

# Deans 6,000 MW DC Injection

## General Information

Proposing entity name	NEETMH
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	2-D60
PJM Proposal ID	250
Project title	Deans 6,000 MW DC Injection
Project description	Four 1,500 MW HVDC Symmetrical Monopole systems connecting offshore platforms in the Hudson South lease area to a new Fresh Ponds 500 kV substation near the existing Deans 500 kV switchyard. Loop in the existing Deans – Windsor and Deans Smithburg 500 kV lines into Fresh Ponds 500 kV.
Email	Johnbinh.Vu@nexteraenergy.com
Project in-service date	06/2029
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	See Attachment 1, Section 3.4

## Project Components

1. Offshore Platform A
2. Offshore Platform B
3. Offshore Platform C
4. Offshore Platform D

5. Fresh Ponds Converter Station
6. Offshore Platform A – Raritan Bay Waterfront Park Landing HVDC
7. Offshore Platform B – Raritan Bay Waterfront Park Landing HVDC
8. Offshore Platform C – Raritan Bay Waterfront Park Landing HVDC
9. Offshore Platform D – Raritan Bay Waterfront Park Landing HVDC
10. Raritan Bay Waterfront Park Landing – Fresh Ponds Converter Station HVDC
11. Loop in and reconductor existing Deans - E. Windsor 500 kV OH line to Fr...
12. Loop in and reconductor existing Deans -Smithburg 500 kV OH line to Fres...
13. Loop in existing Deans - Smithburg 500 kV OH line to Fresh Ponds 500kV A...
14. Loop in existing Deans - E. Windsor 500 kV OH line to Fresh Ponds 500 kV...

### Greenfield Substation Component

Component title	Offshore Platform A
Project description	Offshore Platform A to collect offshore wind and deliver 1,500 MW at the point of injection at the Fresh Ponds Converter Station
Substation name	Offshore Platform A
Substation description	Offshore platform with an HVDC VSC technology converter station that will allow offshore wind generation to interconnect at 66 kV AC
Nominal voltage	DC
Nominal voltage	400

### Transformer Information

None		
Major equipment description	Offshore platform with an HVDC VSC technology converter station that will allow offshore wind generation to interconnect at 66 kV AC	
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1500.000000	1500.000000

Winter (MVA)	1500.000000	1500.000000
Environmental assessment	See Attachment 19	
Outreach plan	See Attachment 12	
Land acquisition plan	See Attachment 22	
Construction responsibility	Proposer	
Benefits/Comments	See Attachment 1, Section 3.4	

**Component Cost Details - In Current Year \$**

Engineering & design	competitive confidential information
Permitting / routing / siting	competitive confidential information
ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$729,653,371.00
Component cost (in-service year)	\$854,835,404.00

**Greenfield Substation Component**

Component title	Offshore Platform B
Project description	Offshore platform to collect offshore wind and deliver 1,500 MW at the point of injection at the Fresh Ponds Converter Station
Substation name	Offshore Platform B

Substation description Offshore platform with an HVDC VSC technology converter station that will allow offshore wind generation to interconnect at 66 kV AC

Nominal voltage DC

Nominal voltage 400

### Transformer Information

None

Major equipment description Offshore platform with a HVDC VSC technology converter station that will allow offshore wind generation to interconnect at 66 kV AC

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1500.000000	1500.000000
Winter (MVA)	1500.000000	1500.000000

Environmental assessment See Attachment 19

Outreach plan See Attachment 12

Land acquisition plan See Attachment 22

Construction responsibility Proposer

Benefits/Comments See Attachment 1, Section 3.4

### Component Cost Details - In Current Year \$

Engineering & design competitive confidential information

Permitting / routing / siting competitive confidential information

ROW / land acquisition competitive confidential information

Materials & equipment competitive confidential information

Construction & commissioning competitive confidential information

Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$729,643,651.00
Component cost (in-service year)	\$854,825,684.00

### Greenfield Substation Component

Component title	Offshore Platform C
Project description	Offshore platform to collect offshore wind and deliver 1,500 MW at the point of injection at the Fresh Ponds Converter Station
Substation name	Offshore Platform C
Substation description	Offshore platform with an HVDC VSC technology converter station that will allow offshore wind generation to interconnect at 66 kV AC
Nominal voltage	DC
Nominal voltage	400

