

# Safety Solutions

## 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	476
Project title	Safety Solutions
Project description	This Proposal includes the following projects: 1. 993296 - New 500kV Line - Brambleton to Aspen 2. 993591 Alt2 - Line 578 Rebuild - Septa - Surry 3. 993594 - New 765kV Line - Axton - Durandal 4. 993227 - Line 535 Uprate - Yeat to Meadow Brook 5. 993592 Alt2 - Line 567 Rebuild - Surry - Chickahominy
Email	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Project in-service date	06/2032
Tie-line impact	Yes
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 765 kV Line - Axton to Durandal (993594)
2. Axton (AEP) 765kV Line Terminal Upgrade (993594)
3. Line 578 Rebuild - Surry to Septa (993591 Alt\_2)
4. Surry Substation Line Terminal Upgrade (993591 Alt\_2)

5. Septa Substation Line Terminal Upgrade (993591 Alt\_2)
6. New 500 kV Line - Brambleton to Aspen (993296)
7. Brambleton Substation Terminal Equipment Upgrade (993296)
8. Aspen Substation Terminal Upgrade (993296)
9. Yeat to Meadow Brook Uprate (99-3227)
10. Line 567 Rebuild - Surry to Chickahominy (993592)
11. Surry Substation Line Terminal Upgrade (993592 Alt\_2)
12. Chickahominy Substation Line Terminal Upgrade (993592 Alt\_2)

## Greenfield Transmission Line Component

Component title	New 765 kV Line - Axton to Durandal (993594)	
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Point A	Axton	
Point B	Durandal	
Point C		
	Normal ratings	Emergency ratings
Summer (MVA)	4571.000000	4571.000000
Winter (MVA)	6485.000000	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	The proposed line mileage is based on a straight-line distance from substation to substation. The linear distance is then increased by 5% in rural counties and 10% in populated counties. Structure quantities are then based on an assumed span length of 85% of the maximum span length allowable for typical Dominion standard right of ways. A detailed circuit route will be required prior to an SCC filing. a. Henry, Pittsylvania, Halifax and Charlotte counties are being classified as rural. b. No counties are being classified as populated.
Terrain description	The project is approximately 61.64 miles long in the southern regions running through Pittsylvannia County and Halifax County. The area is mostly rural and some suburban regions. There are numerous wetland crossings and stream crossings to navigate. There are elevation changes along the route with the highest point being approximately 1115 feet and the lowest being approximately 553 feet.
Right-of-way width by segment	The Axton-Durandal 765kV line will have 200 feet of right-of-way for 70.77 miles, and will parallel/cross existing right-of-way including interstates, roads, railroads, existing transmission lines/utilities and existing pipeline.
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	Structures: Three Hundred and twelve (312) 765kV SC Suspension Structures Fifty-four (54) 765kV Deadend Structures Two (2) 765kV Backbone Structures
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	\$892,285,770.00
Component cost (in-service year)	\$955,638,060.00
<b>Substation Upgrade Component</b>	
Component title	Axton (AEP) 765kV Line Terminal Upgrade (993594)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Axton (AEP)
Substation zone	AEP
Substation upgrade scope	Purchase & Install Substation Material: 1. One (1), 765 kV, 5000A SF6 Circuit Breaker. 2. Two (2), 765kV, 5000A Double end break switches. 3. Three (3), 765kV, Coupling Capacitor Voltage Transformers. 4. Three (3), 476kV MCOV Station Class Surge Arresters. 5. Approximately 100 FT 6 in. Sch. 80 AL tube bus. 6. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards. Purchase & Install Relay Material 1. One (1), 4510 – SEL-2411 Equipment Annunciator 2. One (1), 1510 – 24” Dual SEL-351 Transmission Breaker w/ Reclosing Panel 3. One (1), 1515 – 24” Dual 500KV SEL-351 Transmission Breaker w/ Reclosing Panel 4. One (1), 4526_D – C.B. w/ BCM Fiber Optic Makeup Box 5. One (1), 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
<b>Transformer Information</b>	
None	
New equipment description	1. One (1), 765 kV, 5000A SF6 Circuit Breaker. 2. Two (2), 765kV, 5000A Double end break switches. 3. Three (3), 765kV, Coupling Capacitor Voltage Transformers. 4. Three (3), 476kV MCOV Station Class Surge Arresters. 5. One (1), 4510 – SEL-2411 Equipment Annunciator 6. One (1), 1510 – 24” Dual SEL-351 Transmission Breaker w/ Reclosing Panel 7. One (1), 1515 – 24” Dual 500KV SEL-351 Transmission Breaker w/ Reclosing Panel 8. One (1), 4526_D – C.B. w/ BCM Fiber Optic Makeup Box 9. One (1), 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

