Line 597 Rebuild - Spotsylvania to Morrisville

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	627
Project title	Line 597 Rebuild - Spotsylvania to Morrisville
Project description	Rebuild approximately 19 miles of existing transmission line from the Spotsylvania substation to the Morrisville substation with current 500 kV Standards. Upgrade/install equipment at Spotsylvania and Morrisville substations to support the new conductor termination.
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. Line 594 Rebuild - Spotsylvania to Morrisville (99-3406)
2. Morrisville Substation Terminal Equipment Uprate (99-3406)
3. Spotsylvania Substation Terminal Equipment Uprate (99-3406)

Transmission Line Upgrade Component

Component title	Line 594 Rebuild - Spotsylvania to Morrisville (99-3406)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Impacted transmission line	Line 594
Point A	Morrisville
Point B	Spotsylvania
Point C	
Terrain description	The project area is in the central Virginia Piedmont region with elevations ranging from approximately 260 to 513 feet. The terrain is predominately vegetated existing right-of-way in rural areas. The line will include 19 VDOT road crossings, including Routes 3, 19, and 20, as well as several over stream crossings. The line routes through Spotsylvania, Orange, Culpeper, and Fauquier Counties.
Existing Line Physical Characteristics	
Operating voltage	500
Conductor size and type	2-2500 ACAR (84/7) 90°C MOT
Hardware plan description	New hardware will be used for line rebuild.
Tower line characteristics	Existing Structures will be removed and new structures will be used for this rebuild.
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/HS285 145° C MOT	

Shield wire size and type	(2) DNO-10410 shield wire
Rebuild line length	18.75 Miles
Rebuild portion description	EXISTING FACILITIES TO BE REMOVED: 1. Remove nighty (90) existing single circuit 5LT towers as follows: a. Structures 594/79-93, 95-118, 120-124, 128-130,132-134A-146, 148-149A-153,155-161, 163-165, 168-170, 172-177, 179, and 180 2. Remove four (4) existing single circuit 5LA towers as follows: a. Structures 594/127, 147, 166, and 171 3. Remove four (4) existing single circuit 5MT towers as follows: a. Structures 594/125, 151, 162, and 178 4. Remove two (2) existing single circuit 5MA towers as follows: a. Structures 594/154 and 594/167 5. Remove one (1) existing single circuit 5DE towers as follows: a. Structure 594/119 6. Remove one (1) existing single circuit 5DE-L towers as follows: a. Structure 594/126 7. Remove one (1) existing single circuit 5HA-R towers as follows: a. Structure 594/131 8. Remove one (1) existing single circuit 5HT towers as follows: a. Structure 594/94 9. Remove approx. 18.75 miles of 3-phase 2-2500 ACAR (84/7) conductor from structure 593/78 to 594/181 10. Remove approx. 18.75 miles of one (1) 7#7 Alumoweld shield wire from structure 593/78 to 594/181 11. Remove approx. 18.75 miles of one (1) 45/45 MM2 614 OPGW wire from structure 593/78 to 594/181 MODIFICATIONS TO EXISTING FACILITIES: 1. Install three 500kV conductor strain assemblies (35.252) and two OPGW strain assemblies (96.100) on the following two existing structures: 593/78 and 594/181 PERMANENT FACILITIES TO BE INSTALLED: 1. Install ninety-four (94) 500/230 kV 5-2KT self-support steel tangent lattice towers on foundations as follows: a. Structures 594/79-118, 120-125, 128-130, 132-134-134A-135-146, 148-149-149A-150153, 155-165, 168-169, and 172-180 2. Install seven (7) 500/230 kV 5-2 MA self-support steel tangent lattice towers on foundations as follows: a. Structures 594/127, 147, 154, 166-167, and 170-171 3. Install two (2) 500/230 kV 3-pole steel dead-end structures (small/medium angle 0° -70°) on foundations as follows: a. Structures 594/119, and 131 4. Install one (1) 500/230 kV 3-pole steel dead-end structures (small/medium angle 0° -70°) [Reference Drawing 15.226] on foundations as follows: a. Structures 594/126 5. Install approx. 18.71 miles of 1-set of 3-phase 3-1351.5 ACSS/TW/HS285 145°C MOT conductor as follows: a. From Structure 593/78 to Structure 594/181 6. Install approx. 18.71 miles of two (2) DNO-10110 shield wire as follows: a. From Structure 593/78 to Structure 594/181
Right of way	Existing Right-of-Way shall 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	$93,438,236.00
Component cost (in-service year)	$100,072,351.00

