

# West Cooper BGE-PEPCO

## General Information

Proposing entity name	PEPCO
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Joint proposal ID	344
Company proposal ID	
PJM Proposal ID	660
Project title	West Cooper BGE-PEPCO
Project description	BGE and PEPCO portions of West Cooper Solution (Exelon-full solution).
Email	Proprietary Information
Project in-service date	12/2030
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Proprietary Information

## Project Components

1. Graceton 500 kV Substation Expansion
2. Batavia Road 230 kV Switching Station
3. High Ridge 500 kV Substation Expansion
4. West Cooper - High Ridge (500 kV)
5. Graceton - Batavia Rd (230 kV)

6. Peach Bottom - Graceton (500 kV)
7. 5012 LINE REBUILD GRACETON-CONASTONE (BGE ONLY)
8. 5012 LINE REBUILD WEST COOPER -GRACETON (BGE ONLY)
9. 230 LINE REBUILD Batavia Road to Riverside
10. 230 kV DICKERSON STA H TO ED'S FERRY
11. GRACETON 230KV TERMINAL EQP. (BGE)
12. HIGH RIDGE 230KV TERMINAL EQP. (BGE)
13. CONASTONE 500KV CAP BANK (BGE)
14. CONASTONE 500KV 5012 LINE TERMINAL EQP. (BGE)
15. BRIGHTON 5053 TERMINAL EQP. (PEPCO)
16. BRIGHTON STATCOM (PEPCO)
17. BRIGHTON 500kV CAP BANK (PEPCO)
18. BRIGHTON 5011 TERMINAL EQP. (PEPCO)
19. DICKERSON TO ED'S FERRY TERMINAL EQP. (PEPCO)
20. CONASTONE 500KV 5011 TERMINAL EQP. (BGE)
21. CHALK POINT 500KV 5073 RELAY UPGRADE (PEPCO)
22. 500 kV DOUBS TO GOOSE CREEK (PEPCO Only)

### **Greenfield Substation Component**

Component title	Graceton 500 kV Substation Expansion
Project description	Expand Graceton substation to build new 500 kV yard
Substation name	Graceton 500 kV Substation
Substation description	3-Bay 6-position AIS BAAH substation with two 500/230 kV transformers and 250MVAR cap bank
Nominal voltage	AC
Nominal voltage	500 kV

### **Transformer Information**

	<b>Name</b>	<b>Capacity (MVA)</b>
Transformer	Graceton 500-1	1941
	<b>High Side</b>	<b>Low Side</b> <b>Tertiary</b>
Voltage (kV)	500 kV	230 kV
	<b>Name</b>	<b>Capacity (MVA)</b>
Transformer	Graceton 500-2	1941
	<b>High Side</b>	<b>Low Side</b> <b>Tertiary</b>
Voltage (kV)	500 kV	230 kV
Major equipment description	2 - 500/230 kV Transformers; 8 - 500 kV 5000A breakers; 1 - 250MVAR Capacitor Bank; associated station bus, control house, relaying, grounding, etc.	
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1559.000000	1941.000000
Winter (MVA)	1785.000000	2168.000000
Environmental assessment	TBD BGE land adjacent to existing station	
Outreach plan	BGE Land adjacent to existing station; minimal outreach expected	
Land acquisition plan	N/A - BGE owned property	
Construction responsibility	BGE	
Benefits/Comments	Proprietary Information	
<b>Component Cost Details - In Current Year \$</b>		
Engineering & design	Proprietary Information	
Permitting / routing / siting	Proprietary Information	

ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$78,963,764.00
Component cost (in-service year)	\$86,075,970.00

### **Greenfield Substation Component**

Component title	Batavia Road 230 kV Switching Station
Project description	Build new 230 kV Batavia Road substation
Substation name	Batavia Road 230 kV Switching Station
Substation description	4-bay 8-position GIS BAAH switching station
Nominal voltage	AC
Nominal voltage	230 kV

### **Transformer Information**

None

Major equipment description 10 - 230 kV 4000A breakers; associated station bus, control house, relaying, grounding, etc.