### Transformer Information

None		
Major equipment description	Offshore platform with an HVDC VSC technology converter station that will allow offshore wind generation to interconnect at 66 kV AC	
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1500.000000	1500.000000
Winter (MVA)	1500.000000	1500.000000
Environmental assessment	See Attachment 19	
Outreach plan	See Attachment 12	

Land acquisition plan	See Attachment 22
Construction responsibility	Proposer
Benefits/Comments	See Attachment 1, Section 3.4

**Component Cost Details - In Current Year \$**

Engineering & design	competitive confidential information
Permitting / routing / siting	competitive confidential information
ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$729,643,651.00
Component cost (in-service year)	\$854,825,684.00

**Greenfield Substation Component**

Component title	Offshore Platform D
Project description	Offshore platform to collect offshore wind and deliver 1,500 MW at the point of injection at the Fresh Ponds Converter Station
Substation name	Offshore Platform D
Substation description	Offshore platform with an HVDC VSC technology converter station that will allow offshore wind generation to interconnect at 66 kV AC
Nominal voltage	DC
Nominal voltage	400

## Transformer Information

None

Major equipment description Offshore platform with an HVDC VSC technology converter station that will allow offshore wind generation to interconnect at 66 kV AC

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1500.000000	1500.000000
Winter (MVA)	1500.000000	1500.000000
Environmental assessment	See Attachment 19	
Outreach plan	See Attachment 12	
Land acquisition plan	See Attachment 22	
Construction responsibility	Proposer	
Benefits/Comments	See Attachment 1, Section 3.4	

### Component Cost Details - In Current Year \$

Engineering & design	competitive confidential information
Permitting / routing / siting	competitive confidential information
ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$729,643,651.00

Component cost (in-service year) \$854,825,684.00

### Greenfield Substation Component

Component title Fresh Ponds Converter Station

Project description Onshore Converter station site with four 1,500 MW HVDC converters to connect to the existing 500 kV system to deliver 6,000 MW of offshore wind from Offshore Platforms A, B, C, and D at the point of injection at the Fresh Ponds

Substation name Fresh Ponds Converter Station

Substation description Four HVDC VSC 1,500 MW converters, tying into a new 500 kV AC switchyard, with the existing Deans-Windsor and Deans-Smithburg 500 kV lines looped in

Nominal voltage AC

Nominal voltage 500

### Transformer Information

None

Major equipment description Four HVDC VSC 1500 MW converters, tying into a new 500 kV AC switchyard, with the existing Deans-Windsor and Deans-Smithburg 500 kV lines looped in

	<b>Normal ratings</b>	<b>Emergency ratings</b>
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Summer (MVA)	0.000000	0.000000
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Winter (MVA)	0.000000	0.000000
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Environmental assessment See Attachment 19

Outreach plan See Attachment 12

Land acquisition plan See Attachment 22

Construction responsibility Proposer

Benefits/Comments See Attachment 1, Section 3.4



**Component Cost Details - In Current Year \$**

Engineering & design	competitive confidential information
Permitting / routing / siting	competitive confidential information
ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$1,069,287,401.00
Component cost (in-service year)	\$1,242,125,667.00

**Greenfield Transmission Line Component**

Component title	Offshore Platform A – Raritan Bay Waterfront Park Landing HVDC	
Project description	Submarine HVDC Symmetrical monopole system from Offshore Platform A to Raritan Bay Waterfront Park Landing. NEETMA will deliver 1,500 MW at the onshore point of injection. Actual losses will be calculated based upon the exact location of the offshore platform and incorporated into the final cable design	
Point A	Offshore Platform A	
Point B	Raritan Bay Waterfront Park Landing	
Point C		

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1500.000000	1500.000000
Winter (MVA)	1500.000000	1500.000000

Conductor size and type	2000mm2 copper
Nominal voltage	DC
Nominal voltage	400
Line construction type	Submarine
General route description	Submarine route in Atlantic Ocean. See Attachments 4, 19, and 22
Terrain description	Submarine route in Atlantic Ocean. See Attachments 19 and 22
Right-of-way width by segment	A kmz of the route is provided as Attachment 4. See Attachment 22 for more details.
Electrical transmission infrastructure crossings	See Attachment 7 for a list of all crossings and proposed crossing plan
Civil infrastructure/major waterway facility crossing plan	See Attachment 7 for a list of all crossings and proposed crossing plan
Environmental impacts	See Attachment 19
Tower characteristics	A submarine cable is being proposed. See Attachment 6 for details on the characteristics of the submarine cable and its proposed installation
Construction responsibility	Proposer
Benefits/Comments	See Attachment 1, Section 3.4
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	competitive confidential information
Permitting / routing / siting	competitive confidential information
ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information