Substation Upgrade Component

Component title	Morrisville Substation Terminal Equipment Uprate (99-3406)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Morrisville
Substation zone	366
Substation upgrade scope	Purchase & Install Substation Material: 1. Three (3), Coupling Capacitor Voltage Transformers. 2. Two (2), 500kV, 5000A, Double End Break Switches. 3. Approximately 450 FT of 6 in. Sch. 80 AL tube bus. 4. Conductors, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards. Remove Substation Material: 1. One (1), 500kV, 3000A, Double End Break Switches. 2. One (1), 500kV, 4000A, Double End Break Switches. 3. One (1), 500kV, 4000A, 90-200kHz, Wave Trap. 4. Three (3), 500kV, Coupling Capacitor Voltage Transformers. 5. Approximately 450 FT of 5 in. Sch. 40 AL tube bus. 6. Conductors, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards. Purchase & Install Relay Material: 1. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 2. One (1), 4206 – Circuit Regulator Relay Potential Makeup Box 3. One (1), Panel Retirements

Transformer Information

None

New equipment description	1. Three (3), Coupling Capacitor Voltage Transformers. 2. Two (2), 500kV, 5000A, Double End Break Switches. 3. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 4. One (1), 4206 – Circuit Regulator Relay Potential Makeup Box

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 pad connections to maintain 5000A ratings. 3. Relay Settings and P&C design will be revised as part of the SPE Scope of Work.
Real-estate description	The substation will not be expanded for 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	$1,583,963.60
Component cost (in-service year)	$1,696,425.00

Substation Upgrade Component

Component title	Spotsylvania Substation Terminal Equipment Uprate (99-3406)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Spotsylvania
Substation zone	366

Substation upgrade scope	Purchase & Install Substation Material: 1. Two (2), 500kV, 63kAIC, 5000A, SF6 Circuit Breakers. 2. Five (5), 500kV, 5000A Double End Break Switches. 3. Three (3), 396kV, 318kV MCOV Station Class Surge Arresters. 4. Approximately 3000 FT of 6 in. Sch. 80 AL tube bus. 5. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards. Remove Substation Material: 1. Two (2), 500kV, 50kAIC, 4000A, SF6 Circuit Breakers. 2. Five (5), 500kV, 4000A, Double End Break Switches. 3. One (1), 500kV, 4000A, 115-300kHz, Wave Trap. 4. Approximately 3000 FT of 6 in. Sch. 40 AL tube bus. 5. Conductors, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards. Reuse Substation Material: 1. Two (2), 4510 – SEL-2411 Equipment Annunciator (CB 515T594, CB H1T594) 2. Two (2), 1510 – 24” Dual SEL-351 Transmission Breaker w/ Reclosing Panel (CB 515T594, CB H1T594) 3. Two (2), 1515 – 24” Single 500KV SEL-351 Transmission Breaker w/o Reclosing Panel (CB 515T594, CB H1T594) 4. Two (2), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor (CB 515T594, CB H1T594) 5. Two (2), 4526_D – C.B. w/ BCM Fiber Optic Makeup Box (CB 515T594, CB H1T594) Purchase & Install Relay Material: 1. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 2. One (1), Panel Retirement

Transformer Information

None

New equipment description	1. Two (2), 500kV, 63kAIC, 5000A, SF6 Circuit Breakers. 2. Five (5), 500kV, 5000A Double End Break Switches. 3. Three (3), 396kV, 318kV MCOV Station Class Surge Arresters. 4. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables)
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. Relay Settings and protection & control design to add transmission breakers will be revised as part of the SPE scope of work. 3. 4-hole pad connections must be replaced with 6-hole and 8-hole connections to maintain 5000A ratings.
Real-estate description	The substation will not be expanded for 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	$7,026,285.50
Component cost (in-service year)	$7,525,151.00

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	01/2026
Construction start date	06/2029
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. Line 594 Rebuild - Spotsylvania to Morrisville (99-3406) - Dominion
2. Morrisville Substation Terminal Equipment Uprate (99-3406) - Dominion
3. Spotsylvania Substation Terminal Equipment Uprate (99-3406) - 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