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1657.000000	1848.000000
Winter (MVA)	1960.000000	2119.000000

Environmental assessment	TBD
Outreach plan	TBD
Land acquisition plan	N/A - BGE owned property
Construction responsibility	BGE
Benefits/Comments	Proprietary Information

**Component Cost Details - In Current Year \$**

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$32,909,000.00
Component cost (in-service year)	\$35,810,730.00

**Greenfield Substation Component**

Component title	High Ridge 500 kV Substation Expansion
Project description	Expand High Ridge substation to build new 500 kV yard
Substation name	High Ridge 500 kV Substation
Substation description	3-Bay 6-position GIS BAAH substation with two 500/230 kV transformers and 250MVAR cap bank
Nominal voltage	AC

Nominal voltage 500 kV

### Transformer Information

	<b>Name</b>	<b>Capacity (MVA)</b>
Transformer	High Ridge 500-1	1941
	<b>High Side</b>	<b>Low Side</b> <b>Tertiary</b>
Voltage (kV)	500	230
	<b>Name</b>	<b>Capacity (MVA)</b>
Transformer	High Ridge 500-2	1941
	<b>High Side</b>	<b>Low Side</b> <b>Tertiary</b>
Voltage (kV)	500	230
Major equipment description	2 - 500/230 kV Transformers; 9 - 500 kV 5000A breakers; 1 - 250MVAR Capacitor Bank; associated station bus, control house, relaying, grounding, etc.	
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1559.000000	1941.000000
Winter (MVA)	1785.000000	2168.000000
Environmental assessment	TBD BGE land adjacent to existing station	
Outreach plan	BGE Land adjacent to existing station; minimal outreach expected	
Land acquisition plan	N/A - BGE owned property	
Construction responsibility	BGE	
Benefits/Comments	Proprietary Information	

**Component Cost Details - In Current Year \$**

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$116,001,180.00
Component cost (in-service year)	\$127,178,919.00

**Greenfield Transmission Line Component**

Component title	West Cooper - High Ridge (500 kV)	
Project description	Build new 500 kV circuit from West Cooper (PECO) to High Ridge (BGE) with 3 x 795kcm 30/19 ACSS/TW "Mallard" conductor rated at 250C MOT	
Point A	West Cooper	
Point B	High Ridge	
Point C	MD/PA State Line	

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	4427.000000	5165.000000
Winter (MVA)	4644.000000	5387.000000
Conductor size and type	3 x 795kcm 30/19 ACSS/TW	

Nominal voltage	AC
Nominal voltage	500 kV
Line construction type	Overhead
General route description	TBD
Terrain description	Within existing ROW
Right-of-way width by segment	Varies
Electrical transmission infrastructure crossings	Possible 230 kV crossings at Northwest #2 and High Ridge
Civil infrastructure/major waterway facility crossing plan	No major waterway crossings
Environmental impacts	TBD
Tower characteristics	Single circuit steel pole line
Construction responsibility	BGE
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$407,105,796.00

Component cost (in-service year) \$459,617,989.00

### Greenfield Transmission Line Component

Component title Graceton - Batavia Rd (230 kV)

Project description Build new 230 kV double circuit from Graceton to Batavia Road with 2 x 1590kcm 54/19 ACSR "Falcon" conductor rated at 125C MOT

Point A Graceton

Point B Batavia Road

Point C

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1331.000000	1594.000000
Winter (MVA)	1534.000000	1795.000000
Conductor size and type	2 x 1590kcm 54/19 ACSR	
Nominal voltage	AC	
Nominal voltage	230 kV	
Line construction type	Overhead	
General route description	TBD	
Terrain description	Within existing ROW	
Right-of-way width by segment	Varies	
Electrical transmission infrastructure crossings	Possible 230 kV and 500 kV crossings at Graceton	
Civil infrastructure/major waterway facility crossing plan	No major waterway crossings	
Environmental impacts	TBD	
Tower characteristics	Double circuit steel pole line	

Construction responsibility	BGE
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$176,840,323.00
Component cost (in-service year)	\$192,252,520.00

**Greenfield Transmission Line Component**

Component title	Peach Bottom - Graceton (500 kV)	
Project description	Rebuild existing 230 kV circuit 22093 to a new 500 kV circuit from Peach Bottom North (PECO) to Graceton (BGE) with 3 x 795kcm 30/19 ACSS/TW "Mallard" conductor rated at 250C MOT	
Point A	Peach Bottom North	
Point B	Graceton	
Point C	MD/PA State Line	
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	4427.000000	5165.000000

