

New 500 kV Line Morrisville - Cunningham

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	409
Project title	New 500 kV Line Morrisville - Cunningham
Project description	Construct one (1) new overhead 500kV transmission line (~60 miles in length) from Cunningham substation to Morrisville substation, using 6,000A conductor. Terminal ends should be upgraded as necessary to ensure they do not limit the conductor rating. Construct one (1) new 500kV line terminal position at the existing Cunningham substation. Construct one (1) new 500kV line terminal position at the existing Morrisville substation.
Email	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Project in-service date	06/2030
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. New 500 KV Line - Morrisville to Cunningham (993593)
2. Morrisville Substation Line Terminal Upgrade (993593)
3. Cunningham Substation Line Terminal Upgrade (993593)

Greenfield Transmission Line Component

Component title	New 500 KV Line - Morrisville to Cunningham (993593)	
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Point A	Morrisville	
Point B	Cunningham	
Point C		
	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	
Nominal voltage	AC	
Nominal voltage	500	
Line construction type	Overhead	
General route description	Refer to KMZ file and supporting documents for route evaluation.	
Terrain description	The project is approximately 64 miles long in the Piedmont Region crossing Fauquier, Culpeper, Orange, Albemarle and Louisa Counties. The area is mostly rural and some suburban regions. There are numerous wetland crossings and a crossing of the Rapidan River. There are elevation changes along the route with the highest point being approximately 542 feet and the lowest being approximately 206 feet.	
Right-of-way width by segment	The Morrisville–Cunningham 500kV greenfield 60.28 mile route ROW will be 150 feet in width and will parallel/cross existing rights-of-way to include interstates, roads, railroads, existing transmission lines/utilities and existing pipelines	
Electrical transmission infrastructure crossings	To be determined in detailed design	
Civil infrastructure/major waterway facility crossing plan	Refer to the attached Real Estate and Permitting Summary.	

Environmental impacts	Refer to the attached Real Estate and Permitting Summary.
Tower characteristics	Permanent Facilities to be Installed 1. (255) 500kV-230kV 5-2kT Suspension Tower 2. (44) 500kV-230kV 3-Pole Deadend 3. (1) 500kV SC A-Frame Backbone 4. 60.28 miles of 3-1351 ACSS/TW/HS285 Conductor 5. 60.28 miles of 2-DNO-10100 OPGW Existing Facilities to be Transferred or Modified 1. Install three (3) new 500 kV conductor dead-end assemblies and two (2) new OPGW dead-end assemblies on existing structure 542/3
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	\$514,929,350.00
Component cost (in-service year)	\$551,489,334.00
Substation Upgrade Component	
Component title	Morrisville Substation Line Terminal Upgrade (993593)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Morrisville
Substation zone	345

