

PECO 220-08 230kV Upgrades

General Information

Proposing entity name	Company confidential and proprietary information.
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Company confidential and proprietary information.
Company proposal ID	Company confidential and proprietary information.
PJM Proposal ID	181
Project title	PECO 220-08 230kV Upgrades
Project description	Rebuild of Cooper - Peach Bottom Tap - Nottingham 230kV line 220-08, Nottingham Reactor Upgrade with additional 230kV upgrades to mitigate the resulting flow changes. Additional upgrades on Bramah to Cooper 230kV line and Nottingham - Bradford 230kV line 220-05.
Email	Company confidential and proprietary information.
Project in-service date	06/2031
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Company confidential and proprietary information.

Project Components

1. 220-08 Cooper-Peach Bottom Tap Transmission Line Rebuild
2. Nottingham Reactor Upgrade
3. Acceleration b4052.10 (Quince Orchard 230kv terminal upgrades)
4. Acceleration b4052.9 (Brighton 500kV terminal upgrades)
5. Rebuild Nottingham Daleville 230 kV 220-05

6. Bramah-Cooper 230kV line rebuild
7. 220-08 Substation Upgrade at Nottingham
8. 220-08 Substation Upgrade at Cooper
9. Bramah-Cooper Substation Upgrade at Cooper
10. 220-05 Substation Upgrade at Nottingham
11. 220-05 Substation Upgrade at Bradford
12. 220-08 Peach Bottom Tap-Nottingham Transmission Line Rebuild
13. Rebuild Bradford Daleville 230 kV 220-05
14. Acceleration b4036.3 (Keystone 230kV Terminal Upgrades)

Transmission Line Upgrade Component

Component title	220-08 Cooper-Peach Bottom Tap Transmission Line Rebuild
Project description	Company confidential and proprietary information.
Impacted transmission line	220-08 Cooper-Peach Bottom Tap
Point A	Cooper
Point B	Peach Bottom Tap
Point C	
Terrain description	The line is located within the existing PECO right-of-way and traverses agricultural land, and residential areas. It also crosses existing transmission and distribution lines.
Existing Line Physical Characteristics	
Operating voltage	230
Conductor size and type	795 kcmil 30/19 Strands Mallard ACSR
Hardware plan description	Existing hardware will be replaced.
Tower line characteristics	Existing transmission line is on towers. Spans vary and range from around 400' to 1700'.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1245.000000	1387.000000
Winter (MVA)	1476.000000	1601.000000
Conductor size and type	2-959.6 kcmil 22/7 Suwannee/ACSS/TW/MA2	
Shield wire size and type	AC-91-614 OPGW	
Rebuild line length	1.5 Miles	
Rebuild portion description	The project consists of a rebuild of the existing 1.5-mile, 220-08 230 kV transmission line from Cooper Substation to Peach Bottom Tap within the existing right-of-way. The existing towers and conductor will be removed and replaced with new structures and double-bundled 959.6 kcmil 22/7 Suwannee/ACSS/TW/MA2 conductor. Steel monopoles will follow the existing structure alignment along the line.	
Right of way	Existing PECO ROW will be used.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	
Materials & equipment	Company confidential and proprietary information.	
Construction & commissioning	Company confidential and proprietary information.	
Construction management	Company confidential and proprietary information.	

Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$10,440,429.00
Component cost (in-service year)	\$11,534,940.00
Substation Upgrade Component	
Component title	Nottingham Reactor Upgrade
Project description	Company confidential and proprietary information.
Substation name	Nottingham
Substation zone	PECO
Substation upgrade scope	At Nottingham substation, PECO to remove one (1) 230kV circuit switcher #89 and six (6) existing reactors (two reactors per phase). Install three (3) new 230kV reactors (one reactor per phase) with higher rating.
Transformer Information	
None	
New equipment description	PECO to install new 230kV reactors to achieve existing 17.4 ohms per phase and the following minimum ratings: · Summer Normal Rating: 1522 MVA · Summer Emergency Rating: 1767 MVA · Summer Load Dump Rating: 1865 MVA · Winter Normal Rating: 1597 MVA · Winter Emergency Rating: 1843 MVA · Winter Load Dump Rating: 1953 MVA · Light Load Normal Rating: 1522 MVA · Light Load Emergency Rating: 1767 MVA · Light Load Load Dump Rating: 1865 MVA
Substation assumptions	Assume upgrade of existing equipment without modifying substation general arrangement.
Real-estate description	
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.

Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$11,409,420.00
Component cost (in-service year)	\$12,721,462.00
Substation Upgrade Component	
Component title	Acceleration b4052.10 (Quince Orchard 230kv terminal upgrades)
Project description	Company confidential and proprietary information.
Substation name	Quince Orchard
Substation zone	PEPCO
Substation upgrade scope	Accelerate existing baseline project scope with no additional scope added.
Transformer Information	
None	
New equipment description	NA
Substation assumptions	Acceleration from 6/1/2032 to 6/1/2031 assuming that PJM can support the outage schedule necessary to construct the projects.
Real-estate description	
Construction responsibility	Company confidential and proprietary information.

Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$.00
Component cost (in-service year)	\$.00
Substation Upgrade Component	
Component title	Acceleration b4052.9 (Brighton 500kV terminal upgrades)
Project description	Company confidential and proprietary information.
Substation name	Brighton
Substation zone	PEPCO
Substation upgrade scope	Accelerate existing baseline project scope with no additional scope added.
Transformer Information	
None	
New equipment description	NA

Substation assumptions	Acceleration from 6/1/2032 to 6/1/2031 assuming that PJM can support the outage schedule necessary to construct the projects.
Real-estate description	
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$.00
Component cost (in-service year)	\$.00
Transmission Line Upgrade Component	
Component title	Rebuild Nottingham Daleville 230 kV 220-05
Project description	Company confidential and proprietary information.
Impacted transmission line	220-05
Point A	Nottingham
Point B	Daleville Tap

Point C

Terrain description	Variable terrain is expected in areas outside rural farmland and commercial/industrial areas. Areas near creeks/rivers/ponds will have slightly steeper elevation changes.	
Existing Line Physical Characteristics		
Operating voltage	230	
Conductor size and type	795 KCMIL 30/19 ACSR (MALLARD)	
Hardware plan description	Rebuild 230kV double-circuit monopole structures and a minimum of 2-bundled 959.6 ACSS/TW Suwannee conductor per phase.	
Tower line characteristics	The existing structures are over 90 years old and nearing end of life and double-circuit monopoles will be installed along the length of the line. Only a single circuit will be installed initially.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	633.000000	765.000000
Winter (MVA)	765.000000	765.000000
Conductor size and type	2-bundled 959.6 ACSS/TW Suwannee conductor per phase	
Shield wire size and type	0.638" 96-count OPGW	
Rebuild line length	11.2	
Rebuild portion description	Rebuild the entire 220-05 Nottingham-Daleville Tap 230kV line	
Right of way	Entire line will utilize the existing ROW.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	

Component Cost Details - In Current Year \$

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$91,336,676.00
Component cost (in-service year)	\$100,711,274.00

Transmission Line Upgrade Component

Component title	Bramah-Cooper 230kV line rebuild
Project description	Company confidential and proprietary information.
Impacted transmission line	Bramah to Cooper 230kV line
Point A	Bramah
Point B	Cooper
Point C	
Terrain description	The line is located within the existing PECO right-of-way and traverses agricultural land.
Existing Line Physical Characteristics	
Operating voltage	230
Conductor size and type	1-959.6 kcmil 22/7 Suwannee/ACSS/TW/MA2

Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	Line is currently entering construction using a single monopoles that cannot support bundled conductor. Proposed rebuilt line would be supported on single-circuit steel monopoles capable of bundled conductor.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1245.000000	1387.000000
Winter (MVA)	1476.000000	1601.000000
Conductor size and type	2-959.6 kcmil 22/7 Suwannee/ACSS/TW/MA2	
Shield wire size and type	0.638" 96-count OPGW	
Rebuild line length	0.5 miles	
Rebuild portion description	The project consists of a rebuild of the 0.5-mile, 230 kV transmission line from Cooper Substation to Bramah Substation within the existing right-of-way. The existing towers and conductor will be removed and replaced with new structures and double-bundled 959.6 kcmil 22/7 Suwannee/ACSS/TW/MA2 conductor.	
Right of way	Existing PECO ROW will be used.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	

Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$5,830,000.00
Component cost (in-service year)	\$6,555,250.00
Substation Upgrade Component	
Component title	220-08 Substation Upgrade at Nottingham
Project description	Company confidential and proprietary information.
Substation name	Nottingham
Substation zone	PECO
Substation upgrade scope	At Nottingham substation, PECO to replace 230kV circuit breaker #085 (4000 Amp, 63kA min required rating), two (2) 230kV disconnect switches #83 and #87, one (1) equipment CT, three (3) free standing CTs, three (3) meters (Watt/Var/Amp) and nine (9) station cables.
Transformer Information	
None	
New equipment description	Substation upgrades at Nottingham substation, PECO to replace 230kV circuit breaker #085 (4000 Amp, 63kA min required rating), two (2) 230kV disconnect switches #83 and #87, one (1) equipment CT, three (3) free standing CTs, three (3) meters (Watt/Var/Amp) and nine (9) station cables. Substation work to achieve minimum ratings of: · Summer Normal Rating: 960 MVA · Summer Emergency Rating: 1159 MVA · Summer Load Dump Rating: 1195 MVA · Winter Normal Rating: 1159 MVA · Winter Emergency Rating: 1159 MVA · Winter Load Dump Rating: 1195 MVA · Light Load Normal Rating: 1138 MVA · Light Load Emergency Rating: 1159 MVA · Light Load Load Dump Rating: 1195 MVA
Substation assumptions	Scope assumes upgrade of existing equipment.

Real-estate description	
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$5,186,100.00
Component cost (in-service year)	\$5,709,939.00
Substation Upgrade Component	
Component title	220-08 Substation Upgrade at Cooper
Project description	Company confidential and proprietary information.
Substation name	Cooper
Substation zone	PECO
Substation upgrade scope	At Cooper substation, PECO to replace four (4) station cables to increase the 220-08 facility rating.
Transformer Information	

None	
New equipment description	At Cooper substation, PECO to replace four (4) station cables to achieve the following minimum ratings: · Summer Normal Rating: 1245 MVA · Summer Emergency Rating: 1387 MVA · Summer Load Dump Rating: 1586 MVA · Winter Normal Rating: 1476 MVA · Winter Emergency Rating: 1601 MVA · Winter Load Dump Rating: 1780 MVA · Light Load Normal Rating: 1427 MVA · Light Load Emergency Rating: 1555 MVA · Light Load Load Dump Rating: 1738 MVA
Substation assumptions	Upgrade of existing substation equipment
Real-estate description	
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$691,520.00
Component cost (in-service year)	\$780,974.00
Substation Upgrade Component	
Component title	Bramah-Cooper Substation Upgrade at Cooper
Project description	Company confidential and proprietary information.

Substation name	Cooper
Substation zone	PECO
Substation upgrade scope	At Cooper substation, PECO to replace four (4) station cables
Transformer Information	
None	
New equipment description	At Cooper substation, PECO to replace four (4) station cables to achieve the following minimum ratings: · Summer Normal Rating: 1245 MVA · Summer Emergency Rating: 1387 MVA · Summer Load Dump Rating: 1586 MVA · Winter Normal Rating: 1476 MVA · Winter Emergency Rating: 1601 MVA · Winter Load Dump Rating: 1780 MVA · Light Load Normal Rating: 1427 MVA · Light Load Emergency Rating: 1555 MVA · Light Load Load Dump Rating: 1738 MVA
Substation assumptions	Upgrade of existing substation equipment.
Real-estate description	
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$555,000.00

Component cost (in-service year)	\$627,585.00
Substation Upgrade Component	
Component title	220-05 Substation Upgrade at Nottingham
Project description	Company confidential and proprietary information.
Substation name	Nottingham
Substation zone	PECO
Substation upgrade scope	At Nottingham substation, PECO to replace two (2) 230kV disconnect switches #53 and #57, three (3) meters (Watt/Var/Amp), two (2) line relays, and one (1) station cable. PECO to remove wavetrap.
Transformer Information	
None	
New equipment description	At Nottingham substation, PECO to replace two (2) 230kV disconnect switches #53 and #57, three (3) meters (Watt/Var/Amp), two (2) line relays, and one (1) station cable. Substation upgrades will achieve the following minimum ratings: · Summer Normal Rating: 633 MVA · Summer Emergency Rating: 765 MVA · Summer Load Dump Rating: 878 MVA · Winter Normal Rating: 765 MVA · Winter Emergency Rating: 765 MVA · Winter Load Dump Rating: 896 MVA · Light Load Normal Rating: 757 MVA · Light Load Emergency Rating: 765 MVA · Light Load Load Dump Rating: 896 MVA
Substation assumptions	Substation scope assumes replacement of existing equipment with new higher rated equipment to meet current standards.
Real-estate description	
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.

ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$1,886,300.00
Component cost (in-service year)	\$2,158,961.00
Substation Upgrade Component	
Component title	220-05 Substation Upgrade at Bradford
Project description	Company confidential and proprietary information.
Substation name	Bradford
Substation zone	PECO
Substation upgrade scope	At Bradford substation, PECO to replace three (3) meters (Watt/Var/Amp), two (2) line relays, and five (5) station cables. PECO to remove wavetrap.
Transformer Information	
None	
New equipment description	At Bradford substation, PECO to replace three (3) meters (Watt/Var/Amp), two (2) line relays, and five (5) station cables. Substation upgrades to achieve the following minimum ratings: · Summer Normal Rating: 645 MVA · Summer Emergency Rating: 744 MVA · Summer Load Dump Rating: 876 MVA · Winter Normal Rating: 765 MVA · Winter Emergency Rating: 765 MVA · Winter Load Dump Rating: 896 MVA · Light Load Normal Rating: 742 MVA · Light Load Emergency Rating: 765 MVA · Light Load Load Dump Rating: 896 MVA
Substation assumptions	Substation scope assumes replacement of existing equipment with new higher rated equipment to meet current standards.

Real-estate description	
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$1,015,700.00
Component cost (in-service year)	\$1,156,861.00
Transmission Line Upgrade Component	
Component title	220-08 Peach Bottom Tap-Nottingham Transmission Line Rebuild
Project description	Company confidential and proprietary information.
Impacted transmission line	220-08 Peach Bottom Tap-Nottingham
Point A	Peach Bottom Tap
Point B	Nottingham
Point C	

Terrain description	The line is located within the existing PECO right-of-way and traverses rugged terrain, agricultural land, and residential areas. It also crosses existing transmission and distribution lines and the Susquehanna River.	
Existing Line Physical Characteristics		
Operating voltage	230	
Conductor size and type	795 kcmil 30/19 Strands Mallard ACSR for entire line except spans crossing river. Phase conductors across the river are 851 MCM 54/61 ACSR.	
Hardware plan description	Existing hardware will be replaced.	
Tower line characteristics	Existing transmission line is on towers. Spans vary and range from around 400' to 1700'.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	960.000000	1159.000000
Winter (MVA)	1159.000000	1195.000000
Conductor size and type	2-959.6 kcmil 22/7 Suwannee/ACSS/TW/MA2	
Shield wire size and type	AC-91-614 OPGW	
Rebuild line length	13.5 Miles	
Rebuild portion description	The project consists of a rebuild of the existing 13.5-mile, 220-08 230 kV transmission line from Peach Bottom Tap to Nottingham within the existing right-of-way. The existing towers and conductor will be removed and replaced with new structures and double-bundled 959.6 kcmil 22/7 Suwannee/ACSS/TW/MA2 conductor. Steel monopoles will follow the existing structure alignment along the line.	
Right of way	Existing PECO ROW will be used.	
Construction responsibility	Company confidential and proprietary information.	

Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$93,963,880.00
Component cost (in-service year)	\$103,814,465.00
Transmission Line Upgrade Component	
Component title	Rebuild Bradford Daleville 230 kV 220-05
Project description	Company confidential and proprietary information.
Impacted transmission line	220-05 Bradford-Daleville Tap 230kV line
Point A	Bradford
Point B	Daleville Tap
Point C	
Terrain description	Variable terrain is expected in areas outside rural farmland and commercial/industrial areas. Areas near creeks/rivers/ponds will have slightly steeper elevation changes.
Existing Line Physical Characteristics	