Winter (MVA)	4644.000000	5387.000000
Conductor size and type	3 x 795kcm 30/19 ACSS/TW	
Nominal voltage	AC	
Nominal voltage	500 kV	
Line construction type	Overhead	
General route description	TBD	
Terrain description	Within existing ROW	
Right-of-way width by segment	Varies	
Electrical transmission infrastructure crossings	Possible 230 kV crossings at Graceton	
Civil infrastructure/major waterway facility crossing plan	No major waterway crossings	
Environmental impacts	TBD	
Tower characteristics	Single circuit steel pole line	
Construction responsibility	BGE	
Benefits/Comments	Proprietary Information	
<b>Component Cost Details - In Current Year \$</b>		
Engineering & design	Proprietary Information	
Permitting / routing / siting	Proprietary Information	
ROW / land acquisition	Proprietary Information	
Materials & equipment	Proprietary Information	
Construction & commissioning	Proprietary Information	
Construction management	Proprietary Information	
Overheads & miscellaneous costs	Proprietary Information	

Contingency	Proprietary Information
Total component cost	\$10,435,152.00
Component cost (in-service year)	\$11,453,027.00

**Transmission Line Upgrade Component**

Component title	5012 LINE REBUILD GRACETON-CONASTONE (BGE ONLY)
Project description	Rebuild 8.7 miles of existing 5012 circuit from new Graceton 500 kV station to Conastone.
Impacted transmission line	5012
Point A	Graceton
Point B	Conastone
Point C	
Terrain description	Rural farm land and suburban neighborhoods.

**Existing Line Physical Characteristics**

Operating voltage	500 kV
Conductor size and type	3 x 795kcm 30/19 ACSS/TW
Hardware plan description	All new hardware will be installed
Tower line characteristics	single circuit pole line

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	500.000000	500.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	4427.000000	5165.000000

Winter (MVA)	4644.000000	5387.000000
Conductor size and type	3 x 795kcm 30/19 ACSS/TW	
Shield wire size and type	AFL DNO-7519, 0.538" 96-fiber OPGW	
Rebuild line length	8.7	
Rebuild portion description	Portion of existing 5012 circuit from vicinity of Graceton to Conastone will be rebuilt on new single circuit pole line	
Right of way	This project will be constructed in the existing ROW. No ROW expansion or acquisition is required.	
Construction responsibility	BGE	
Benefits/Comments	Proprietary Information	

**Component Cost Details - In Current Year \$**

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$70,000,701.00
Component cost (in-service year)	\$79,087,935.00

**Transmission Line Upgrade Component**

Component title	5012 LINE REBUILD WEST COOPER -GRACETON (BGE ONLY)
-----------------	--

Project description	Rebuild 1.6 miles of existing 5012 circuit from new Graceton 500 kV station to MD/PA line and tie-in to PECO portion continuing to new West Cooper station.
Impacted transmission line	5012
Point A	West Cooper
Point B	Graceton
Point C	MD/PA Line
Terrain description	Rural farm land and suburban neighborhoods.

**Existing Line Physical Characteristics**

Operating voltage	500 kV
Conductor size and type	3 x 795kcm 30/19 ACSS/TW
Hardware plan description	All new hardware will be installed
Tower line characteristics	single circuit pole line

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	500.000000	500.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	4427.000000	5165.000000
Winter (MVA)	4644.000000	5387.000000
Conductor size and type	3 x 795kcm 30/19 ACSS/TW	
Shield wire size and type	AFL DNO-7519, 0.538" 96-fiber OPGW	
Rebuild line length	1.6	

Rebuild portion description	Portion of existing 5012 circuit from vicinity of Graceton to MD/PA line will be rebuilt on new single circuit pole line
Right of way	This project will be constructed in the existing ROW. No ROW expansion or acquisition is required.
Construction responsibility	BGE
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$10,435,152.00
Component cost (in-service year)	\$11,453,027.00
<b>Transmission Line Upgrade Component</b>	
Component title	230 LINE REBUILD Batavia Road to Riverside
Project description	Proprietary Information
Impacted transmission line	2317 / 2339
Point A	Batavia Road
Point B	Riverside

Point C

Terrain description Rural farm land and suburban neighborhoods.

