Topology Changes at Ladysmith, Kraken, and Carson substations

General Information

Proposing entity name	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Company proposal ID	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
PJM Proposal ID	868
Project title	Topology Changes at Ladysmith, Kraken, and Carson substations
Project description	1. Cut-in the future 500kV line from North Anna to Kraken (b4000.344) and terminate into Ladysmith substation. Disconnect the following existing and future 500kV lines from Ladysmith and Kraken to create a direct 500kV line from Elmont to Yeat: a. Pull out Elmont to Ladysmith (existing 500kV) from Ladysmith b. Pull out Ladysmith to Kraken (future 500kV) from Ladysmith c. Pull out Kraken to Yeat (future 500kV) from Kraken 2. Disconnect the existing 500kV line Rogers Rd to Carson from Carson and disconnect the existing 500kV line Carson to Septa from Carson and to create a direct 500kV line from Rogers Rd to Septa.
Email	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Project in-service date	06/2032
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Project Components

1. Ladysmith Cut-in - North Anna to Kraken Future 500kV Line
2. 500kV Line Disconnect - Elmont to Ladysmith to Kraken to Yeat

Transmission Line Upgrade Component

Component title	Ladysmith Cut-in - North Anna to Kraken Future 500kV Line
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Impacted transmission line	Line ID to be determined
Point A	North Anna
Point B	Ladysmith
Point C	Kraken
Terrain description	The area is in the Piedmont region of Virginia, characterized by generally rolling hills and dissected plateaus.
Existing Line Physical Characteristics	
Operating voltage	500
Conductor size and type	3-1351 ACSS/TW/HS
Hardware plan description	New hardware will be used for the line cut-in.
Tower line characteristics	New structures will be installed for this line cut-in.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	4357.000000	4357.000000
Winter (MVA)	5155.000000	5155.000000
Conductor size and type	3-1351 ACSS/TW/HS (42/19) 145°C MOT	

Shield wire size and type	(2) DNO-10110 shield wire
Rebuild line length	0.25 Miles
Rebuild portion description	Permanent Facilities to be Installed: 1. (2) 500 kV SC Steel DDE 3-Pole Structure 2. (1) 500 kV SC Steel A-Frame Backbone Structure 3. 0.25 miles of 3-1351 ACSS/TW/HS Conductor 4. 0.25 miles of DNO-10100 OPGW
Right of way	No new ROW needed.
Construction responsibility	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Benefits/Comments	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Component Cost Details - In Current Year $	
Engineering & design	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Permitting / routing / siting	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
ROW / land acquisition	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Materials & equipment	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction & commissioning	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction management	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Overheads & miscellaneous costs	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Contingency	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Total component cost	$6,686,110.00
Component cost (in-service year)	$7,160,824.00

Transmission Line Upgrade Component

Component title	500kV Line Disconnect - Elmont to Ladysmith to Kraken to Yeat
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Impacted transmission line	Line ID to be determined

Point A	Elmont
Point B	Ladysmith to Kraken
Point C	Yeat
Terrain description	The area is in the Piedmont region of Virginia, characterized by generally rolling hills and dissected plateaus.
Existing Line Physical Characteristics	
Operating voltage	500
Conductor size and type	3-1351 ACSS/TW/HS
Hardware plan description	New hardware will be used if needed for any line extensions.
Tower line characteristics	New structures will be installed if needed for any line extensions.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	4357.000000	4357.000000
Winter (MVA)	5155.000000	5155.000000

Conductor size and type	3-1351 ACSS/TW/HS (42/19) 145°C MOT
Shield wire size and type	(2) DNO-10110 shield wire
Rebuild line length	0.40 Miles
Rebuild portion description	1. Remove any structures and hardware no long needed after disconnecting the lines from Ladysmith and Kraken substations. 2. Reuse existing structures as needed to extend and reconnect the disconnected lines. 3. Install new structures and hardware as needed for reconnection.
Right of way	No new ROW needed.

Construction responsibility	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Benefits/Comments	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Component Cost Details - In Current Year $	
Engineering & design	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Permitting / routing / siting	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
ROW / land acquisition	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Materials & equipment	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction & commissioning	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction management	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Overheads & miscellaneous costs	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Contingency	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Total component cost	$1,671,527.50
Component cost (in-service year)	$1,790,205.95

Transmission Line Upgrade Component

Component title	500kV Line Disconnect - Rogers Rd-Carson & Carson-Septa
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Impacted transmission line	Line ID to be determined
Point A	Rogers Rd
Point B	Carson
Point C	Septa
Terrain description	NA

Existing Line Physical Characteristics		
Operating voltage	500	
Conductor size and type	3-1351 ACSS/TW/HS	
Hardware plan description	New hardware will be used if needed.	
Tower line characteristics	New structures will be installed if needed for any line extensions.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	4357.000000	4357.000000
Winter (MVA)	5155.000000	5155.000000
Conductor size and type	3-1351 ACSS/TW/HS (42/19) 145°C MOT	
Shield wire size and type	(2) DNO-10100 OPGW	
Rebuild line length	0.25 Miles	
Rebuild portion description	1. Remove any structures and hardware no long needed after disconnecting the lines from Carson substation. 2. Reuse existing structures as needed to extend and reconnect the disconnected lines. 3. Install new structures and hardware as needed for reconnection.	
Right of way	Existing ROW will be used.	
Construction responsibility	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Benefits/Comments	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Component Cost Details - In Current Year $		
Engineering & design	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Permitting / routing / siting	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	

ROW / land acquisition	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Materials & equipment	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction & commissioning	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction management	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Overheads & miscellaneous costs	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Contingency	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Total component cost	$1,671,527.50
Component cost (in-service year)	$1,790,205.95

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

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Financial Information

Capital spend start date	01/2026
Construction start date	06/2028
Project Duration (In Months)	77

Cost Containment Commitment

Cost cap (in current year)	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Cost cap (in-service year)	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Components covered by cost containment

1. Ladysmith Cut-in - North Anna to Kraken Future 500kV Line - Dominion
2. 500kV Line Disconnect - Elmont to Ladysmith to Kraken to Yeat - Dominion

Cost elements covered by cost containment

Engineering & design	Yes
Permitting / routing / siting	No
ROW / land acquisition	No
Materials & equipment	No
Construction & commissioning	No
Construction management	No
Overheads & miscellaneous costs	No
Taxes	No
AFUDC	No
Escalation	No
Additional Information	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
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?	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Additional Comments

None