

Line #2210 Reconductor - Brambleton to Evergreen Mills - Full Reconductor

General Information

Proposing entity name	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	735
Project title	Line #2210 Reconductor - Brambleton to Evergreen Mills - Full Reconductor
Project description	Proposal B-2 increases the ampacity of Line 2210 between Brambleton and Evergreen Mills to a summer rating of 1574 MVA by fully reconductoring the line and upgrading the line leads at Brambleton. System Protection Engineering Coordination Study and System Protection Technician relay resets.
Project in-service date	12/2025
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	The redacted information is proprietary to the Company, therefore it is privileged and confidential.

Project Components

1. Uprate line segment from Brambleton to Evergreen Mills - Full Reconductor
2. Brambleton Substation terminal equipment
3. Evergreen Mills relay resets

Transmission Line Upgrade Component

Component title	Uprate line segment from Brambleton to Evergreen Mills - Full Reconductor
Impacted transmission line	Line #2210 - Brambleton to Evergreen Mills

Point A	Brambleton
Point B	Evergreen Mills
Point C	
Terrain description	The project area is in the northern Virginia Piedmont region with elevations ranging from approximately 250 to 300 feet. The terrain is predominately forested/vegetated existing right-of-way consisting of moderate slopes. The line will cross two primary roads, several small streams, and two streams with greater than 5 square miles of drainage area.

Existing Line Physical Characteristics

Operating voltage	230 kv
Conductor size and type	2-636 ACSR (24/7) 150 Deg C, 2-795 ACSR (26/7) 150 Deg C, and 2-768.2 ACSS/TW 250 Deg C MOT
Hardware plan description	Existing line hardware will not be reused.
Tower line characteristics	Existing structures for this transmission line are ten years old or less and do not need to be replaced as part of the reconductor project.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1574.000000	1574.000000
Winter (MVA)	1650.000000	1650.000000
Conductor size and type	2-768.2 ACSS/TW 250 deg C MOT	
Shield wire size and type	Shield wire unchanged	
Rebuild line length	1.91 miles (Reconductor)	

Rebuild portion description	<p>Reconductor scope includes: 1. Remove approximately 1.62 miles of single circuit 3-phase 2-636 ACSR conductor between Brambleton and structure number 2210/95A. 2. Remove approximately 0.29 miles of single circuit 3-phase 2-795 ACSR conductor between structure number 2210/95A and the proposed double circuit 3-pole structure at Evergreen Mills Junction. 3. Replace three conductor deadend insulator assemblies on the line 2210 backbone at Brambleton. 4. Replace three conductor suspension insulator assemblies on one double circuit steel pole between Brambleton and the proposed double circuit 3-pole structure at Evergreen Mills Junction. 5. Replace three conductor suspension insulator assemblies on one single circuit steel pole between Brambleton and the proposed double circuit 3-pole structure at Evergreen Mills Junction. 6. Replace three conductor braced post insulator assemblies on seven double circuit steel poles between Brambleton and the proposed double circuit 3-pole structure at Evergreen Mills Junction. 7. Replace six conductor deadend insulator assemblies on eleven double circuit steel poles between Brambleton and the proposed double circuit 3-pole structure at Evergreen Mills Junction. 8. Replace three conductor deadend insulator assemblies on one double circuit steel 3-pole structure between Brambleton and the proposed double circuit 3-pole structure at Evergreen Mills Junction. 9. Install approximately 1.91 miles of single circuit 3-phase 2-768.2 ACSS/TW conductor between Brambleton and the proposed double circuit 3-pole structure at Evergreen Mills Junction. This shall include the installation of dampers, spacers, and tee connectors for the substation installed risers.</p>
Right of way	No new or additional right of way is required to complete this project.
Construction responsibility	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Additional 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	\$2,057,158.00
Component cost (in-service year)	\$2,203,215.00

Substation Upgrade Component

Component title	Brambleton Substation terminal equipment
Substation name	Brambleton
Substation zone	352
Substation upgrade scope	Upgrade Line 2210 line lead conductors, upgrade CT's and System Protection Engineering Coordination Study and System Protection Technician relay resets.

Transformer Information

None	
New equipment description	Purchase and install Substation Material: 1.) Line 2210 line lead conductors and connector to support 1574 MVA summer line rating. 2.) All Current Transformers in the 230 kV, Circuit Breaker 221002 (formerly Line 2183) total of eighteen (18), 2000: 5 CT's, TRF 4 3.) Remove- Existing CT's in the Breaker, conductors, connectors and accessories
Substation assumptions	1.) No additional relay material will be needed for this proposal. 2.) Current Transformers in the 230kV Circuit Breaker 2172T2210 will be replaced as part of Proposal A2 that has a projected target date of 6/2024.
Real-estate description	The substation will not be expanded for this proposal.
Construction responsibility	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Additional 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	\$189,672.00
Component cost (in-service year)	\$203,139.00

Substation Upgrade Component

Component title	Evergreen Mills relay resets
Substation name	Evergreen Mills
Substation zone	352
Substation upgrade scope	System Protection Engineering Coordination Study and System Protection Technician relay resets.

Transformer Information

None	
New equipment description	No new equipment required for this proposal.
Substation assumptions	No additional relay equipment required for this proposal.
Real-estate description	No new real-estate required for this proposal.
Construction responsibility	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Additional 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	\$9,978.00
Component cost (in-service year)	\$10,686.00

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-S11	314171	6BRAMBL	313827	6EVERGR MILL	2	230	345	Gen Deliv (Summer)
N2-ST1	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (summer)
N2-ST3	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (summer)
N2-ST8	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (summer)
N2-ST10	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (summer)
N1-ST32	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1 Thermal (Summer)
N2-ST13	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (summer)
N2-ST14	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (summer)
N2-ST15	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (summer)
N2-WT1	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (winter)
N2-WT8	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (winter)
DOM-T1	313827	6EVERGR MILL	314171	6BRAMBL	2	230	345	FERC 715 Thermal

New Flowgates

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Financial Information

Capital spend start date	08/2024
Construction start date	08/2025
Project Duration (In Months)	16

Additional comments

None