**Existing Line Physical Characteristics**

Operating voltage 230 kV  
Conductor size and type 2 x 1622kcm 38/19 ACCR/TW  
Hardware plan description All new hardware will be installed  
Tower line characteristics double circuit pole line

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	230.000000	230.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1941.000000	2181.000000
Winter (MVA)	2065.000000	2302.000000
Conductor size and type	2 x 1622kcm 38/19 ACCR/TW	
Shield wire size and type	AFL DNO-7519, 0.538" 96-fiber OPGW	
Rebuild line length	5.84	
Rebuild portion description	Portion of existing 2317 / 2339 line between Batavia Road and Riverside	
Right of way	This project will be constructed in the existing ROW. No ROW expansion or acquisition is required.	
Construction responsibility	BGE	
Benefits/Comments	Proprietary Information	
<b>Component Cost Details - In Current Year \$</b>		
Engineering & design	Proprietary Information	

Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$20,160,000.00
Component cost (in-service year)	\$21,739,894.00

### **Transmission Line Upgrade Component**

Component title	230 kV DICKERSON STA H TO ED'S FERRY
Project description	Rebuild 7.26 miles of existing 230 kV single circuit from Dickerson Station H to Ed's Ferry Station as double circuit 230 kV
Impacted transmission line	23111
Point A	Dickerson Station H
Point B	Ed's Ferry
Point C	
Terrain description	Rural farm land and suburban neighborhoods.

### **Existing Line Physical Characteristics**

Operating voltage	230 kV
Conductor size and type	1033 kcm ACCR
Hardware plan description	All new hardware will be installed

Tower line characteristics

double circuit pole line, Existing single circuit towers / poles were installed in 1963.

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	230.000000	230.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	3281.000000	4061.000000
Winter (MVA)	3778.000000	4571.000000
Conductor size and type	2 x 1590kcm 45/7 ACSR	
Shield wire size and type	TBD	
Rebuild line length	7.26	
Rebuild portion description	Portion of existing 23111 circuit from Dickerson Sta H to Ed's Ferry	
Right of way	This project will be constructed in the existing ROW. No ROW expansion or acquisition is required.	
Construction responsibility	PEPCO	
Benefits/Comments	Proprietary Information	
<b>Component Cost Details - In Current Year \$</b>		
Engineering & design	Proprietary Information	
Permitting / routing / siting	Proprietary Information	
ROW / land acquisition	Proprietary Information	
Materials & equipment	Proprietary Information	
Construction & commissioning	Proprietary Information	
Construction management	Proprietary Information	

Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$18,598,448.00
Component cost (in-service year)	\$20,471,849.00

**Substation Upgrade Component**

Component title	GRACETON 230KV TERMINAL EQP. (BGE)
Project description	Install (3) new 230 kV 4000A breakers at Graceton
Substation name	Graceton
Substation zone	BGE
Substation upgrade scope	Install (3) new 230 kV 4000A breakers at Graceton

**Transformer Information**

None	
New equipment description	230 kV 4000A gas circuit breakers
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	BGE
Benefits/Comments	Proprietary Information

**Component Cost Details - In Current Year \$**

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information

Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$8,773,751.00
Component cost (in-service year)	\$9,563,997.00

### **Substation Upgrade Component**

Component title	HIGH RIDGE 230KV TERMINAL EQP. (BGE)
Project description	Install (2) new 230 kV 4000A breakers at High Ridge
Substation name	High Ridge
Substation zone	BGE
Substation upgrade scope	Install (2) new 230 kV 4000A breakers at High Ridge

### **Transformer Information**

None	
New equipment description	230 kV 4000A gas circuit breakers
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	BGE
Benefits/Comments	Proprietary Information

### **Component Cost Details - In Current Year \$**

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information

ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$6,105,325.00
Component cost (in-service year)	\$6,693,627.00

### **Substation Upgrade Component**

Component title	CONASTONE 500KV CAP BANK (BGE)
Project description	Install new 250MVAR capacitor bank at Conastone 500 kV substation
Substation name	Conastone
Substation zone	BGE
Substation upgrade scope	Install new 250MVAR capacitor bank at Conastone 500 kV substation

