New 500kV Line - Heritage 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	458
Project title	New 500kV Line - Heritage to Morrisville
Project description	Construct a new 500kV transmission line from Heritage to Morrisville substation using 500kV, 6000A conductor. Expand the Heritage and Morrisville to accommodate the new 500kV lines.
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 Morrisville
2. Heritage Substation 500kV Expansion
3. Morrisville Substation 500 KV Expansion

Greenfield Transmission Line Component

Component title	Heritage to Morrisville

Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Point A	Heritage	
Point B	Morrisville	
Point C		
	Normal ratings	Emergency ratings
Summer (MVA)	4357.000000	4357.000000
Winter (MVA)	5155.000000	5155.000000
Conductor size and type	3-1351.5 ACSS/TW/HS285 145°C MOT	
Nominal voltage	AC	
Nominal voltage	500	
Line construction type	Overhead	
General route description	Refer the KMZ and supporting documents for evaluation of Route.	
Terrain description	The project is approximately 127 miles long traversing much of the state from South to North through The Piedmont Region. The area is mostly rural with significant suburban development. The project does cross I085, _62, several major state routes and waterways. There are elevation changes along the route with the highest point being approximately 476 feet and the lowest being approximately 249 feet	
Right-of-way width by segment	The Heritage–Vontay-Morrisville 500kV greenfield route right-of-way will be 150 feet in width.	
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. (311) 500kV-230kV 5-2kT Suspension Towers 2. (53) 500kV-230kV 3-Pole Deadends 3. (258) 500kV SC Suspension Monopole 4. (44) 500kV SC DDE Pole (Large Angle) 5. (2) 500kV SC A-Frame Backbone 6. 127.01 miles of 3-1351 ACSS/TW/HS285 Conductor 7. 127.01 miles of 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 503/166.
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	$785,167,700.02
Component cost (in-service year)	$840,914,607.00

Substation Upgrade Component

Component title	Heritage Substation 500kV 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	Purchase & Install Substation Material: 1. Two (2), 500kV, 5000A, 63kA, Circuit Breaker 2. Two (2), 500kV, 5000A, Double-End Break Switch 3. Three (3), 500kV, 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 Remove Substation Material: 1. One (1), 500kV, 4000A, 63kA, Circuit Breaker 2. Two (2), 500kV, 4000A, Double-End Break Switch 3. Conductor, connectors, conduit, control cable, foundations, structures, steel, and grounding material as per engineering standards 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. Two (2), 4526_ – 4526_D – C.B. w/ BCM Fiber Optic Makeup Box

Transformer Information

None

New equipment description	1. Two (2), 500kV, 5000A, 63kA, Circuit Breaker 2. Two (2), 500kV, 5000A, Double-End Break Switch 3. Three (3), 500kV, 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. Two (2), 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	$4,764,899.70
Component cost (in-service year)	$5,103,208.00

Substation Upgrade Component

Component title	Morrisville Substation 500 KV Expansion
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	Purchase & Install Substation Material: 1. One (1), 500kV Backbone (Provided by Transmission) 2. Two (2), 500kV, 5000A, 63kA, Circuit Breakers 3. Four (4), 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. 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. Two (2), 4526_ – 4526_D – C.B. w/ BCM Fiber Optic Makeup Box

Transformer Information

None

New equipment description	1. One (1), 500kV Backbone (Provided by Transmission) 2. Two (2), 500kV, 5000A, 63kA, Circuit Breakers 3. Four (4), 500kV, 5000A, Double-End Break Switches 4. Three (3), 500kV, CCVTs 5. Three (3), 396kV MO, 318kV MCOV, Lightning Arresters 6. Two (2), 4510 - SEL-2411 Equipment Annunciator 7. Two (2), 1510 – Dual SEL-351 Transmission Breaker w/ Reclosing Panel 8. Two (2), 4514 – Circuit Breaker C.T. Makeup Box 9. Two (2), 4535 or 4536 – 500kV Circuit Breaker Condition Monitor 10. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 11. One (1), 4506 – 3Ø CCVT Potential Makeup Box 12. Two (2), 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	$4,340,129.39
Component cost (in-service year)	$4,648,279.00

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 Morrisville - Dominion
2. Heritage Substation 500kV Expansion - Dominion
3. Morrisville Substation 500 KV Expansion - 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