

# New 500kV Line - Finneywood to 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	825
Project title	New 500kV Line - Finneywood to Cunningham
Project description	Construct a new 500kV transmission line from Finneywood to Cunningham (approximately 75 miles in length) using 6,000A, 500 kV conductor. At Finneywood, install one 500kV breaker into an open breaker bay in the existing 500kV breaker-and-a-half arrangement. Based on the terminal position that is selected, ensure all terminal equipment is upgraded to 500kV 5000A, 63kAIC standards including breakers, disconnect switches, leads, and buswork. At Cunningham, expand the station to either accommodate a double bus, double breaker configuration or a breaker-and-a half configuration based on which layout is most feasible. Based on the layout selected, ensure all new and existing terminal equipment meets current 500kV, 5000A, 63kAIC standards.
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. New 500 kV Line - Finneywood and Cunningham

2. Finneywood Substation Expansion
3. Cunningham Substation Expansion

## Greenfield Transmission Line Component

Component title	New 500 kV Line - Finneywood and Cunningham	
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Point A	Finneywood	
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 in the attachments.	
Terrain description	This project is approximately 85 miles long through the blue ridge region traversing Luenenburg, Mecklenburg, Prince Edward, Nottoway, Amelia, Cumberland, Buckingham and Fluvanna Counties. The area is mostly rural and some suburban areas. There are numerous wetland and stream crossings to navigate. There are elevation changes along the route, the highest being approximately 651 feet and the lowest being approximately 289 feet.	
Right-of-way width by segment	Existing ROW will be expanded as needed.	
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. (350) 500kV-230kV 5-2kT Suspension Tower 2. (60) 500kV-230kV 3-Pole Deadend 3. (2) 500kV SC A-Frame Backbone 4. 77.77 miles of 3-1351 ACSS/TW/HS285 Conductor 5. 77.77 miles of 2-DNO-10100 OPGW
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	\$459,084,630.00
Component cost (in-service year)	\$491,679,639.00
<b>Substation Upgrade Component</b>	
Component title	Finneywood Substation Expansion
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Finneywood
Substation zone	345

Substation upgrade scope	<p>Purchase &amp; Install Substation Material: 1. Three (3), 500kV, 63kAIC, 5000A, SF6 Circuit Breakers. 2. Four (4), 500kV, 5000A Double End Break Switches. 3. Three (3), 396kV, 318kV MCOV Station Class Surge Arresters. 4. Three (3), 500kV, Coupling Capacitor Voltage Transformers. 5. Approximately 600 FT of 6 in. Sch. 80 AL tube bus. 6. Approximately 500 FT of level 1 security fence. 7. Conductor, connectors, conduit, control cable, foundations, steel structures, and grounding material as necessary per engineering standards. Purchase &amp; 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), 1515 – Dual 500kV SEL-351 Transmission Breaker w/ Reclosing Panel 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. Two (2), 4526_D – C.B. w/ BCM Fiber Optic Makeup Box</p>
Transformer Information	
None	
New equipment description	<p>1. Three (3), 500kV, 63kAIC, 5000A, SF6 Circuit Breakers. 2. Four (4), 500kV, 5000A Double End Break Switches. 3. Three (3), 396kV, 318kV MCOV Station Class Surge Arresters. 4. Three (3), 500kV, Coupling Capacitor Voltage Transformers. 5. Two (2), 4510 - SEL-2411 Equipment Annunciator 6. Two (2), 1510 – Dual SEL-351 Transmission Breaker w/ Reclosing Panel 7. Two (2), 1515 – Dual 500kV SEL-351 Transmission Breaker w/ Reclosing Panel 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. 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. 4-hole pad connections must be replaced with 6-hole pad connections to maintain 5000A ratings. 3. Relay Settings and P&amp;C design will be revised as part of the SPE Scope of Work.</p>
Real-estate description	N/A
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	\$9,270,915.50
Component cost (in-service year)	\$9,929,151.00
<b>Substation Upgrade Component</b>	
Component title	Cunningham Substation Expansion
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Cunningham
Substation zone	345
Substation upgrade scope	Purchase & Install Substation Material: 1. One (1), 500kV Backbone (Provided by Transmission) 2. Three (3), 500kV, 5000A, 63kA, Circuit Breakers 3. Seven (7), 500kV, 5000A, Double-End Break Switches 4. Three (3), 500kV, CCVTs 5. Three (3), 396kV MO, 318kV MCOV, Lightning Arresters 6. Bus, fence, roadway, conductors, connectors, conduit, control cable, cable trench, foundations, structures, and grounding material as per engineering standards. Remove Substation Material: 1. Bus, conductors, connectors, conduit, control cable, foundations, structures, and grounding material as needed. Relocate & Reuse Substation Material: 1. Twelve (12), 500kV, Coupling Capacitor Voltage Transformers ( Six (6), w/ Metering) 2. Twelve (12), 396kV MO, 318kV MCOV, Lightning Arresters 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), 4514 – Circuit Breaker C.T. Makeup Box 4. Three (3), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 5. Three (3), 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. Three (3), 4526_ – 4526_D – C.B. w/ BCM Fiber Optic Makeup Box
<b>Transformer Information</b>	
None	

New equipment description	1. One (1), 500kV Backbone (Provided by Transmission) 2. Three (3), 500kV, 5000A, 63kA, Circuit Breakers 3. Seven (7), 500kV, 5000A, Double-End Break Switches 4. Three (3), 500kV, CCVTs 5. 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), 4514 – Circuit Breaker C.T. Makeup Box 8. Three (3), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 9. Three (3), 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. 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. 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	N/A
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	\$15,379,953.60
Component cost (in-service year)	\$16,471,930.00

## 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	06/2029
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Project Duration (In Months)	77
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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 - Finneywood and Cunningham - Dominion
2. Finneywood Substation Expansion - Dominion
3. Cunningham Substation Expansion - 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