### **Transformer Information**

None	
New equipment description	250MVAR capacitor bank
Substation assumptions	Assumes that space is available in the existing substation for new cap bank
Real-estate description	
Construction responsibility	BGE
Benefits/Comments	Proprietary Information

### Component Cost Details - In Current Year \$

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$14,312,906.00
Component cost (in-service year)	\$15,300,388.00

### Substation Upgrade Component

Component title	CONASTONE 500KV 5012 LINE TERMINAL EQP. (BGE)
Project description	Upgrade (2) existing 500 kV breakers at Conastone from 4000A to 5000A
Substation name	Conastone
Substation zone	BGE
Substation upgrade scope	Upgrade (2) existing 500 kV breakers at Conastone from 4000A to 5000A

### Transformer Information

None	
New equipment description	500 kV 5000A gas circuit breakers
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	

Construction responsibility	BGE
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$4,931,897.00
Component cost (in-service year)	\$5,315,556.00

**Substation Upgrade Component**

Component title	BRIGHTON 5053 TERMINAL EQP. (PEPCO)
Project description	Install (2) new 500 kV 5000A breakers at Brighton
Substation name	Brighton
Substation zone	PEPCO
Substation upgrade scope	Install (2) new 500 kV 5000A breakers at Brighton

**Transformer Information**

None	
New equipment description	500 kV 5000A gas circuit breakers

Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	PEPCO
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$4,127,579.00
Component cost (in-service year)	\$4,341,042.00
<b>Substation Upgrade Component</b>	
Component title	BRIGHTON STATCOM (PEPCO)
Project description	Proprietary Information
Substation name	Brighton
Substation zone	PEPCO
Substation upgrade scope	Install new 350MVAR STATCOM at Brighton

## Transformer Information

None

New equipment description	350MVAR STATCOM
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	PEPCO
Benefits/Comments	Proprietary Information

## Component Cost Details - In Current Year \$

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$52,200,000.00
Component cost (in-service year)	\$56,888,040.00

## Substation Upgrade Component

Component title	BRIGHTON 500kV CAP BANK (PEPCO)
Project description	Install new 350MVAR Capacitor Bank at Brighton
Substation name	Brighton

Substation zone	PEPCO
Substation upgrade scope	Install new 350MVAR Capacitor bank at Brighton
<b>Transformer Information</b>	
None	
New equipment description	350MVAR CAP BANK
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	PEPCO
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$14,312,906.00
Component cost (in-service year)	\$15,300,388.00
<b>Substation Upgrade Component</b>	
Component title	BRIGHTON 5011 TERMINAL EQP. (PEPCO)

Project description	Install (2) new 500 kV 5000A breakers at Brighton
Substation name	Brighton
Substation zone	PEPCO
Substation upgrade scope	Install (2) new 500 kV 5000A breakers at Brighton
<b>Transformer Information</b>	
None	
New equipment description	500 kV 5000A gas circuit breakers
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	PEPCO
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$4,127,579.00
Component cost (in-service year)	\$4,341,042.00

## Substation Upgrade Component

Component title	DICKERSON TO ED'S FERRY TERMINAL EQP. (PEPCO)
Project description	23111 Dickerson Substation Equipment Upgrades (PEPCO). See Substation Upgrade Scope for more details.
Substation name	Dickerson
Substation zone	PEPCO
Substation upgrade scope	Add new terminal equipment (four breakers and associated disconnects, relays, etc) in Bay 8 and 9 for the two 230kV Lines (Rebuild; 23111) at Dickerson H.

## Transformer Information

None	
New equipment description	Install (4) 230kV, 4000A, 63kA breakers and associated terminal equipment (e.g., 4000A disconnects) at Dickerson H station.
Substation assumptions	Assume that Ed's Ferry substation (Dominion) terminal equipment are also upgraded to get the full transmission conductor ratings.
Real-estate description	
Construction responsibility	PEPCO
Benefits/Comments	Proprietary Information

## Component Cost Details - In Current Year \$

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

Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$10,583,715.00
Component cost (in-service year)	\$11,524,805.00

**Substation Upgrade Component**

Component title	CONASTONE 500KV 5011 TERMINAL EQP. (BGE)
Project description	Conastone 5011 Substation Terminal Equipment Upgrades (BGE). See Substation Upgrade Scope for more details.
Substation name	Conastone
Substation zone	BGE
Substation upgrade scope	Upgrade terminal equipment (disconnects/breakers) to get the full conductor rating for the 5011 line at Conastone.