Substation assumptions	Assumptions & Clarifications: 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.
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	\$4,680,858.20
Component cost (in-service year)	\$5,013,199.00
Transmission Line Upgrade Component	
Component title	Line 578 Rebuild - Surry to Septa (993591 Alt_2)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Impacted transmission line	Line 578
Point A	Surry

Point B	Septa	
Point C		
Terrain description	The project is approximately 61.64 miles long in the southern regions running through Pittslyvania County and Halifax County. The area is mostly rural and some suburban regions. There are numerous wetland crossings and stream crossings to navigate. Therea are elevation changes along the route with the highest point being approximately 1115 feet and the lowest being approximately 553 feet.	
Existing Line Physical Characteristics		
Operating voltage	500	
Conductor size and type	2-2500 ACAR (84/7) Conductor	
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 112° C MOT	
Shield wire size and type	DNO-10110 shield wire	
Rebuild line length	11.46 Miles	

Rebuild portion description	Existing Facilities to be Removed 1. (49) SC 500kV 5LT Suspension Towers 2. (3) SC 500kV 5MT Suspension Towers 3. (1) SC 500kV 5MA DDE Tower 4. (2) SC 500kV 5HA DDE Towers 5. (2) SC 500kV 5DE DDE Towers 6. (3) SC 500kV 5LA Running Angle Towers 7. (1) SC 500kV Suspension 2 Pole Concrete H Frame 8. 11.46 miles of 2-2500 ACAR (84/7) Conductor 9. 22.92 miles of 7#7 Alumoweld Shield Wire Permanent Facilities to be Installed 1. (52) 500kV-230kV Type 5-2KT Suspension Towers 2. (6) 500kV-230kV Engineered Steel 3-pole DDE Small/Medium Angle (0-70) 3. (2) 500kV-230kV Engineered Steel 3-pole DDE Large Angle (70-90) 4. (1) 00kV-230kV Engineered Steel H-Frame Suspension 5. 11.46 miles 3-1351 ACSS/TW/HS285 Conductor 6. 22.92 miles DNO-10100 OPGW Existing Facilities to be Transferred or Modified 1. Install three (3) conductor dead-end assemblies and two (2) OPGW dead-end assemblies on existing backbone structures 578/1A and 578/60B.
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	\$68,286,560.00
Component cost (in-service year)	\$73,134,906.00
Substation Upgrade Component	
Component title	Surry Substation Line Terminal Upgrade (993591 Alt_2)

Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Surry
Substation zone	500
Substation upgrade scope	<p>Purchase &amp; Install Substation Material: 1. Five (5), 500kV, 5000A, Double End Break Switches 2. Three (3), 396kV, 318kV MCOV Station Class Surge Arresters 3. Three (3), 500kV, Coupling Capacitor Voltage Transformers 4. Approximately 1000 FT of 6 in. Sch. 80 tube bus 5. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards Remove Substation Material: 1. Five (5), 500kV, 3000A, Double End Break Switches 2. Three (3), 500kV, Coupling Capacitor Voltage Transformers 3. One (1), 500kV, 3000A, 90-200kHz, Wave Trap 4. Approximately 50 FT of 6 in. Sch. 40 tube bus 5. Approximately 550 FT of 5 in. Sch. 40 tube bus 6. Approximately 400 FT of 3½ in. Sch. 40 tube bus 7. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards Purchase &amp; Install Relay Material: 1. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 2. One (1), 4506 – 3Ø CCVT Potential Makeup Box Remove Relay Material: 1. One (1), Retire Panel No. 70</p>
<b>Transformer Information</b>	
None	
New equipment description	1. Five (5), 500kV, 5000A, Double End Break Switches 2. Three (3), 396kV, 318kV MCOV Station Class Surge Arresters 3. Three (3), 500kV, Coupling Capacitor Voltage Transformers 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
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. 4. Alternative 2 involves the rebuild of Line #578.
Real-estate description	Substation is not being expanded.
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	\$3,514,715.50
Component cost (in-service year)	\$3,764,260.00
<b>Substation Upgrade Component</b>	
Component title	Septa Substation Line Terminal Upgrade (993591 Alt_2)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Septa
Substation zone	500
Substation upgrade scope	Purchase & Install Substation Material: 1. Three (3), 500kV, Coupling Capacitor Voltage Transformers 2. Conductor, connectors, conduit, control cable, foundations, steel structures, and grounding material as necessary per engineering standards Remove Substation Material: 1. Three (3), 500kV, Coupling Capacitor Voltage Transformers 2. One (1), 500kV, 3000A, 90-200kHz, Wave Trap 3. Conductor, 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), 4506 – 3Ø CCVT Potential Makeup Box Remove Relay Material: 1. One (1), Retire Panels No. 6
<b>Transformer Information</b>	
None	

New equipment description	1. Three (3), 500kV, Coupling Capacitor Voltage Transformers 2. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 3. One (1), 4506 – 3Ø CCVT 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. 4. Alternative 2 involves the rebuild of Line #578.
Real-estate description	Substation is not being expanded.
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	\$580,215.50
Component cost (in-service year)	\$621,411.00
<b>Greenfield Transmission Line Component</b>	
Component title	New 500 kV Line - Brambleton to Aspen (993296)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Point A	Brambleton	
Point B	Aspen	
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	Existing lines 206, 2308, 2178, 2286, and I227 will be rebuilt with 500KV/230 kV structures, and the new 500 kV line from Brambleton to Aspen will use the new structures.	
Terrain description	This project is approximately 7.82 miles long through the Piedmont Region, in Loudoun County. The area is mostly suburban with growth continuing rapidly. There are wetland crossings and several major arterial road crossings. There are elevation changes along the route, the highest being approximately 391 feet and the lowest being approximately 250 feet.	
Right-of-way width by segment	Existing right of way will be expanded by 25ft to	
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 Removed 1. (25) 230kV DC Suspension Towers 2. (4) 230kV DC DDE Towers 3. (5) 230kV DC DDE Monopoles 4. (1) 230kV DC Suspension Monopole 5. (3) 230kV SC Suspension Monopole 6. (3) 230kV SC DDE Monopole 7. (1) 230kV DC DDE H-Frame 8. (3) 230kV SC 3-Pole DDE 9. 5.65 miles of 3#6 Alumoweld Shield Wire 10. 6.23 miles of 45/45 MM2 OPT-GW 11. 4.26 miles of DNO-11410 12. 1.54 miles of 2-768 ACSS/TW/HS (20/7) 13. 6.53 miles of 1-1233 ACSS/TW/HS285 (38/19) 14. 6.53 miles of 1-1033 ACSR (45/7) Permanent Facilities to be Installed 1. (29) 500kV-230kV 5-2kT Suspension Towers 2. (15) 500kV-230kV 3-Pole Deadend 3. (1) 500kV SC A-Frame Backbone 4. (1) 500kV-230kV DC DDE H-Frame 5. 8.07 miles of 3-1351 ACSS/TW/HS285 Conductor 6. 8.07 miles of DNO-10100 OPGW 7. 8.07 miles of 2-768 ACSS/TW/HS Conductor 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 546/29. a. See attached reference dwg 35.252 and 96.061 2. Install three (3) new 230 kV conductor dead-end assemblies and two (2) new OPGW dead-end assemblies on existing structure 2286/180, 2308/188, 2178/191, 206/191, 2308/196, and 206/219A. 3. Install six (6) new 230 kV conductor dead-end assemblies and four (4) new OPGW dead-end assemblies on existing structure 2286/188B. 4. Install six (6) new 230kV floating deadend assemblies with risers to self-supporting switches 2286/58A and 2286/56A
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	\$123,245,100.00
Component cost (in-service year)	\$131,995,502.00

