

Overdutied Breaker Replacement

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	261
Project title	Overdutied Breaker Replacement
Project description	Replace breakers identified to be overdutied in the 2024 Reliability Open Window #1. Brambleton 230 Lines Bypass (Lines # 201, 206, 2227, 2319) to reduce short circuit levels in the area.
Email	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Project in-service date	06/2029
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. Substation Breaker Replacements
2. Brambleton 230 kV Line 2319 & 201 Bypass
3. Brambleton 230 kV Line 2227 & 206 Bypass
4. Northstar 230 kV Substation Upgrade
5. Altair 230 kV Substation Upgrade

- 6. Racefield 230 kV Substation Upgrade
- 7. Thunderball 230 kV Substation Upgrade

Substation Upgrade Component

Component title	Substation Breaker Replacements
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Multiple Substations.
Substation zone	Dominion
Substation upgrade scope	Purchase and install substation material: 1. (1) 230kV, 63kAIC, 4000A, Circuit Breaker at Ashburn. 2. (1) 230kV, 80kAIC, 4000A, Circuit Breaker at Beaumeade. 3. (4) 230kV, 63kAIC, 4000A, Circuit Breakers at Braddock. 4. (2) 230kV, 80kAIC, 4000A, Circuit Breakers at Brambleton. 5. (1) 230kV, 63kAIC, 4000A, Circuit Breaker at Bull Run. 6. (5) 230kV, 80kAIC, 4000A, Circuit Breakers at Buttermilk. 7. (3) 230kV, 80kAIC, 4000A, Circuit Breakers at Cabin Run. 8. (1) 230kV, 63kAIC, 4000A, Circuit Breaker at Carson. 9. (3) 230kV, 80kAIC, 4000A, Circuit Breakers at Clifton. 10. (2) 230kV, 80kAIC, 4000A, Circuit Breakers at Evergreen Mills 11. (2) 230kV, 80kAIC, 4000A, Circuit Breakers at Goose Creek 12. (1) 500kV, 80kAIC, 5000A, Circuit Breaker at Goose Creek 13. (1) 230kV, 63kAIC, 4000A, Circuit Breaker at Ladysmith. 14. (10) 230kV, 63kAIC, 4000A, Circuit Breakers at Ladysmith. 15. (1) 230kV, 63kAIC, 4000A, Circuit Breaker at Liberty. 16. (4) 230kV, 80kAIC, 4000A, Circuit Breakers at Lockridge. 17. (3) 230kV, 80kAIC, 4000A, Circuit Breakers at Loudoun. 18. (1) 230kV, 63kAIC, 4000A, Circuit Breakers at Loudoun CAP. 19. (2) 500kV, 63kAIC, 5000A, Circuit Breakers at Loudoun. 20. (4) 230kV, 63kAIC, 4000A, Circuit Breakers at Morrisville 21. (7) 500kV, 63kAIC, 5000A, Circuit Breakers at Morrisville 22. (7) 500kV, 63kAIC, 5000A, Circuit Breakers at Mosby 23. (5) 230kV, 80kAIC, 4000A, Circuit Breakers at Nimbus. 24. (4) 230kV, 80kAIC, 4000A, Circuit Breakers at Nivo. 25. (3) 230kV, 80kAIC, 4000A, Circuit Breakers at Ox. 26. (1) 230kV, 80kAIC, 4000A, Circuit Breaker at Ox SC242. 27. (2) 230kV, 80kAIC, 4000A, Circuit Breakers at Paragon. 28. (3) 230kV, 80kAIC, 4000A, Circuit Breakers at Pleasant. 29. (1) 230kV, 63kAIC, 4000A, Circuit Breaker at Pleasant. 30. (1) 230kV, 63kAIC, 4000A, Circuit Breaker at Remington CT. 31. (4) 230kV, 63kAIC, 4000A, Circuit Breakers at Remington. 32. (6) 230kV, 80kAIC, 4000A, Circuit Breakers at Roundtable. 33. (3) 230kV, 80kAIC, 4000A, Circuit Breakers at Vint Hill. 34. (4) 230kV, 80kAIC, 4000A, Circuit Breakers at Yardley.