**Transformer Information**

None	
New equipment description	Install two 500kV 4000A 63kA breakers (J, H) and 5 disconnect switches with associated relay upgrades at Conastone 500kV Substation.
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	BGE
Benefits/Comments	Proprietary Information

**Component Cost Details - In Current Year \$**

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information

ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$7,156,453.00
Component cost (in-service year)	\$7,650,194.00

### **Substation Upgrade Component**

Component title	CHALK POINT 500KV 5073 RELAY UPGRADE (PEPCO)
Project description	Remove relay limitation for the 5073 line at Chalkpoint Syd E. The existing line 5073 is limited by a relay at position 'P_R_3031' (1732MVA SE)
Substation name	Chalkpoint
Substation zone	PEPCO
Substation upgrade scope	Remove relay limitation for the 5073 line at Chalkpoint Syd E. The existing line 5073 is limited by a relay at position 'P_R_3031' (1732MVA SE)

### **Transformer Information**

None	
New equipment description	install new relay (e.g., microprocessor-based) to remove the thermal limitation for the 5073 line.
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	PEPCO
Benefits/Comments	Proprietary Information

**Component Cost Details - In Current Year \$**

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$340,000.00
Component cost (in-service year)	\$349,240.00

**Greenfield Transmission Line Component**

Component title	500 kV DOUBS TO GOOSE CREEK (PEPCO Only)	
Project description	Build 7.26 miles of new 500 kV circuit between Doubs and Goose Creek from vicinity Dickerson Station H to near vicinity Ed's Ferry	
Point A	Doubs	
Point B	Goose Creek	
Point C	Dickerson to Ed's Ferry	
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	4922.000000	6091.000000
Winter (MVA)	5667.000000	6857.000000
Conductor size and type	3 x 1590kcm 45/7 ACSR	

Nominal voltage	AC
Nominal voltage	500kV
Line construction type	Overhead
General route description	TBD
Terrain description	Within existing ROW
Right-of-way width by segment	Varies
Electrical transmission infrastructure crossings	Possible 230 kV and 500 kV crossings near Dickerson.
Civil infrastructure/major waterway facility crossing plan	No major waterway crossings
Environmental impacts	TBD
Tower characteristics	Double circuit tower
Construction responsibility	PEPCO
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$37,196,897.00

Component cost (in-service year)