Contingency	competitive confidential information
Total component cost	\$423,986,143.00
Component cost (in-service year)	\$446,978,451.00

### Greenfield Transmission Line Component

Component title	Offshore Platform B – Raritan Bay Waterfront Park Landing HVDC
Project description	Submarine HVDC Symmetrical monopole system from Offshore Platform B to Raritan Bay Waterfront Park Landing. NEETMA will deliver 1,500 MW at the onshore point of injection. Actual losses will be calculated based upon the exact location of the offshore platform and incorporated into the final cable design
Point A	Offshore Platform B
Point B	Raritan Bay Waterfront Park Landing
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	1500.000000	1500.000000
Winter (MVA)	1500.000000	1500.000000
Conductor size and type	2000mm2 copper	
Nominal voltage	DC	
Nominal voltage	400	
Line construction type	Submarine	
General route description	Submarine route in Atlantic Ocean. See Attachments 4, 19, and 22	
Terrain description	Submarine route in Atlantic Ocean. See Attachments 19 and 22	
Right-of-way width by segment	A kmz of the route is provided as Attachment 4. See Attachment 22 for more details.	
Electrical transmission infrastructure crossings	See Attachment 7 for a list of all crossings and proposed crossing plan	

Civil infrastructure/major waterway facility crossing plan	See Attachment 7 for a list of all crossings and proposed crossing plan
Environmental impacts	See Attachment 19
Tower characteristics	A submarine cable is being proposed. See Attachment 6 for details on the characteristics of the submarine cable and its proposed installation
Construction responsibility	Proposer
Benefits/Comments	See Attachment 1, Section 3.4

**Component Cost Details - In Current Year \$**

Engineering & design	competitive confidential information
Permitting / routing / siting	competitive confidential information
ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$451,692,631.00
Component cost (in-service year)	\$475,918,571.00

**Greenfield Transmission Line Component**

Component title	Offshore Platform C – Raritan Bay Waterfront Park Landing HVDC
Project description	Submarine HVDC Symmetrical monopole system from Offshore Platform C to Raritan Bay Waterfront Park Landing. NEETMA will deliver 1,500 MW at the onshore point of injection. Actual losses will be calculated based upon the exact location of the offshore platform and incorporated into the final cable design
Point A	Offshore Platform C

Point B	Raritan Bay Waterfront Park Landing	
Point C		
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1500.000000	1500.000000
Winter (MVA)	1500.000000	1500.000000
Conductor size and type	2000mm2 copper	
Nominal voltage	DC	
Nominal voltage	400	
Line construction type	Submarine	
General route description	Submarine route in Atlantic Ocean. See Attachments 4, 19, and 22	
Terrain description	Submarine route in Atlantic Ocean. See Attachments 19 and 22	
Right-of-way width by segment	A kmz of the route is provided as Attachment 4. See Attachment 22 for more details.	
Electrical transmission infrastructure crossings	See Attachment 7 for a list of all crossings and proposed crossing plan	
Civil infrastructure/major waterway facility crossing plan	See Attachment 7 for a list of all crossings and proposed crossing plan	
Environmental impacts	See Attachment 19	
Tower characteristics	A submarine cable is being proposed. See Attachment 6 for details on the characteristics of the submarine cable and its proposed installation	
Construction responsibility	Proposer	
Benefits/Comments	See Attachment 1, Section 3.4	
<b>Component Cost Details - In Current Year \$</b>		
Engineering & design	competitive confidential information	
Permitting / routing / siting	competitive confidential information	

ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$505,498,062.00
Component cost (in-service year)	\$530,667,583.00

**Greenfield Transmission Line Component**

Component title	Offshore Platform D – Raritan Bay Waterfront Park Landing HVDC
Project description	Submarine HVDC Symmetrical monopole system from Offshore Platform D to Raritan Bay Waterfront Park Landing. NEETMA will deliver 1,500 MW at the onshore point of injection. Actual losses will be calculated based upon the exact location of the offshore platform and incorporated into the final cable design
Point A	Offshore Platform D
Point B	Raritan Bay Waterfront Park Landing
Point C	