Transformer Information

None

New equipment description	<p>Purchase and install substation material: 1. (1) 230kV, 63kAIC, 50000A, Circuit Breaker at Ashburn. 2. (1) 230kV, 80kAIC, 63000A, Circuit Breaker at Beaumeade. 3. (4) 230kV, 63kAIC, 40000A, Circuit Breakers at Braddock. 4. (2) 230kV, 80kAIC, 63000A, Circuit Breakers at Brambleton. 5. (1) 230kV, 63kAIC, 50000A, Circuit Breaker at Bull Run. 6. (5) 230kV, 80kAIC, 63000A, Circuit Breakers at Buttermilk. 7. (3) 230kV, 80kAIC, 63000A, Circuit Breakers at Cabin Run. 8. (1) 230kV, 63kAIC, 40000A, Circuit Breaker at Carson. 9. (3) 230kV, 80kAIC, 63000A, Circuit Breakers at Clifton. 10. (2) 230kV, 80kAIC, 63000A, Circuit Breakers at Evergreen Mills 11. (2) 230kV, 80kAIC, 63000A, Circuit Breakers at Goose Creek 12. (1) 500kV, 80kAIC, 50000A, Circuit Breaker at Goose Creek 13. (1) 230kV, 63kAIC, 50000A, Circuit Breaker at Ladysmith. 14. (10) 230kV, 63kAIC, 40000A, Circuit Breakers at Ladysmith. 15. (1) 230kV, 63kAIC, 50000A, Circuit Breaker at Liberty. 16. (4) 230kV, 80kAIC, 63000A, Circuit Breakers at Lockridge. 17. (3) 230kV, 80kAIC, 63000A, Circuit Breakers at Loudoun. 18. (3) 230kV, 63kAIC, 50000A, Circuit Breakers at Loudoun. 19. (4) 230kV, 63kAIC, 50000A, Circuit Breakers at Morrisville 20. (7) 500kV, 63kAIC, 50000A, Circuit Breakers at Morrisville 21. (7) 500kV, 63kAIC, 50000A, Circuit Breakers at Mosby 22. (5) 230kV, 80kAIC, 63000A, Circuit Breakers at Nimbus. 23. (4) 230kV, 80kAIC, 63000A, Circuit Breakers at Nivo. 24. (3) 230kV, 80kAIC, 63000A, Circuit Breakers at Ox. 25. (1) 230kV, 80kAIC, 50000A, Circuit Breaker at Ox SC242. 26. (2) 230kV, 80kAIC, 63000A, Circuit Breakers at Paragon. 27. (3) 230kV, 80kAIC, 63000A, Circuit Breakers at Pleasant. 28. (1) 230kV, 63kAIC, 40000A, Circuit Breaker at Pleasant. 29. (1) 230kV, 63kAIC, 40000A, Circuit Breaker at Remington CT. 30. (4) 230kV, 63kAIC, 40000A, Circuit Breakers at Remington. 31. (6) 230kV, 80kAIC, 63000A, Circuit Breakers at Roundtable. 32. (3) 230kV, 80kAIC, 63000A, Circuit Breakers at Vint Hill. 33. (4) 230kV, 80kAIC, 63000A, Circuit Breakers at Yardley.</p>
Substation assumptions	<p>The cost shown below only includes the following for breaker installation: - Material (Breaker) - Labor - Engineering Design - Project & Construction Management The cost shown below does not include the following because of increased fault current at the substation: - Changes Substation Ground Grid - Bus Spans/Bus Calculations - Insulation Coordination - Steel & Foundation for the additional bus supports</p>
Real-estate description	<p>It is assumed that substations will not be expanded for this project.</p>
Construction responsibility	<p>The redacted information is proprietary to the Company; therefore, it is privileged and confidential.</p>
Benefits/Comments	<p>The redacted information is proprietary to the Company; therefore, it is privileged and confidential.</p>
Component Cost Details - In Current Year \$	
Engineering & design	<p>The redacted information is proprietary to the Company; therefore, it is privileged and confidential.</p>
Permitting / routing / siting	<p>The redacted information is proprietary to the Company; therefore, it is privileged and confidential.</p>
ROW / land acquisition	<p>The redacted information is proprietary to the Company; therefore, it is privileged and confidential.</p>
Materials & equipment	<p>The redacted information is proprietary to the Company; therefore, it is privileged and confidential.</p>