Operating voltage	230	
Conductor size and type	795 KCMIL 30/19 ACSR (MALLARD)	
Hardware plan description	Rebuild 230kV double-circuit monopole structures and a minimum of 2-bundled 959.6 ACSS/TW Suwannee conductor per phase.	
Tower line characteristics	The existing structures are over 90 years old and nearing end of life and double-circuit monopoles will be installed along the length of the line. Only a single circuit will be installed initially.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	645.000000	744.000000
Winter (MVA)	765.000000	765.000000
Conductor size and type	2-bundled 959.6 ACSS/TW Suwannee conductor per phase	
Shield wire size and type	0.638" 96-count OPGW	
Rebuild line length	11.2	
Rebuild portion description	Rebuild the entire 220-05 Nottingham-Daleville Tap 230kV line	
Right of way	Entire line will utilize the existing ROW.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	

ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$110,093,317.00
Component cost (in-service year)	\$121,393,053.00
Substation Upgrade Component	
Component title	Acceleration b4036.3 (Keystone 230kV Terminal Upgrades)
Project description	Company confidential and proprietary information.
Substation name	Keystone
Substation zone	PENELEC
Substation upgrade scope	Accelerate existing baseline project scope with no additional scope added.
Transformer Information	
None	
New equipment description	NA
Substation assumptions	Acceleration from 6/1/2032 to 6/1/2031 assuming that PJM can support the outage schedule necessary to construct the projects.
Real-estate description	
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.

Component Cost Details - In Current Year \$

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$0.00
Component cost (in-service year)	\$0.00

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
2026W1-N11-ST2	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST5	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST6	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST7	213846	EXCLUDED_FROM_COMPETITION	213869	PCHBTMTP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST16	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST17	213846	EXCLUDED_FROM_COMPETITION	213869	PCHBTMTP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST31	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST32	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-N11-ST33	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST46	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST49	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST50	213846	EXCLUDED_FROM_COMPETITION	213869	PCHBTMTP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST51	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST52	213846	EXCLUDED_FROM_COMPETITION	213869	PCHBTMTP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST53	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST54	213846	EXCLUDED_FROM_COMPETITION	213869	PCHBTMTP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST66	213846	EXCLUDED_FROM_COMPETITION	213869	PCHBTMTP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST67	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST102	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST104	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST105	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST106	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST107	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST111	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST112	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included

New Flowgates

Company confidential and proprietary information.

Financial Information

Capital spend start date 01/2027

Construction start date 01/2028

Project Duration (In Months) 53

Cost Containment Commitment

Cost cap (in current year)	Company confidential and proprietary information.
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Cost cap (in-service year)	Company confidential and proprietary information.
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Components covered by cost containment

1. 220-08 Cooper-Peach Bottom Tap Transmission Line Rebuild - PROPOSER
2. Nottingham Reactor Upgrade - PROPOSER
3. Acceleration b4052.10 (Quince Orchard 230kv terminal upgrades) - PEPCO
4. Acceleration b4052.9 (Brighton 500kV terminal upgrades) - PEPCO
5. Rebuild Nottingham Daleville 230 kV 220-05 - PROPOSER
6. Bramah-Cooper 230kV line rebuild - PROPOSER
7. 220-08 Substation Upgrade at Nottingham - PROPOSER
8. 220-08 Substation Upgrade at Cooper - PROPOSER
9. Bramah-Cooper Substation Upgrade at Cooper - PROPOSER
10. 220-05 Substation Upgrade at Nottingham - PROPOSER
11. 220-05 Substation Upgrade at Bradford - PROPOSER
12. 220-08 Peach Bottom Tap-Nottingham Transmission Line Rebuild - PROPOSER
13. Rebuild Bradford Daleville 230 kV 220-05 - PROPOSER

Cost elements covered by cost containment

Engineering & design	Yes
Permitting / routing / siting	Yes
ROW / land acquisition	Yes
Materials & equipment	Yes
Construction & commissioning	Yes
Construction management	Yes

Overheads & miscellaneous costs	Yes
Taxes	No
AFUDC	No
Escalation	No
Additional Information	Company confidential and proprietary information.
Is the proposer offering a binding cap on ROE?	No
Is the proposer offering a Debt to Equity Ratio cap?	Company confidential and proprietary information.
Additional cost containment measures not covered above	Company confidential and proprietary information.

Additional Comments

None