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1500.000000	1500.000000
Winter (MVA)	1500.000000	1500.000000
Conductor size and type	2000mm2 copper	
Nominal voltage	DC	
Nominal voltage	400	

Line construction type	Submarine
General route description	Submarine route in Atlantic Ocean. See Attachments 4, 19, and 22
Terrain description	Submarine route in Atlantic Ocean. See Attachments 19 and 22
Right-of-way width by segment	A kmz of the route is provided as Attachment 4. See Attachment 22 for more details.
Electrical transmission infrastructure crossings	See Attachment 7 for a list of all crossings and proposed crossing plan
Civil infrastructure/major waterway facility crossing plan	See Attachment 7 for a list of all crossings and proposed crossing plan
Environmental impacts	See Attachment 19
Tower characteristics	A submarine cable is being proposed. See Attachment 6 for details on the characteristics of the submarine cable and its proposed installation
Construction responsibility	Proposer
Benefits/Comments	See Attachment 1, Section 3.4
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	competitive confidential information
Permitting / routing / siting	competitive confidential information
ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$669,278,392.00
Component cost (in-service year)	\$700,702,644.00

## Greenfield Transmission Line Component

Component title	Raritan Bay Waterfront Park Landing – Fresh Ponds Converter Station HVDC	
Project description	Four terrestrial HVDC Symmetrical monopole systems in a common duct bank from Raritan Bay Waterfront Park Landing to Fresh Ponds Converter Station. NEETMA will deliver 6,000 MW at the onshore point of injection. Actual losses will be calculated based upon the exact location of the offshore platform and incorporated into the final cable design	
Point A	Raritan Bay Waterfront Park Landing	
Point B	Fresh Ponds Converter Station	
Point C		
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1500.000000	1500.000000
Winter (MVA)	1500.000000	1500.000000
Conductor size and type	6000kcmil copper	
Nominal voltage	DC	
Nominal voltage	400	
Line construction type	Underground	
General route description	Submarine route in Atlantic Ocean. See Attachments 4, 19, and 22	
Terrain description	Submarine route in Atlantic Ocean. See Attachments 19 and 22	
Right-of-way width by segment	A kmz of the route is provided as Attachment 4. The project will primarily use existing public ROW. See Attachment 22 for more details.	
Electrical transmission infrastructure crossings	See Attachment 7 for a list of all crossings and proposed crossing plan	
Civil infrastructure/major waterway facility crossing plan	See Attachment 7 for a list of all crossings and proposed crossing plan	
Environmental impacts	See Attachment 19	



Tower characteristics A submarine cable is being proposed. See Attachment 6 for details on the characteristics of the submarine cable and its proposed installation

Construction responsibility Proposer

Benefits/Comments See Attachment 1, Section 3.4

**Component Cost Details - In Current Year \$**

Engineering & design competitive confidential information

Permitting / routing / siting competitive confidential information

ROW / land acquisition competitive confidential information

Materials & equipment competitive confidential information

Construction & commissioning competitive confidential information

Construction management competitive confidential information

Overheads & miscellaneous costs competitive confidential information

Contingency competitive confidential information

Total component cost \$968,208,066.00

Component cost (in-service year) \$1,127,058,066.00

**Transmission Line Upgrade Component**

Component title Loop in and reconductor existing Deans - E. Windsor 500 kV OH line to Fresh Ponds 500kV AIS substation

Project description Loop in existing Deans - E. Windsor 500 kV OH line at NEETMA proposed Fresh Pond sub and reconductor the section of line from Fresh Ponds - Deans

Impacted transmission line New NEETMA-Fresh Ponds substation to Deans 500 kV line

Point A Fresh Ponds

Point B Deans

Point C

Terrain description Terrain is agriculture in nature. Cut-ins will occur on ROW/easements owned by incumbent, and substation will be constructed on property NEETMA will obtain site control for

**Existing Line Physical Characteristics**

Operating voltage 500

Conductor size and type Same as existing

Hardware plan description Utilize existing line hardware to extent practicable

Tower line characteristics New dead end structures will need to be installed in order to loop existing lines into the NEETMA Fresh Ponds substation