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	\$69,730,000.00
Component cost (in-service year)	\$74,680,830.00

Substation Upgrade Component

Component title	Brambleton 230 kV Line 2319 & 201 Bypass
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Brambleton
Substation zone	352
Substation upgrade scope	Wave traps removal, conductors & connectors, drawing work, relay resets and field support to tie the lines together and re-work the existing line panels to become bus panels.

Transformer Information

None	
New equipment description	NA
Substation assumptions	1. The scope of work assumes that there is no overlap with other designs and construction activities.
Real-estate description	Substation is not being expanded.
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	\$300,000.00
Component cost (in-service year)	\$321,300.00
Substation Upgrade Component	
Component title	Brambleton 230 kV Line 2227 & 206 Bypass
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Brambleton
Substation zone	352
Substation upgrade scope	Drawing work, relay resets and field support to tie the lines together and re-work the existing line panels to become bus panels.
Transformer Information	
None	
New equipment description	NA
Substation assumptions	1. The scope of work assumes that there is no overlap with other designs and construction activities.
Real-estate description	Substation is not being expanded.
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	\$250,000.00
Component cost (in-service year)	\$267,750.00
Substation Upgrade Component	
Component title	Northstar 230 kV Substation Upgrade
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Northstar
Substation zone	352
Substation upgrade scope	Wave Trap addition, conductors & connectors, drawing work, relay resets and field support to change line destination & convert the line panel to DCB/PLC.
Transformer Information	
None	
New equipment description	NA

Substation assumptions	1. The scope of work assumes that there is no overlap with other designs and construction activities.
Real-estate description	Substation is not being expanded.
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	\$350,000.00
Component cost (in-service year)	\$374,850.00
Substation Upgrade Component	
Component title	Altair 230 kV Substation Upgrade
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Altair
Substation zone	352
Substation upgrade scope	Drawing work, relay resets and field support to change the line destination.

Transformer Information

None

New equipment description

NA

Substation assumptions

1. The scope of work assumes that there is no overlap with other designs and construction activities.

Real-estate description

Substation is not being expanded.

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

\$50,000.00

Component cost (in-service year)

\$53,550.00

Substation Upgrade Component

Component title

Racefield 230 kV Substation Upgrade

Project description

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

Substation name	Racefield
Substation zone	352
Substation upgrade scope	Drawing work, relay resets and field support to change the line destination.
Transformer Information	
None	
New equipment description	NA
Substation assumptions	1. The scope of work assumes that there is no overlap with other designs and construction activities.
Real-estate description	Substation is not being expanded.
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	\$50,000.00
Component cost (in-service year)	\$53,550.00

Substation Upgrade Component

Component title	Thunderball 230 kV Substation Upgrade
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Thunderball
Substation zone	352
Substation upgrade scope	Drawing work, relay resets and field support to change the line destination.
Transformer Information	
None	
New equipment description	NA
Substation assumptions	1. The scope of work assumes that there is no overlap with other designs and construction activities.
Real-estate description	Substation is not being expanded.
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	\$50,000.00
Component cost (in-service year)	\$53,550.00

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

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

Financial Information

Capital spend start date	02/2025
Construction start date	06/2025
Project Duration (In Months)	52

Additional Comments

None