

Pumphrey Transformer, Constitution-Concord 110567/110568 Re-conductor, Partial 110563/110564 Re-conductor

General Information

Proposing entity name	BGETO
Company proposal ID	E
PJM Proposal ID	962
Project title	Pumphrey Transformer, Constitution-Concord 110567/110568 Re-conductor, Partial 110563/110564 Re-conductor
Project description	Replace Pumphrey Transformer, Re-conductor Constitution-Concord 110567/110568 UG Circuits, Partial 110563/110564 Re-conductor
Project in-service date	06/2024
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	BGE Confidential Information

Project Components

1. Pumphrey 230/115 kV Transformer
2. Constitution Street-Concord Street 110567 Re-conductor
3. Constitution Street-Concord Street 110568 Re-conductor
4. Constitution Street-Concord Street 110563 Partial Re-conductor
5. Constitution Street-Concord Street 110564 Partial Re-conductor

Substation Upgrade Component

Component title	Pumphrey 230/115 kV Transformer
Substation name	Pumphrey
Substation zone	BGE
Substation upgrade scope	Replace Existing transformer in place with new transformer

Transformer Information

	Name	Capacity (MVA)	
Transformer	Pumphrey 230-	300	
	High Side	Low Side	Tertiary
Voltage (kV)	230	115	
New equipment description	New 300MVA transformer with ratings of 363/471/540 SN/SE/SLD, 4220/510/540 WN/WE/WLD		
Substation assumptions	Replace transformer in same location as existing		
Real-estate description	No expansion Required		
Construction responsibility	BGE		
Additional comments			

Component Cost Details - In Current Year \$

Engineering & design	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Permitting / routing / siting	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
ROW / land acquisition	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Materials & equipment	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements

Construction & commissioning	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Construction management	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Overheads & miscellaneous costs	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Contingency	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Total component cost	\$4,692,263.35
Component cost (in-service year)	\$4,929,809.18

Transmission Line Upgrade Component

Component title	Constitution Street-Concord Street 110567 Re-conductor
Impacted transmission line	Constitution Street-Concord Street 110567
Point A	Constitution Street
Point B	Concord Street
Point C	
Terrain description	Baltimore City UG Duct (Existing)

Existing Line Physical Characteristics

Operating voltage	115
Conductor size and type	1650 kcmil Al/1750 kcmil Cu
Hardware plan description	NA
Tower line characteristics	NA

Proposed Line Characteristics

Designed	Operating
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Voltage (kV)	115.000000	115.000000
	Normal ratings	Emergency ratings
Summer (MVA)	198.000000	198.000000
Winter (MVA)	246.000000	246.000000
Conductor size and type	3500 kcmil Cu	
Shield wire size and type	NA	
Rebuild line length	0.95 Miles	
Rebuild portion description	0.95 Miles Re-conductor of UG cables in existing duct within existing pipes	
Right of way		
Construction responsibility	BGE	
Additional comments		

Component Cost Details - In Current Year \$

Engineering & design	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Permitting / routing / siting	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
ROW / land acquisition	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Materials & equipment	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Construction & commissioning	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Construction management	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	

Overheads & miscellaneous costs	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Contingency	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Total component cost	\$5,471,250.81
Component cost (in-service year)	\$5,865,144.77

Transmission Line Upgrade Component

Component title	Constitution Street-Concord Street 110568 Re-conductor
Impacted transmission line	Constitution Street-Concord Street 110568
Point A	Constitution Street
Point B	Concord Street
Point C	
Terrain description	Baltimore City UG Duct (Existing)

Existing Line Physical Characteristics

Operating voltage	115
Conductor size and type	1650 kcmil Al/1750 kcmil Cu
Hardware plan description	NA
Tower line characteristics	NA

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	115.000000	115.000000
	Normal ratings	Emergency ratings

Summer (MVA)	201.000000	205.000000
Winter (MVA)	250.000000	253.000000
Conductor size and type	3500 kcmil Cu	
Shield wire size and type	NA	
Rebuild line length	0.87 Miles	
Rebuild portion description	0.87 Miles Re-conductor of UG cables in existing duct within existing pipes	
Right of way		
Construction responsibility	BGE	
Additional comments		

Component Cost Details - In Current Year \$

Engineering & design	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Permitting / routing / siting	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
ROW / land acquisition	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Materials & equipment	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Construction & commissioning	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Construction management	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Overheads & miscellaneous costs	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	
Contingency	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements	

Total component cost	\$5,190,639.86
Component cost (in-service year)	\$5,564,333.26

Transmission Line Upgrade Component

Component title	Constitution Street-Concord Street 110563 Partial Re-conductor
Impacted transmission line	Constitution Street-Concord Street 110563
Point A	Concord Street
Point B	Monument Street
Point C	
Terrain description	Baltimore City UG Duct (Existing)

Existing Line Physical Characteristics

Operating voltage	115
Conductor size and type	2000 kcmil Al UG Cable
Hardware plan description	NA
Tower line characteristics	NA

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	115.000000	115.000000
	Normal ratings	Emergency ratings
Summer (MVA)	137.000000	157.000000
Winter (MVA)	172.000000	193.000000
Conductor size and type	3500 kcmil Cu	

Shield wire size and type	NA
Rebuild line length	0.19 Miles
Rebuild portion description	0.19 Miles Re-conductor of UG cables in existing duct within existing pipes
Right of way	NA
Construction responsibility	BGE
Additional comments	
Component Cost Details - In Current Year \$	
Engineering & design	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Permitting / routing / siting	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
ROW / land acquisition	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Materials & equipment	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Construction & commissioning	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Construction management	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Overheads & miscellaneous costs	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Contingency	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Total component cost	\$1,963,982.10
Component cost (in-service year)	\$2,105,395.65

Transmission Line Upgrade Component

Component title	Constitution Street-Concord Street 110564 Partial Reconductor
Impacted transmission line	Constitution Street-Concord Street 110563
Point A	Concord Street
Point B	Monument Street
Point C	
Terrain description	Baltimore City UG Duct (Existing)

Existing Line Physical Characteristics

Operating voltage	115
Conductor size and type	1650 kcmil Al UG Cable
Hardware plan description	NA
Tower line characteristics	NA

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	115.000000	115.000000
	Normal ratings	Emergency ratings
Summer (MVA)	121.000000	154.000000
Winter (MVA)	152.000000	191.000000
Conductor size and type	3500 kcmil Cu	
Shield wire size and type	NA	
Rebuild line length	0.36 Miles	

Rebuild portion description	0.36 Miles Re-conductor of UG cables in existing duct within existing pipes
Right of way	NA
Construction responsibility	BGE
Additional comments	
Component Cost Details - In Current Year \$	
Engineering & design	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Permitting / routing / siting	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
ROW / land acquisition	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
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Construction & commissioning	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Construction management	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Overheads & miscellaneous costs	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Contingency	Confidential BGE Detailed Estimate Information Confidential to BGE Supply Chain/Vendor Agreements
Total component cost	\$2,104,361.23
Component cost (in-service year)	\$2,255,880.36

Congestion Drivers

None

Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type
GD-S483	221855	CONSTITUTION	221215	CONCRD62	1	115	232	Gen Deliv (Summer)
GD-S480	221855	CONSTITUTION	221214	CONCRD64	1	115	232	Gen Deliv (Summer)

New Flowgates

None

Financial Information

Capital spend start date 01/2021

Construction start date 10/2022

Project Duration (In Months) 41

Additional comments

None