Upgrades for Oceanview 1500 MW 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	1A-O15
PJM Proposal ID	520
Project title	Upgrades for Oceanview 1500 MW Injection
Project description	Required upgrades to facilitate 2-O15 injection
Email	Johnbinh.Vu@nexteraenergy.com
Project in-service date	10/2025
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

Project Components

1. Atlantic 230kV Substation Upgrade
2. Add 1x Phase Shifting Transformer at Raritan River substation in series ...
3. Add 1x Phase Shifting Transformer at Raritan River substation in series ...
4. Add new Oceanview - Atlantic 230 kV line using existing tower
5. Loop-in the existing Larrabee - Oceanview 230 kV line into the Atlantic ...

Substation Upgrade Component

Component title	Atlantic 230kV Substation Upgrade
Project description	Add four 230 kV line terminations at Atlantic, or reconfigure the existing substation to breaker and a half to accommodate(use 10 existing CB + add 8 new CB)
Substation name	Atlantic 230 kV
Substation zone	JCPL
Substation upgrade scope	Add four 230 kV line terminations at Atlantic, or reconfigure the existing substation to breaker and a half to accommodate(use 10 existing CB + add 8 new CB)

Transformer Information

None

New equipment description	Add four 230 kV line terminations at Atlantic, or reconfigure the existing substation to breaker and a half to accommodate(use 10 existing CB + add 8 new CB)
Substation assumptions	Use available space to rebuild the sub
Real-estate description	No expansion of substation fence anticipated
Construction responsibility	JCPL
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process

Component Cost Details - In Current Year $

Engineering & design	Confidential competitive information
Permitting / routing / siting	Confidential competitive information
ROW / land acquisition	Confidential competitive information
Materials & equipment	Confidential competitive information
Construction & commissioning	Confidential competitive information
Construction management	Confidential competitive information

Overheads & miscellaneous costs	Confidential competitive information
Contingency	Confidential competitive information
Total component cost	$13,983,000.00
Component cost (in-service year)	$15,140,000.00

Substation Upgrade Component

Component title	Add 1x Phase Shifting Transformer at Raritan River substation in series with Raritan River- Red Oak 230 OH line circuit 1
Project description	Add 1x Phase Shifting Transformer (PST) at Raritan River substation in series with Raritan River- Red Oak 230kV OH line (PSSE ID # : 206305- 206314 ckt 1)
Substation name	Raritan River 230 kV
Substation zone	JCPL
Substation upgrade scope	Add 1x Phase Shifting Transformer at Raritan River substation to prevent downstream overload on Raritan River- Red Oak 230kV OH line (PSSE ID # : 206305- 206314 ckt 1)

Transformer Information

	Name	**Capacity (MVA)**	
Transformer	Raritan River PST -1	766	
	High Side	**Low Side**	**Tertiary**
Voltage (kV)	230	230	0

New equipment description	AC Substation: Phase Shifting Transformer
Substation assumptions	Use available space in sub to add phase-shifting transformer
Real-estate description	No expansion of substation fence anticipated
Construction responsibility	JCPL
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process

Component Cost Details - In Current Year $

Engineering & design	Confidential competitive information
Permitting / routing / siting	Confidential competitive information
ROW / land acquisition	Confidential competitive information
Materials & equipment	Confidential competitive information
Construction & commissioning	Confidential competitive information
Construction management	Confidential competitive information
Overheads & miscellaneous costs	Confidential competitive information
Contingency	Confidential competitive information
Total component cost	$15,000,000.00
Component cost (in-service year)	$16,240,000.00

Substation Upgrade Component

Component title	Add 1x Phase Shifting Transformer at Raritan River substation in series with Raritan River- Red Oak 230 OH line circuit 2
Project description	Add 1x Phase Shifting Transformer (PST) at Raritan River substation in series with Raritan River- Red Oak 230kV OH line (PSSE ID # : 206305- 206315 ckt 1) to following ratings - Summer Normal :766 MVA Summer Emergency : 963 MVA
Substation name	Raritan River 230 kV
Substation zone	JCPL
Substation upgrade scope	Add 1x Phase Shifting Transformers at Raritan River substation to prevent downstream overload on Raritan River- Red Oak 230kV OH line (PSSE ID # : 206305- 206315 ckt 1) to following ratings - Summer Normal :766 MVA Summer Emergency : 963 MVA