\$40,943,697.00

## 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
2022W3-LD-ST11	200004	CNASTONE	200064	PCHBTM1S	1	500/500	232/230	Load Deliverability	Included
2022W3-N1-ST24	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1	Included
2022W3-N1-ST24	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1	Included
2022W3-GD-S177	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-LD-ST13	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-GD-S203	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W93	214084	COOPER	220964	GRACETON	1	230	230/232	Winter Gen Deliv	Included
2022W3-LD-ST12	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-N1-ST25	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1	Included
2022W3-N1-ST64	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1 Thermal	Included
2022W3-LD-ST5	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Load Deliverability	Included
2022W3-LD-ST4	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Load Deliverability	Included
2022W3-LD-ST7	223937	DICK 230	314290	6EDFERRY	1	230/230	233/345	Load Deliverability	Included
2022W3-LD-ST6	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Load Deliverability	Included
2022W3-LD-ST8	223937	DICK 230	314290	6EDFERRY	1	230/230	233/345	Load Deliverability	Included
2022W3-GD-S168	223938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-GD-W138	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-N1-ST24	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1	Included
2022W3-GD-S169	223938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-GD-S169	214084	COOPER	220964	GRACETON	1	230	230/232	Summer Gen Deliv	Included
2022W3-N1-ST17	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-ST24	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S73	223938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included
2022W3-GD-S72	223938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-GD-W94	214084	COOPER	220964	GRACETON	1	230	230/232	Winter Gen Deliv	Included
2022W3-GD-W10	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Winter Gen Deliv	Included
2022W3-GD-W50	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W73	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W51	214084	COOPER	220964	GRACETON	1	230	230/232	Winter Gen Deliv	Included
2022W3-GD-W74	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S139	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S177	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-N1-ST10	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD-S127	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-N1-ST65	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD_128	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Light Load Gen Deliv	Included
2022W3-GD_122	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Light Load Gen Deliv	Included
2022W3-GD-W65	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W68	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-N1-ST10	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD-W67	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-N1-ST10	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1 Thermal	Included
2022W3-N1-ST10	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD-S166	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-N1-ST10	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Summer N-1 Thermal	Included
2022W3-N1-ST10	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Summer N-1 Thermal	Included
2022W3-GD-S326	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-W10	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-S155	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S203	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W1022	23937	DICK 230	314290	6EDFERRY	1	230	233/345	Winter Gen Deliv	Included
2022W3-GD-S312	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S170	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-W1012	23938	DICKH230	223937	DICK 230	1	230	233	Winter Gen Deliv	Included
2022W3-N1-ST109	221092	FIVE.FOR	221096	ROCKRGE1	1	115/115	232/232	Summer N-1 Thermal	Included
2022W3-GD-W1002	23938	DICKH230	223937	DICK 230	2	230	233	Winter Gen Deliv	Included
2022W3-N1-ST231	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Summer N-1 Thermal	Included
2022W3-GD-S91	223938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included
2022W3-GD-S90	223938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-GD-S1792	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-S164	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S1792	220962	NWEST311	220972	GRANITE1	1	230	232	Summer Gen Deliv	Included
2022W3-GD-W86	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-S1712	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1712	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-ST129	221092	FIVE.FOR	221096	ROCKRGE1	1	115/115	232/232	Summer N-1 Thermal	Included
2022W3-GD-S1712	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S1712	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1702	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-W81	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W151	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S1812	23938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included
2022W3-GD-S1812	23938	DICKH230	223937	DICK 230	2	230	233	Summer Gen Deliv	Included
2022W3-GD-S103	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-W883	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-S2047	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-S2052	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1722	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W93	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-GD-S172	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S206	221090	GLENARM2	221089	WINDYED1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-S174	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W95	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-S171	2223937	DICK 230	314290	6EDFERRY	1	230	233/345	Summer Gen Deliv	Included
2022W3-GD-W13	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W79	223938	DICKH230	223937	DICK 230	2	230	233	Winter Gen Deliv	Included
2022W3-GD-W89	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-W89	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-GD-S182	220961	NWEST326	220973	GRANITE6	1	230	232	Summer Gen Deliv	Included
2022W3-GD-S172	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S172	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-N1-WT1	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-S188	214084	COOPER	220964	GRACETON	1	230	230/232	Summer Gen Deliv	Included
2022W3-LD-ST15	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-N1-WT2	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-S205	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-LD-ST14	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-N1-WT1	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-LD-ST17	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-N1-WT2	223938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-LD-ST16	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-N1-WT2	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-N1-ST13	208071	SAHA34TP	208069	PPL-BGE TIE	1	230/230	229/229	Summer N-1 Thermal	Included
2022W3-GD-W96	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W97	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S232	2223937	DICK 230	314290	6EDFERRY	1	230	233/345	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-WT19218	9218938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-N1-WT19218	9218938	DICKH230	223937	DICK 230	2	230/230	233/233	Winter N-1 Thermal	Included
2022W3-GD-S1732	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-W794213	9218937	DICK 230	314290	6EDFERRY	1	230	233/345	Winter Gen Deliv	Included
2022W3-GD-S2012	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W16011	9218937	DICK 230	314290	6EDFERRY	1	230	233/345	Winter Gen Deliv	Included
2022W3-GD-S2022	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W794213	9218938	DICKH230	223937	DICK 230	1	230	233	Winter Gen Deliv	Included
2022W3-GD-S2472	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-W1082	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W794213	9218937	DICK 230	314290	6EDFERRY	1	230	233/345	Winter Gen Deliv	Included
2022W3-GD-S21421	14084	COOPER	220964	GRACETON	1	230	230/232	Summer Gen Deliv	Included
2022W3-GD-W794213	9218938	DICKH230	223937	DICK 230	1	230	233	Winter Gen Deliv	Included
2022W3-GD-S2602	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-W95621	14084	COOPER	220964	GRACETON	1	230	230/232	Winter Gen Deliv	Included
2022W3-GD-S206521	21090	GLENARM2	221089	WINDYED1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-W9062	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-LD-ST192	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-N1-WT20218	9218938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-LD-ST182	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-N1-WT20218	9218938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-LD-ST212	200003	BRIGHTON	200004	CNASTONE	1	500/500	233/232	Load Deliverability	Included
2022W3-LD-ST202	208047	PPL-BGE TIE	220963	CONASTON	1	230/230	229/232	Load Deliverability	Included
2022W3-N1-WT20218	9218938	DICKH230	223937	DICK 230	1	230/230	233/233	Winter N-1 Thermal	Included
2022W3-LD-ST222	208048	OTCR	208047	PPL-BGE TIE	1	230/230	229/229	Load Deliverability	Included
2022W3-GD-S812	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S22121	14084	COOPER	220964	GRACETON	1	230	230/232	Summer Gen Deliv	Included
2022W3-GD-S1687	223938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W920	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-S1682	223938	DICKH230	223937	DICK 230	1	230	233	Summer Gen Deliv	Included
2022W3-GD-S1732	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Summer Gen Deliv	Included
2022W3-GD-S1732	223937	DICK 230	314290	6EDFERRY	1	230	233/345	Summer Gen Deliv	Included
2022W3-LD-ST1	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Load Deliverability	Included
2022W3-LD-ST3	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Load Deliverability	Included
2022W3-GD-W14	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-LD-ST2	223938	DICKH230	223937	DICK 230	2	230/230	233/233	Load Deliverability	Included
2022W3-GD-W806	220047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Winter Gen Deliv	Included
2022W3-GD-S762	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1652	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-N1-ST20	223937	DICK 230	314290	6EDFERRY	1	230/230	233/345	Summer N-1 Thermal	Included