Substation upgrade scope	<p>Purchase & Install Substation Material: 1. Two (2), 500kV, 6000A, 63kA, Circuit Breakers 2. Four (4), 500kV, 6000A, Double-End Break Switches 3. Three (3), 500kV, Relay Accuracy CCVTs 4. Three (3), 396kV MO, 318kV MCOV, Lightning Arresters 5. Conductor, connectors, conduit, control cable, foundations, structures, steel, and grounding material as per engineering standards</p> <p>Purchase & Install Relay Material: 1. Two (2), 4510 - SEL-2411 Equipment Annunciator 2. Two (2), 1510 – Dual SEL-351 Transmission Breaker w/ Reclosing Panel 3. Two (2), 4514 – Circuit Breaker C.T. Makeup Box 4. Two (2), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 5. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 6. One (1), 4506 – 3Ø CCVT Potential Makeup Box 7. One (1), 4507 – 1Ø CCVT Potential Makeup Box 8. Two (2), 4526_D – C.B. w/ BCM Fiber Optic Makeup Bo</p>
Transformer Information	
None	
New equipment description	<p>1. Two (2), 500kV, 6000A, 63kA, Circuit Breakers 2. Four (4), 500kV, 6000A, Double-End Break Switches 3. Three (3), 500kV, Relay Accuracy CCVTs 4. Three (3), 396kV MO, 318kV MCOV, Lightning Arresters 5. Two (2), 4510 - SEL-2411 Equipment Annunciator 6. Two (2), 1510 – Dual SEL-351 Transmission Breaker w/ Reclosing Panel 7. Two (2), 4514 – Circuit Breaker C.T. Makeup Box 8. Two (2), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 9. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 10. One (1), 4506 – 3Ø CCVT Potential Makeup Box 11. One (1), 4507 – 1Ø CCVT Potential Makeup Box 12. Two (2), 4526_D – C.B. w/ BCM Fiber Optic Makeup Box</p>
Substation assumptions	<p>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. All connections must be updated to maintain 6000A. 3. Relay Settings and P&C design will be revised as part of the SPE Scope of Work</p>
Real-estate description	No additional real estate needed.
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	\$18,100,992.60
Component cost (in-service year)	\$19,386,163.00
Substation Upgrade Component	
Component title	Cunningham Substation Line Terminal Upgrade (993593)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Cunningham
Substation zone	500
Substation upgrade scope	<p>Purchase & Install Substation Material: 1. Three (3), 500kV, 6000A, 80kA, Circuit Breaker 2. Three (3), 500kV, 6000A, Double-End Break Switches 3. Four (4), 500kV, Relay Accuracy CCVTs 4. Three (3), 396kV MO, 318kV MCOV, Lightning Arresters 5. Approximately 800FT of 6 IN Sch. 80 Tubular Bus 6. One (1), Double Circuit Backbone Structure (by Transmission) at 500kV 7. Approximately 700 FT of cable trough along with road crossing sections 8. Approximately 1570 linear FT of 12FT tall level 4 chain link fence with security features 9. Minor site preparation and grading work; gravel & equipment access road as required 10. Grounding grid for the entire station pad as per engineering standards 11. Conductor, connectors, conduit, control cable, foundations, structures, steel, and grounding material as per engineering standards Remove Substation Material: 1. Conductor, connectors, conduit, control cable, foundations, structures, steel, and grounding material as per engineering standards Purchase & Install Relay Material: 1. Three (3), 4510 - SEL-2411 Equipment Annunciator 2. Three (3), 1510 – Dual SEL-351 Transmission Breaker w/ Reclosing Panel 3. Three (3), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 4. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 5. One (1), 4506 – 3Ø CCVT Potential Makeup Box 6. One (1), 4507 – 1Ø CCVT Potential Makeup Box 7. Three (3), 4526_ – 4526_D – C.B. w/ BCM Fiber Optic Makeup Box</p>
Transformer Information	
None	

New equipment description	1. Three (3), 500kV, 6000A, 80kA, Circuit Breaker 2. Three (3), 500kV, 6000A, Double-End Break Switches 3. Four (4), 500kV, Relay Accuracy CCVTs 4. Three (3), 396kV MO, 318kV MCOV, Lightning Arresters 5. Three (3), 4510 - SEL-2411 Equipment Annunciator 6. Three (3), 1510 – Dual SEL-351 Transmission Breaker w/ Reclosing Panel 7. Three (3), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 8. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 9. One (1), 4506 – 3Ø CCVT Potential Makeup Box 10. One (1), 4507 – 1Ø CCVT Potential Makeup Box 11. Three (3), 4526_ – 4526_D – C.B. w/ BCM Fiber Optic 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. All connections must be updated to maintain 6000A. 3. Relay Settings and P&C design will be revised as part of the SPE Scope of Work.
Real-estate description	Additional real estate is not required.
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	\$6,523,479.01
Component cost (in-service year)	\$6,986,646.00

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
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Construction start date	06/2028
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Project Duration (In Months)	53
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Cost Containment Commitment

Cost cap (in current year)	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
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Cost cap (in-service year)	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
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Components covered by cost containment

1. New 500 KV Line - Morrisville to Cunningham (993593) - Dominion
2. Morrisville Substation Line Terminal Upgrade (993593) - Dominion
3. Cunningham Substation Line Terminal Upgrade (993593) - Dominion

Cost elements covered by cost containment

Engineering & design	Yes
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Permitting / routing / siting	No
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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