid any shore protection structures. Based on final design and landfall locations, the proposed project route may be in the vicinity of shore protection structures. NEETMA will coordinate with USACE and NJDEP.

Does the project propose any cabling through inlets or areas that are regularly dredged for maintenance?

Yes, the proposed project route crosses USACE navigation channels. See Attachment 19, Sec. 1.2. NEETMA will coordinate with the USACE and the NJDEP.

What if any restrictions will be placed on anchoring and navigation around proposed cables?

The cable will be designed to appropriate burial depths. Typically, restrictions are tied to permit conditions. During project development, NEETMA will coordinate with NJDEP, USACE, and USCG.

Have you contacted the USACE or NJDEP Division of Coastal Engineering regarding your proposed project?

Yes, NEETMA coordinated with the USACE Philadelphia District on July 9, 2021 and the USACE New York District on July 12, 2021 regarding the proposed project. NEETMA coordinated with the NJDEP regarding the proposed project on June 7, 2021 and August 5, 2021.

Community Engagement

The Department is committed to the principles of meaningful and early community engagement in the project's approval process. The Department has representatives available to discuss community engagement issues with you and we encourage this communication to take place at the earliest possible time.

(a) What community groups and stakeholders have you identified that may be interested in or impacted by this project?

See Attachment 12.

(b) How have you or will you engage community and stakeholders in this project?

See Attachment 12.

(c) What are the potential impacts of this project on the community?

See Attachment 19, Section 4.4

(d) What are the community concerns or potential concerns about this project?

See Attachment 12.

(e) How do you intend to address these concerns?

See Attachment 12.

(f) As part of this project, do you plan to perform any environmental improvements in this community? If yes, describe

As the proposed project develops, NEETMA will continue to communicate and collaborate with affected communities. Environmental improvements will be selected based on final design. See **Attachment 12** for proposed additional environmental benefits.

Please provide the Department with an additional narrative description function and its local/regional environmental, social, and economic benefits and impacts. Also, what sensitive receptors are present and how might they be affected by this project?

During the routing and siting process, NEETMA developed proposed project routes that utilize existing rights-of-way and avoid impacts to sensitive receptors. **See Attachment 1.**

Air Quality

Will activity at the site release substances into the air?

Yes. **See Attachment 19, Sec. 4.1.3**. NEETMA will conduct an air quality impact analysis to evaluate the potential effects of the proposed project on air quality.

Does the project require Air Preconstruction permits per N.J.A.C. 7.27-8.2(c)?

Yes. NEETMA will apply for and secure the required Air Preconstruction permits per N.J.A.C. 7:27-8.2(c).

Will your project require Air Operating permits (N.J.A.C. 7:27--22.1)?

Yes. NEETMA will apply for and secure the required Air Operating permits per N.J.A.C. 7:27-22.1.

Will the project result in a significant increase in emissions of any air contaminant for which the area is nonattainment with the national ambient air quality standards (all of NJ for VOC and NOx; 13 counties for fine particulates), thereby triggering the Emission Offset Rule at NJAC7:27-18?

See Attachment 19, Sec. 4.1.3.

Will the project result in stationary diesel engines (such as generators or pumps) or mobile diesel engines (such as bulldozers and forklifts) operating on the site? If so, which?

See **Attachment 19, Sec. 4.1.3.**