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	500.000000	500.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	3178.000000	4282.000000
Winter (MVA)	3574.000000	4746.000000
Conductor size and type	1590 kcmil Falcon ACSR: 2C	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	2.23 miles	
Rebuild portion description	Construct new ~0.1 mi long 500 kV loop-ins to tie into the NEETMA Fresh Ponds AC substation. Reconductor the entire section of the 500kV OH circuit from Fresh Ponds to Deans.	
Right of way	Use of existing ROW and expansion for building 500 kV tie-in line (~0.1 mi long) into NEETMA proposed new Fresh Pond substation 500kV sub anticipated	
Construction responsibility	PSEG	

Benefits/Comments

Resolves reliability issues identified per PJM's Gen. Deliv. Process

**Component Cost Details - In Current Year \$**

Engineering & design

competitive confidential information

Permitting / routing / siting

competitive confidential information

ROW / land acquisition

competitive confidential information

Materials & equipment

competitive confidential information

Construction & commissioning

competitive confidential information

Construction management

competitive confidential information

Overheads & miscellaneous costs

competitive confidential information

Contingency

competitive confidential information

Total component cost

\$8,000,000.00

Component cost (in-service year)

\$8,660,000.00

**Transmission Line Upgrade Component**

Component title

Loop in and reconductor existing Deans -Smithburg 500 kV OH line to Fresh Ponds 500 kV AIS substation

Project description

Loop in existing Deans - Smithburg 500 kV OH line at NEETMA proposed Fresh Pond substation and reconductor the section of line from Fresh Ponds - Deans

Impacted transmission line

New NEETMA-Fresh Ponds substation to Deans 500 kV line

Point A

Fresh Ponds

Point B

Deans

Point C

Terrain description

Terrain is agriculture in nature. Cut-ins will occur on ROW/easements owned by incumbent, and substation will be constructed on property NEETMA will obtain site control for

**Existing Line Physical Characteristics**

Operating voltage	500
Conductor size and type	Same as existing
Hardware plan description	Utilize existing line hardware to extent practicable
Tower line characteristics	New dead end structures will need to be installed in order to loop existing lines into the NEETMA Fresh Ponds substation

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	500.000000	500.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	3178.000000	4282.000000
Winter (MVA)	3574.000000	4746.000000
Conductor size and type	1590 kcmil Falcon ACSR: 2C	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	2.27 miles	
Rebuild portion description	Construct new ~0.1 mi long 500 kV loop-ins to tie into the NEETMA Fresh Ponds AC substation. Reconductor the entire section of the 500kV OH circuit from Fresh Ponds to Deans.	
Right of way	Use of existing ROW and expansion for building 500 kV tie-in line (~0.1 mi long) into NEETMA proposed new Fresh Ponds substation 500kV sub anticipated	
Construction responsibility	PSEG	
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process	

**Component Cost Details - In Current Year \$**

Engineering & design	competitive confidential information
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Permitting / routing / siting	competitive confidential information
ROW / land acquisition	competitive confidential information
Materials & equipment	competitive confidential information
Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$8,000,000.00
Component cost (in-service year)	\$8,660,000.00

### **Transmission Line Upgrade Component**

Component title	Loop in existing Deans - Smithburg 500 kV OH line to Fresh Ponds 500kV AIS substation and use existing conductors
Project description	Loop in existing Deans - Smithburg 500 kV OH line at NEETMA proposed Fresh Ponds substation and use existing conductors on the section Fresh Ponds - Smithburg
Impacted transmission line	New NEETMA Fresh Ponds substation to Smithburg 500 kV line
Point A	Fresh Ponds
Point B	Smithburg
Point C	
Terrain description	Terrain is agriculture in nature. Cut-ins will occur on ROW/easements owned by incumbent, and substation will be constructed on property NEETMA will obtain site control for

### **Existing Line Physical Characteristics**

Operating voltage	500
Conductor size and type	Same as existing

Hardware plan description	Utilize existing line hardware to extent practicable
Tower line characteristics	New dead end structures will need to be installed in order to loop existing lines into the NEETMA Fresh Ponds substation

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	500.000000	500.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	2078.000000	2078.000000
Winter (MVA)	2078.000000	2078.000000
Conductor size and type	Same as existing	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	0.1 miles	
Rebuild portion description	Construct new ~0.1 mi long 500 kV loop-ins to tie into the NEETMA Fresh Ponds AC substation	
Right of way	Use of existing ROW and expansion for building 500 kV tie-in line (~0.1 mi long) into NEETMA proposed new Fresh Ponds substation 500kV sub anticipated	
Construction responsibility	JCPL	
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process	
<b>Component Cost Details - In Current Year \$</b>		
Engineering & design	competitive confidential information	
Permitting / routing / siting	competitive confidential information	
ROW / land acquisition	competitive confidential information	
Materials & equipment	competitive confidential information	