## Substation Upgrade Component

Component title	Brambleton Substation Terminal Equipment Upgrade (993296)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Brambleton
Substation zone	345
Substation upgrade scope	Purchase & Install Substation Material: 1. Three (3), 500kV, 5000A Coupling Capacitor Voltage Transformers. 2. Conductors, connectors, conduit, control cables, steel, foundation, and grounding as required per engineering standards. Purchase & Install Relay Material: 1. One (1), 4506 – 3Ø CCVT Potential Makeup Box. 2. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables).
Transformer Information	
None	
New equipment description	1. Three (3), 500kV, 5000A Coupling Capacitor Voltage Transformers. 2. One (1), 4506 – 3Ø CCVT 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	Substation is not getting expanded.
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	\$666,717.00
Component cost (in-service year)	\$714,054.00
<b>Substation Upgrade Component</b>	
Component title	Aspen Substation Terminal Upgrade (993296)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Aspen
Substation zone	345
Substation upgrade scope	Purchase & Install Substation Material: 1. 500kV GIS Building Purchases and Installations: i. Two (2), GIS 500 kV, 63kAIC, 5000A, SF6 Circuit Breakers ii. Four (4), GIS 500 kV, 5000A, Group Operated Disconnect Switches w/grounding switches as required iii. Gas Insulated Bus, connectors, Current Transformer, Potential Transformers, and gas to air bushings as required 2. Three (3), 396 kV, 318 kV MCOV Station Class Surge Arresters. 3. Three (3), 500kV, Metering Accuracy CCVT's. 4. One (1), 500 kV Backbone structure (by Transmission). 5. Conductor, connectors, insulators, conduit, control cable, foundations, steel structures and grounding connections as per engineering standards. Purchase & Install Relay Material: 1. Two (2), 1510 – 24" Dual SEL-351 Transmission Breaker w/ Reclosing Panel. 2. Two (2), 1515 – SEL 351 500 kV Breaker Reclosing Panel (Use with 1510). 3. One (1), 1340 – 24" Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables). 4. One (1), 4506 – 3Ø CCVT Potential Makeup Box. 5. One (1), 1816 – Single SEL-787 Gas Zone Differential Panel
<b>Transformer Information</b>	
None	

New equipment description	1. 500kV GIS Building Purchases and Installations: i. Two (2), GIS 500 kV, 63kAIC, 5000A, SF6 Circuit Breakers ii. Four (4), GIS 500 kV, 5000A, Group Operated Disconnect Switches w/grounding switches as required iii. Gas Insulated Bus, connectors, Current Transformer, Potential Transformers, and gas to air bushings as required 2. Three (3), 396 kV, 318 kV MCOV Station Class Surge Arresters. 3. Three (3), 500kV, Metering Accuracy CCVT's. 4. Two (2), 1510 – 24" Dual SEL-351 Transmission Breaker w/ Reclosing Panel. 5. Two (2), 1515 – SEL 351 500 kV Breaker Reclosing Panel (Use with 1510). 6. One (1), 1340 – 24" 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), 1816 – Single SEL-787 Gas Zone Differential 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. 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	Substation is not getting expanded.
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	\$14,974,827.00
Component cost (in-service year)	\$16,038,040.00

## Transmission Line Upgrade Component

Component title	Yeat to Meadow Brook Uprate (99-3227)		
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.		
Impacted transmission line	Line 535		
Point A	Yeat		
Point B	Meadow Brook		
Point C			
Terrain description	The project area is in the northern Virginia Piedmont region with elevations ranging from approximately 190 to 430 feet. The terrain is predominately vegetated existing right-of-way and urban development consisting of moderate slopes.		
Existing Line Physical Characteristics			
Operating voltage	500		
Conductor size and type	3-1351.5 ACSR (45/7) 90°C MOT		
Hardware plan description	Existing hardware will be reused.		
Tower line characteristics	Existing suspension towers will have AMPJACK body extensions installed.		
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	3-1351.5 ACSS/TW/HS285 145°C MOT		



