New 765 kV Line - Heritage to Yeat

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	55
Project title	New 765 kV Line - Heritage to Yeat
Project description	Construct a new 765kV transmission line from Heritage to Yeat substations for approximately 152 miles. Expand Heritage substation, add two 765/500kV transformers, install shunt reactors and cap banks on the 765kV side. Install shunt reactors at Yeat and terminate the 765 kV line.
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. Heritage to Yeat
2. Heritage Substation Expansion
3. Yeat Substation Termination

Greenfield Transmission Line Component

Component title	Heritage to Yeat
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Point A	Heritage
Point B	Yeat
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	5523.000000	5523.000000
Winter (MVA)	6845.000000	6485.000000

Conductor size and type	6-795 ACSR 70°C MOT
Nominal voltage	AC
Nominal voltage	765
Line construction type	Overhead
General route description	Refer the KMZ and supporting documents for evaluation of Route.
Terrain description	The project is approximately 152.3 miles through southern, Piedmont and Northern regions, through Brunswick, Greensville, Dinwiddie, Amelia, Chesterfield, Powhatan, Goochland, Hanover, Spotsylvania, Orange, Culpeper, and Fauquier Counties. The area ranges from rural, urban, and suburban. There are numerous wetland crossings and stream crossings to navigate. There are elevation changes along the route with the highest being approximately 425feet and the lowest being 210 feet.
Right-of-way width by segment	The Heritage to Yeat 765kV line will have 200 feet of right-of-way for 136.68 miles.
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. (709) 765kV SC Suspension Structures 2. (105) 765kV Deadend Structures 3. (2) 765kV Backbone Structures 4. 136.68 miles of 6-795 ACSR Conductor 5. 136.68 miles of 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	$1,384,592,820.01
Component cost (in-service year)	$1,482,898,910.00

Substation Upgrade Component

Component title	Heritage Substation Expansion
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Heritage
Substation zone	345

Substation upgrade scope	1. Transmission Backbone as Required 2. Seven (7), 765/500kV Single Phase Transformer Banks 3. Two (2), 765kV, 50kAIC, 5000A, SF6 Circuit Breakers 4. Four (4), 765kV, 5000A Motor Operated Double End Break Switches 5. Four (4), 765kV Coupling Capacitor Voltage Transformers, Relay Accuracy 6. Thirteen (13), 476kV MCOV Station Class Surge Arresters 7. Six (6), 500kV, 5000A, 63kA, Circuit Breaker 8. Twelve (12), 500kV, 5000A Double End Break Switches 9. Fourteen (14), 500kV, Relay Accuracy CCVTs 10. Twelve (12), 396kV, 318kV Station Class Surge Arresters 11. One (1) 3 Phase 765kV Shunt reactor 12. Approximately 11500 FT. of 6 in. Sch. 80 AL tube and connectors. 13. Two (2) 24’ X 60’ Control Enclosures 14. Station Batteries and Battery Chargers as required 15. Approximately 4500 FT. of 20’ Level One Security Fence with Security Integrators and associated infrastructure 16. Approximately 1500FT. of Cable Trench 17. Conduit and control cables as required 18. Oil Containment System for seven (7) new 765/500kV Transformers 19. Ground grid for the entire substation as per Dominion Energy Standards 20. Site preparation and grading as required 21. Conductor, connectors, conduit, control cable, foundations, structures, and grounding material as per engineering standards

Transformer Information

	Name		Capacity (MVA)	
Transformer	Transformer 1		3604	
	High Side	Low Side		Tertiary
Voltage (kV)	765	500		

	Name		Capacity (MVA)	
Transformer	Transformer 2		3604	
	High Side	Low Side		Tertiary
Voltage (kV)	765	500		

New equipment description	1. Transmission Backbone as Required 2. Seven (7), 765/500kV Single Phase Transformer Banks 3. Two (2), 765kV, 50kAIC, 5000A, SF6 Circuit Breakers 4. Four (4), 765kV, 5000A Motor Operated Double End Break Switches 5. Four (4), 765kV Coupling Capacitor Voltage Transformers, Relay Accuracy 6. Thirteen (13), 476kV MCOV Station Class Surge Arresters 7. Six (6), 500kV, 5000A, 63kA, Circuit Breaker 8. Twelve (12), 500kV, 5000A Double End Break Switches 9. Fourteen (14), 500kV, Relay Accuracy CCVTs 10. Twelve (12), 396kV, 318kV Station Class Surge Arresters 11. One (1) 3 Phase 765kV Shunt reactor 12. Approximately 11500 FT. of 6 in. Sch. 80 AL tube and connectors. 13. Two (2) 24’ X 60’ Control Enclosures 14. Station Batteries and Battery Chargers as required
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 P&C design will be revised as part of the SPE Scope of Work.
Real-estate description	No new real estate 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	$231,276,518.02
Component cost (in-service year)	$247,697,151.00

Substation Upgrade Component

Component title	Yeat Substation Termination
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Yeat
Substation zone	345
Substation upgrade scope	Purchase & Install Substation Material: 1. Three (3), 765 kV, 5000A SF6 Circuit Breakers 2. Six (6), 765kV, 5000A Double end break switches 3. One (1), 765kV, Variable Shunt Reactor 4. Four (4), 765kV, Coupling Capacitor Voltage Transformers 5. Six (6), 588kV MO, 476kV MCOV, Station Class Surge Arresters 6. Approximately 100 FT 6 in. Sch. 80 AL tube bus 7. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards Purchase & Install Relay Material 1. Three (3), 4510 – SEL-2411 Equipment Annunciator 2. Three (3), 1510 – 24” Dual SEL-351 Transmission Breaker w/ Reclosing Panel 3. Three (3), 1515 – 24” Dual 500KV SEL-351 Transmission Breaker w/ Reclosing Panel 4. Three (3), 4526_D – C.B. w/ BCM Fiber Optic Makeup Box 5. Three (3), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 6. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 7. One (1), 4506 – 3Ø CCVT Potential Makeup Box 8. One (1), 4507 - 1Ø CCVT Potential Makeup Box 9. One (1), 1216 – SEL-587Z/387E Reactor Bank Panel

Transformer Information

None

New equipment description	1. Three (3), 765 kV, 5000A SF6 Circuit Breakers 2. Six (6), 765kV, 5000A Double end break switches 3. One (1), 765kV, Variable Shunt Reactor 4. Four (4), 765kV, Coupling Capacitor Voltage Transformers 5. Six (6), 588kV MO, 476kV MCOV, Station Class Surge Arresters 6. Three (3), 4510 – SEL-2411 Equipment Annunciator 7. Three (3), 1510 – 24” Dual SEL-351 Transmission Breaker w/ Reclosing Panel 8. Three (3), 1515 – 24” Dual 500KV SEL-351 Transmission Breaker w/ Reclosing Panel 9. Three (3), 4526_D – C.B. w/ BCM Fiber Optic Makeup Box 10. Three (3), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 11. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 12. One (1), 4506 – 3Ø CCVT Potential Makeup Box 12. One (1), 4507 - 1Ø CCVT Potential Makeup Box 13. One (1), 1216 – SEL-587Z/387E Reactor Bank Panel
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 pad connections to maintain 5000A ratings.

Real-estate description	No new real estate 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	$49,425,377.02
Component cost (in-service year)	$52,934,579.00

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. Heritage to Yeat - Dominion
2. Heritage Substation Expansion - Dominion
3. Yeat Substation Termination - 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