## New Flowgates

None

## Financial Information

Capital spend start date 02/2024

Construction start date 02/2024

Project Duration (In Months) 82

## Cost Containment Commitment

Cost cap (in current year) Proprietary Information

Cost cap (in-service year) Proprietary Information

## Components covered by cost containment

1. Graceton 500 kV Substation Expansion - BGE
2. Batavia Road 230 kV Switching Station - BGE
3. High Ridge 500 kV Substation Expansion - BGE
4. West Cooper - High Ridge (500 kV) - BGE
5. Graceton - Batavia Rd (230 kV) - BGE
6. Peach Bottom - Graceton (500 kV) - BGE
7. 5012 LINE REBUILD GRACETON-CONASTONE (BGE ONLY) - BGE
8. 5012 LINE REBUILD WEST COOPER -GRACETON (BGE ONLY) - BGE
9. 230 LINE REBUILD Batavia Road to Riverside - BGE
10. 230 kV DICKERSON STA H TO ED'S FERRY - PEPCO
11. GRACETON 230KV TERMINAL EQP. (BGE) - BGE
12. HIGH RIDGE 230KV TERMINAL EQP. (BGE) - BGE
13. CONASTONE 500KV CAP BANK (BGE) - BGE
14. CONASTONE 500KV 5012 LINE TERMINAL EQP. (BGE) - BGE
15. BRIGHTON 5053 TERMINAL EQP. (PEPCO) - PEPCO
16. BRIGHTON STATCOM (PEPCO) - PEPCO
17. BRIGHTON 500KV CAP BANK (PEPCO) - PEPCO
18. BRIGHTON 5011 TERMINAL EQP. (PEPCO) - PEPCO
19. DICKERSON TO ED'S FERRY TERMINAL EQP. (PEPCO) - PEPCO
20. CONASTONE 500KV 5011 TERMINAL EQP. (BGE) - BGE
21. CHALK POINT 500KV 5073 RELAY UPGRADE (PEPCO) - PEPCO
22. 500 kV DOUBS TO GOOSE CREEK (PEPCO Only) - PEPCO

**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	Yes
AFUDC	Yes
Escalation	Yes
Additional Information	Proprietary Information
Is the proposer offering a binding cap on ROE?	No
Is the proposer offering a Debt to Equity Ratio cap?	Proprietary Information

### **Additional Comments**

None