Shield wire size and type	Existing Shield wire will remain
Rebuild line length	43 Miles
Rebuild portion description	This project serves to uprate approximately 42.91 miles of 500kV Line 535 from Yeat Substation to Meadow Brook Substation. The majority of Line 535 is double circuit on 5/2 structures with Line 2114, Line 2199, or Line 655 at different locations throughout the corridor. The remainder of Line 535 near Meadow Brook Substation is single circuit. To accommodate the uprate, the existing suspension towers are to have AMPJACK body extensions installed. The extensions will range from ten (10) to twenty (20) feet. The uprate will occur utilizing existing structures, conductor, and most of the existing hardware while increasing the maximum operating temperature (MOT) of the circuit from 90°C to 110°C. The existing 500kV strain and suspension clamps will need to be replaced with high temp hardware. In addition to the tower extensions, the 500kV and/or underbuilt 230kV/34.5kV circuits may need to be re-tensioned due to the impacts of the tower extensions and to meet wire clearances. The existing line primarily consists of lattice tower structures and steel monopole structures.
Right of way	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	\$100,412,100.00

Component cost (in-service year)	\$107,541,359.00	
Transmission Line Upgrade Component		
Component title	Line 567 Rebuild - Surry to Chickahominy (993592)	
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Impacted transmission line	Line 567	
Point A	Surry	
Point B	Chickahominy	
Point C		
Terrain description	The areas range from rural to suburban. There are numerous wetland and stream crossings to navigate. There are elevation changes along the route, the highest being approximately 280 feet and the lowest being approximately 19 feet.	
Existing Line Physical Characteristics		
Operating voltage	500	
Conductor size and type	2-2500 ACAR (84/7) Conductor	
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 112° C MOT
Shield wire size and type	DNO-10110 shield wire
Rebuild line length	44.44 Miles
Rebuild portion description	Existing Facilities to be Removed 1. (208) 500 kV SC Steel Suspension Towers 2. (8) 500 kV SC Steel Running Angle Towers 3. (10) 500 kV SC Steel Double Deadend Towers 4. 34.49 miles of 2-2500 ACAR Conductor 5. 0.99 miles of 3-1351 ACSS/TW/HS285 Conductor 6. 8.96 miles of 2-2500 ACAR Conductor 7. 44.44 miles of 7#7 Alumoweld Shield Wire Permanent Facilities to be Installed 1. (198) 500/230kV 5-2 kT Suspension Towers 2. (9) 500/230kV 5-2 kT Suspension Towers with OPGW DE Assemblies 3. (3) 500/230kV Steel Double Deadend H-frames 4. (14) 500KV-230kV Steel Double Deadend 3-Pole (0-70) 5. (2) 500KV-230kV Steel Double Deadend 3-Pole (0-90) 6. 44.44 miles of 3-1351 ACSS/TW/HS Conductor 7. 22.92 miles of 2-DNO-10100 OPGW Existing Facilities to be Transferred or Modified 1. Install three (3) conductor dead-end assemblies and two (2) OPGW dead-end assemblies on existing backbone structures 578/1A and 578/60B.
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	\$229,730,460.00

