

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

General Information

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| 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 | 740 |
| Project title | Line #2210 Reconductor - Brambleton to Evergreen Mills - Partial Reconductor |
| Project description | Proposal B-1 increases the ampacity of Line 2210 between Brambleton and Evergreen Mills to a summer rating of 1225 MVA by partially reconductoring the line and upgrading line leads at Brambleton. |
| 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 - Partial Recondu...
2. Brambleton Substation terminal equipment
3. Evergreen Mills Substation relay resets

Transmission Line Upgrade Component

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| Component title | Uprate line segment from Brambleton to Evergreen Mills - Partial Reconductor |
| Impacted transmission line | Line #2210 - Brambleton to Evergreen Mills |
| Point A | Brambleton |

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|---------------------|--|
| 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

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| 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) | 1225.000000 | 1225.000000 |
| Winter (MVA) | 1358.000000 | 1358.000000 |
| Conductor size and type | 2-768.2 ACSS/TW 250 deg C MOT | |
| Shield wire size and type | Shield wire unchanged | |
| Rebuild line length | 1.62 miles | |

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| Rebuild portion description | 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. Replace three conductor deadend insulator assemblies on the line 2210 backbone at Brambleton. 3. Replace three conductor suspension insulator assemblies on one single circuit steel pole between Brambleton and structure number 2210/95A. 4. Replace three conductor braced post insulator assemblies on seven double circuit steel poles between Brambleton and structure number 2210/95A. 5. Replace six conductor deadend insulator assemblies on eight double circuit steel poles between Brambleton and structure number 2210/95A. 6. Replace three conductor deadend insulator assemblies on one double circuit steel pole between Brambleton and structure number 2210/95A. 7. Install approximately 1.62 miles of single circuit 3-phase 2-768.2 ACSS/TW conductor between Brambleton and structure number 2210/95A. This shall include the installation of dampers, spacers, and tee connectors for the substation installed risers. |
| 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 | \$1,870,658.00 |
| Component cost (in-service year) | \$2,003,474.00 |

Substation Upgrade Component

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|--------------------------|---|
| Component title | Brambleton Substation terminal equipment |
| Substation name | Brambleton |
| Substation zone | 352 |
| Substation upgrade scope | 1.) Upgrade Line 2210 line lead conductors. 2.) System Protection Engineering Coordination Study and System Protection Technician relay resets. 3.) Remove line Wave Trap |

Transformer Information

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|-----------------------------|---|
| None | |
| New equipment description | Purchase & Install - Line 2210 line lead conductors and connector to support 1225 MVA summer line rating. |
| Substation assumptions | No additional relay material will be needed. |
| Real-estate description | The substation will not be expanded for this project. No real-estate plan necessary. |
| 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 | \$133,092.00 |

Component cost (in-service year) \$142,542.00

Substation Upgrade Component

Component title Evergreen Mills Substation 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

The redacted information is proprietary to the Company, therefore it is privileged and confidential.

Financial Information

Capital spend start date 09/2024

Construction start date 09/2025

Project Duration (In Months)

15

Additional comments

None