Transformer Information

Name	Capacity (MVA)

Transformer	Raritan River PST-2	766	
	High Side	**Low Side**	**Tertiary**
Voltage (kV)	230	230	0
New equipment description	AC Substation: Phase Shifting Transformer		
Substation assumptions	Use available space in sub to add phase-shifting transformer		
Real-estate description	No expansion of substation fence anticipated		
Construction responsibility	JCPL		
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process		
Component Cost Details - In Current Year $			
Engineering & design	Confidential competitive information		
Permitting / routing / siting	Confidential competitive information		
ROW / land acquisition	Confidential competitive information		
Materials & equipment	Confidential competitive information		
Construction & commissioning	Confidential competitive information		
Construction management	Confidential competitive information		
Overheads & miscellaneous costs	Confidential competitive information		
Contingency	Confidential competitive information		
Total component cost	$15,000,000.00		
Component cost (in-service year)	$16,240,000.00		

Transmission Line Upgrade Component

Component title	Add new Oceanview - Atlantic 230 kV line using existing tower

Project description	The existing Larrabee - Oceanview 230 kV line has an open line position between Oceanview-Atlantic. Incumbent transmission owner to string a second circuit on the existing tower
Impacted transmission line	New Atlantic - Oceanview 230 kV line
Point A	Atlantic
Point B	Oceanview
Point C	
Terrain description	Use existing tower that exists in cleared ROW in a suburban setting

Existing Line Physical Characteristics

Operating voltage	230 kV
Conductor size and type	Match existing 230 kV conductors in the same corridor
Hardware plan description	Utilize existing hardware to extent possible - may need to install new insulators
Tower line characteristics	Utilize existing open postion on the Larrabee-Oceanview 230 kV line

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	709.000000	869.000000
Winter (MVA)	805.000000	1031.000000
Conductor size and type	1033.5 kcmil Curlew ACSS	
Shield wire size and type	match existing shield wire	
Rebuild line length	4.61	
Rebuild portion description	Utilize existing tower structures to string a new circuit from Atlantic to Larrabee	

Right of way	no new rights-of-way will be needed
Construction responsibility	JCPL
Benefits/Comments	

Component Cost Details - In Current Year $

Engineering & design	Confidential competitive information
Permitting / routing / siting	Confidential competitive information
ROW / land acquisition	Confidential competitive information
Materials & equipment	Confidential competitive information
Construction & commissioning	Confidential competitive information
Construction management	Confidential competitive information
Overheads & miscellaneous costs	Confidential competitive information
Contingency	Confidential competitive information
Total component cost	$6,000,000.00
Component cost (in-service year)	$6,490,000.00

Transmission Line Upgrade Component

Component title	Loop-in the existing Larrabee - Oceanview 230 kV line into the Atlantic 230 kV substation
Project description	Loop the existing Larrabee-Oceanview 230 kV line in and out of Atlantic 230 kV substation
Impacted transmission line	Larrabee - Oceanview 230 kV line
Point A	Larrabee
Point B	Oceanview
Point C	
Terrain description	Existing rights-of-way

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	no change to existing conductor
Hardware plan description	no change to existing hardware
Tower line characteristics	no change to existing tower

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	709.000000	869.000000
Winter (MVA)	805.000000	1031.000000
Conductor size and type	1033 Curlew ACSS	
Shield wire size and type	match existing	
Rebuild line length	0.25	
Rebuild portion description	Install new dead-end structures to loop-in the existing Larrabee-Oceanview line into the Atlantic 230 kV susbtation	
Right of way	No new rights-of-way will be required	
Construction responsibility	JCPL	
Benefits/Comments		

Component Cost Details - In Current Year $

Engineering & design	Confidential competitive information
Permitting / routing / siting	Confidential competitive information

ROW / land acquisition	Confidential competitive information
Materials & equipment	Confidential competitive information
Construction & commissioning	Confidential competitive information
Construction management	Confidential competitive information
Overheads & miscellaneous costs	Confidential competitive information
Contingency	Confidential competitive information
Total component cost	$2,000,000.00
Component cost (in-service year)	$2,160,000.00

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

None

Financial Information

Capital spend start date	12/2022
Construction start date	01/2022
Project Duration (In Months)	34

Additional Comments

None