Component cost (in-service year)	\$246,041,323.00
<b>Substation Upgrade Component</b>	
Component title	Surry Substation Line Terminal Upgrade (993592 Alt_2)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Surry
Substation zone	500
Substation upgrade scope	<p>Purchase &amp; Install Substation Material: 1. Three (3), 500kV, 5000A, Double End Break Switches 2. Three (3), 396kV MO (S), 318kV MCOV Station Class Surge Arresters 3. Three (3), 500kV, Coupling Capacitor Voltage Transformers 4. Approximately 580 FT of 6 in. Sch. 80 tube bus 5. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards Remove Substation Material: 1. Three (3), 500kV, 3000A, Double End Break Switches 2. One (1), 500kV, 3000A, 90-200kHz, Wave Trap 3. Three (3), 500kV, Coupling Capacitor Voltage Transformers 4. Approximately 30 FT of 6 in. Sch. 40 tube bus 5. Approximately 550 FT of 5 in. Sch. 40 tube bus 6. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards Purchase &amp; Install Relay Material: 1. One (1), 1340 – Dual SEL-411L DCB/Fiber, CD/Fiber Line Panel (500kV w/ 2 Fiber Cables) 2. One (1), 4506 – 3Ø CCVT Potential Makeup Box Remove Relay Material: 1. One (1), Retire Panel No. 63</p>
<b>Transformer Information</b>	
None	
New equipment description	1. Three (3), 500kV, 5000A, Double End Break Switches 2. Three (3), 396kV MO (S), 318kV MCOV Station Class Surge Arresters 3. Three (3), 500kV, Coupling Capacitor Voltage Transformers 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
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. 4. Detail Engineering to coordinate with circuit breaker vendor to achieve 6000A rated breaker CTs.
Real-estate description	Substation is not being expanded.
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	\$2,491,194.00
Component cost (in-service year)	\$2,668,069.00
<b>Substation Upgrade Component</b>	
Component title	Chickahominy Substation Line Terminal Upgrade (993592 Alt_2)
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Chickahominy
Substation zone	500
Substation upgrade scope	Purchase & Install Substation Material: 1. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards Remove Substation Material: 1. One (1), 500kV, 5000A, 90-200kHz, Wave Trap 2. Conductor, 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) Remove Relay Material: 1. One (1), Retire Panel No. 27

## Transformer Information

None

New equipment description

1. Conductor, connectors, conduit, control cable, foundations, steel structures and grounding material as necessary per engineering standards 2. 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. 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. 4. Detail Engineering to coordinate with circuit breaker vendor to achieve 6000A rated breaker CTs.

Real-estate description

Substation is not being expanded.

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

\$226,650.00

Component cost (in-service year)

\$242,742.00

## Congestion Drivers

None

## Existing Flowgates

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-32GD-S20	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S21	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S120	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL54	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S22	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL55	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S100	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL12	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL56	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S8NEW	314923	8SEPTA	314924	8SURRY	1	500	345	Summer 2032 Generation Deliverability	Included
2025W1-32GD-LL52	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL65	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL64	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL1	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL20	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S68	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL13	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL57	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL14	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL15	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S104	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S130	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S76	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-32GD-LL73	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-S110	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S132	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL72	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-S12	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL71	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL10	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S99	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S138	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL28	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S18	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S117	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S95	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL29	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL51	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S19	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL30	314923	8SEPTA	314924	8SURRY	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S13	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL25	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL26	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL4	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-S93	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL49	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL27	314923	8SEPTA	314924	8SURRY	1	500	345	2032 Generation Deliverability	Included

## 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. New 765 kV Line - Axton to Durandal (993594) - Dominion
2. Axton (AEP) 765kV Line Terminal Upgrade (993594) - AEP
3. Line 578 Rebuild - Surry to Septa (993591 Alt\_2) - Dominion
4. Surry Substation Line Terminal Upgrade (993591 Alt\_2) - Dominion
5. Septa Substation Line Terminal Upgrade (993591 Alt\_2) - Dominion
6. New 500 kV Line - Brambleton to Aspen (993296) - Dominion
7. Brambleton Substation Terminal Equipment Upgrade (993296) - Dominion
8. Aspen Substation Terminal Upgrade (993296) - Dominion
9. Yeat to Meadow Brook Uprate (99-3227) - Dominion
10. Line 567 Rebuild - Surry to Chickahominy (993592) - Dominion
11. Surry Substation Line Terminal Upgrade (993592 Alt\_2) - Dominion
12. Chickahominy Substation Line Terminal Upgrade (993592 Alt\_2) - 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.
<b>Additional Comments</b>	
None	