Crete-St. John 345 kV Reconductoring Proposal

General Information

Proposing entity name	NXTMID
Company proposal ID	NEETMidAtlanticIN001
PJM Proposal ID	575
Project title	Crete-St. John 345 kV Reconductoring Proposal
Project description	NextEra Energy Transmission MidAtlantic Indiana, Inc. (NEET MidAtlantic IN) proposes to reconductor and make required structure modifications/enhancements to the Crete-St. John 345 kV transmission line (circuit #94507). NEET MidAtlantic IN will complete the work from the Illinois/Indiana state line to the Crete substation using the 2X Curlew 1033 ACSS UHS conductor. Additional incumbent Transmission Owner (TO) work in Illinois is to be performed by Commonwealth Edison Company (ComEd).
Project in-service date	12/2021
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	Not Applicable.

Project Components

1. Crete-St. John Transmission Line Upgrade

Transmission Line Upgrade Component

Component title	Crete-St. John Transmission Line Upgrade
Impacted transmission line	Crete-St. John 345 kV (circuit #94507)
Point A	Crete Substation

Point B	Illinois/Indiana State Line (Between structures 159 and 160)
Point C	St. John Substation at Pull-Off Structure (A-Frame)
Terrain description	The terrain along the transmission line right-of-way (ROW) is relatively flat with about 94% of the ROW having a ground slope of 4% or less. Elevations along the ROW range from about 670 feet to 721 feet MSL. Since the ROW is maintained, no tree or other clearing is anticipated to be required for the project. The existing land use adjacent to the ROW is primarily cultivated crops and low intensity developed lands. No new ROW is anticipated to be required.

Existing Line Physical Characteristics

Operating voltage	345 kV
Conductor size and type	PE-1414kCMIL (62/19) ACSR
Hardware plan description	NEET MidAtlantic IN will replace the line hardware and insulators to accommodate the new bundled conductor and optical ground wire (OPGW). OPGW is planned for the ~7-mile length of the re-conductor in Indiana. The OPGW will contain 48 fibers.
Tower line characteristics	The existing lattice steel towers were installed in 1958. Based on preliminary site assessments some structure modifications / enhancements are anticipated. The detailed design phase will include a thorough investigation of tower and foundation conditions as well as collection of geotechnical and LIDAR data.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	345.000000	345.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1679.000000	2011.000000
Winter (MVA)	2091.000000	2339.000000
Conductor size and type	Bundled (2X) Curlew 1033kCMIL ACSS	
Shield wire size and type	Existing shield wire above the circuit being reconductored will be replaced with 48-count OPGW.	

Rebuild line length	Approximately 7 miles in Indiana to be completed by NEET MidAtlantic IN, and 5 miles in Illinois (to be completed by incumbent TO – ComEd).
Rebuild portion description	NEET MidAtlantic IN plans to re-conductor approximately 7 miles of circuit #94507. The re-conductoring will start at the Illinois/Indiana state line and continue east/north east to the St. John substation. The line being reconductored is sited in a well maintained transmission ROW, with good access that will require minimal site preparation. Based on preliminary engineering, it is assumed that tower condition will allow replacement of discrete lattice members to address increases in structural loading resulting from the higher capacity conductor. Construction is planned to be executed in fall 2021 such that line outages are timed to minimize impact to the transmission system. Additional work in Illinois to be done by incumbent TO – ComEd.
Right of way	From the Illinois/Indiana state line to St. John Substation the 7 mile reconductoring project will remain within the existing 140ft ROW. No expansion to the existing 140ft ROW is anticipated.
Construction responsibility	As discussed in additional comments, contractor name is business confidential information.
Additional comments	Additional comments contains business confidential information.
Component Cost Details - In Current Year $	
Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$8,249,880.00
Component cost (in-service year)	$8,534,086.00

Congestion Drivers

None

Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type
GD-W3	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Gen Deliv (winter)
GD-W4	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Gen Deliv (winter)

New Flowgates

None

Financial Information

Capital spend start date	10/2020
Construction start date	08/2021
Project Duration (In Months)	14

Additional comments

All attachments contains business confidential information.