Evergreen Mills - 300MW Load Drop Violation

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	648
Project title	Evergreen Mills - 300MW Load Drop Violation
Project description	Cut existing Line #2183 (Brambleton to Poland Road) and extend double circuit 230kV lines creating new Line #2210 (Brambleton to Evergreen Mills) and Line #2183 (Evergreen Mills to Poland Road)
Email	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Project in-service date	06/2027
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. Evergreen Mills substation
2. Brambleton Substation
3. Poland Road Substation
4. Extension of 230kV Line #2183 Poland to Evergreen Mills
5. Extension of 230kV Line #2183 Brambleton to Evergreen Mills

Substation Upgrade Component

Component title	Evergreen Mills substation
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Evergreen Mills
Substation zone	352
Substation upgrade scope	Install two (2) 230kV breakers, two (2) disconnect switches, six (6) line CCVTs, six (6) surge arresters, and associate conductors, connectors, foundations, steel, conduit, grounding, line relaying, and breaker protection.

Transformer Information

None

New equipment description	Substation Material: 1. Two (2), 230kV, 4000A, 63kAIC, SF6 Circuit Breaker 2. Two (2), 230kV, 4000A 3-Phase Double End Break Switches 3. Six (6), 230 kV, Relay Accuracy CCVT's. 4. Six (6), 180 kV, 144 kV MCOV, Station Class Surge Arresters. 5. Foundations and steel structures as required. 6. Conductor, connectors, conduit, control cable, and grounding material per engineering standards. Relay Material: 1. Two (2), 4510 – SEL-2411 Breaker Annunciator 2. Two (2), 4506 – 3Ø CCVT Potential Makeup Box 3. Two (2), 4526_A – Circuit Breaker Fiber Optic Makeup Box 4. Two (2), 1340 – 28" Dual SEL-411L CD/Fiber Line Panel 5. Two (2), 1510 – 28" SEL-351S Breaker Control Panel w/ Reclosing
Substation assumptions	1. The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary. 2. 4-hole pad connections must be replaced with 6-hole connections to maintain 4000A ratings.
Real-estate description	No new real-estate required for substation expansion.
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	$1,642,057.00
Component cost (in-service year)	$1,758,643.05

Substation Upgrade Component

Component title	Brambleton Substation
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	Install one (1), 1340 – 24” Dual SEL-411L, CD/Fiber Line Relay Panel. Retire one (1) 230kV, 3000A, Wave Trap 2183WT, associated foundation, steel, terminal connections. and one (1) relay panel.

Transformer Information

None

New equipment description	One (1), 1340 – 24” Dual SEL-411L, CD/Fiber Line Panel
Substation assumptions	1. Relay Settings and protection & control design for the new line termination will be revised as part of the SPE scope of work. 2. The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary.
Real-estate description	Brambleton Substation will not be expanded under this project.
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	$194,892.00
Component cost (in-service year)	$208,729.33

Substation Upgrade Component

Component title	Poland Road Substation
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Poland Road
Substation zone	352
Substation upgrade scope	Retire one (1) 230kV, 3000A, Wave Trap 2183WT, associated foundation, steel, and terminal connections. Install one (1), 1340 – 24” Dual SEL-411L, CD/Fiber Line Panel and one (1), Panel Retirement (Panel 4).

Transformer Information

None

New equipment description	One (1), 1340 – 24” Dual SEL-411L, CD/Fiber Line Panel One (1), Panel Retirement (Panel 4)

Substation assumptions	1. Relay Settings and protection & control design for the new line termination will be revised as part of the SPE scope of work. 2. The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary.
Real-estate description	Poland Road Substation will not be expanded under this project.
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	$194,892.00
Component cost (in-service year)	$208,729.33

Transmission Line Upgrade Component

Component title	Extension of 230kV Line #2183 Poland to Evergreen Mills
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Impacted transmission line	Line #2183
Point A	Poland Road
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 320 feet. The terrain is predominately vegetated existing right-of-way consisting of minimal slopes and industrial development. The line will cross one primary road and two stormwater management ponds.

Existing Line Physical Characteristics

Operating voltage	230 kV
Conductor size and type	2-636 ACSR (24/7) 150°C MOT [1.62 miles]; 2-795 ACSR (26/7) 150°C MOT [3.60 miles]
Hardware plan description	Existing segment of the line will remain as is. For the extension segment, new hardware will be used. The existing hardware were installed in 2018.
Tower line characteristics	New structures will be used for the extension.

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 ACSS/TW-HS (20/7) 250°C MOT (New Section); 2-795 ACSR (26/7) 150°C MOT (Existing Section)
Shield wire size and type	DNO-11410 OPGW shield wire
Rebuild line length	0.63 miles (Line Extension)
Rebuild portion description	See Scope of Work in attachments for designation of removed, modified and installed structures.
Right of way	160' Right-of-Way required for this scope of work has been previously acquired.
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	$2,836,735.50
Component cost (in-service year)	$3,038,143.72

Transmission Line Upgrade Component

Component title	Extension of 230kV Line #2183 Brambleton to Evergreen Mills
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Impacted transmission line	Line #2210 (Formerly Line 2183)
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 320 feet. The terrain is predominately vegetated existing right-of-way consisting of minimal slopes and industrial development. The line will cross one primary road and two stormwater management ponds.

Existing Line Physical Characteristics

Operating voltage	230 kV
Conductor size and type	2-636 ACSR (24/7) 150°C MOT [1.62 miles]; 2-795 ACSR (26/7) 150°C MOT [3.60 miles]
Hardware plan description	Existing segment of the line will remain as is. For the extension segment, new hardware will be used. The existing hardware were installed in 2018.
Tower line characteristics	New structures will be used for the extension.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1047.000000	1047.000000
Winter (MVA)	1160.000000	1160.000000

Conductor size and type	2-768 ACSS/TW-HS (20/7) 250°C MOT (New Section); 2-636 ACSR (24/7) & 2-795 ACSR (26/7) 150°C MOT (Existing Section)
Shield wire size and type	DNO-11410 OPGW shield wire
Rebuild line length	0.63 Miles (Line Extension)
Rebuild portion description	See Scope of Work in attachments for designation of removed, modified and installed structures.
Right of way	160' Right-of-Way required for this scope of work has been previously acquired. No new Right-of-way required for this proposal.
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	$2,836,735.50
Component cost (in-service year)	$3,038,143.72

Congestion Drivers

None

Existing Flowgates

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W2-N2-SLD1	313827	6EVERGR MILL	314171	6BRAMBL	1	230	345	Summer N-1-1	Included
2022W2-N2-SLD2	313827	6EVERGR MILL	314171	6BRAMBL	1	230	345	Summer N-1-1	Included
2022W2-N2-WLD1	313827	6EVERGR MILL	314171	6BRAMBL	1	230	345	Winter N-1-1	Included
2022W2-N2-WLD2	313827	6EVERGR MILL	314171	6BRAMBL	1	230	345	Winter N-1-1	Included

New Flowgates

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

Financial Information

Capital spend start date	06/2025

Construction start date	06/2026
Project Duration (In Months)	24

Additional Comments

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