Construction & commissioning	competitive confidential information
Construction management	competitive confidential information
Overheads & miscellaneous costs	competitive confidential information
Contingency	competitive confidential information
Total component cost	\$3,000,000.00
Component cost (in-service year)	\$3,250,000.00

### **Transmission Line Upgrade Component**

Component title	Loop in existing Deans - E. Windsor 500 kV OH line to Fresh Ponds 500 kV AIS substation and use existing conductors
Project description	Loop in existing Deans - E. Windsor 500 kV OH line at NEETMA proposed Fresh Ponds substation. Use existing conductors on the section Fresh Ponds - E. Windsor
Impacted transmission line	New NEETMA-Fresh Ponds substation to E. Windsor 500 kV line
Point A	Fresh Ponds
Point B	E Windsor
Point C	
Terrain description	Terrain is agriculture in nature. Cut-ins will occur on ROW/easements owned by incumbent, and substation will be constructed on property NEETMA will obtain site control for

### **Existing Line Physical Characteristics**

Operating voltage	500
Conductor size and type	Same as existing
Hardware plan description	Utilize existing line hardware to extent practicable
Tower line characteristics	New dead end structures will need to be installed in order to loop existing lines into the NEETMA Fresh Ponds substation

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	500.000000	500.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	2656.000000	2983.000000
Winter (MVA)	2931.000000	3229.000000
Conductor size and type	Same as existing	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	0.1 miles	
Rebuild portion description	Construct new ~0.1 mi long 500 kV loop-ins to tie into the NEETMA Fresh Ponds AC substation	
Right of way	Use of existing ROW and expansion for building 500 kV tie-in line (~0.1 mi long) into NEETMA proposed new Fresh Ponds substation 500kV sub anticipated	
Construction responsibility	JCPL	
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process	
<b>Component Cost Details - In Current Year \$</b>		
Engineering & design	competitive confidential information	
Permitting / routing / siting	competitive confidential information	
ROW / land acquisition	competitive confidential information	
Materials & equipment	competitive confidential information	
Construction & commissioning	competitive confidential information	
Construction management	competitive confidential information	
Overheads & miscellaneous costs	competitive confidential information	



Contingency	competitive confidential information
Total component cost	\$3,000,000.00
Component cost (in-service year)	\$3,250,000.00

## Congestion Drivers

None

## Existing Flowgates

None

## New Flowgates

None

## Financial Information

Capital spend start date	01/2022
Construction start date	12/2025
Project Duration (In Months)	89

## Cost Containment Commitment

Cost cap (in current year)	competitive confidential information
Cost cap (in-service year)	competitive confidential information

## Components covered by cost containment

1. Offshore Platform A - Proposer
2. Offshore Platform B - Proposer
3. Offshore Platform C - Proposer

4. Offshore Platform D - Proposer
5. Fresh Ponds Converter Station - Proposer
6. Offshore Platform A – Raritan Bay Waterfront Park Landing HVDC - Proposer
7. Offshore Platform B – Raritan Bay Waterfront Park Landing HVDC - Proposer
8. Offshore Platform C – Raritan Bay Waterfront Park Landing HVDC - Proposer
9. Offshore Platform D – Raritan Bay Waterfront Park Landing HVDC - Proposer
10. Raritan Bay Waterfront Park Landing – Fresh Ponds Converter Station HVDC - Proposer

**Cost elements covered by cost containment**

Engineering & design	Yes
Permitting / routing / siting	Yes
ROW / land acquisition	Yes
Materials & equipment	Yes
Construction & commissioning	Yes
Construction management	Yes
Overheads & miscellaneous costs	Yes
Taxes	Yes
AFUDC	Yes
Escalation	Yes
Additional Information	competitive confidential information
Is the proposer offering a binding cap on ROE?	Yes
Would this ROE cap apply to the determination of AFUDC?	Yes
Would the proposer seek to increase the proposed ROE if FERC finds that a higher ROE would not be unreasonable?	No
Is the proposer offering a Debt to Equity Ratio cap?	competitive confidential information

Additional cost containment measures not covered above

## **Additional Comments**

None