Dickerson 500kV Substation & New Dickerson - Brighton 500kV Line

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	Proprietary
Company proposal ID	
PJM Proposal ID	371
Project title	Dickerson 500kV Substation & New Dickerson - Brighton 500kV Line
Project description	Expand the existing 230kV Dickerson substation by cutting into the 5015 line and installing one new 500/230kV transformer. Build a new Dickerson – Brighton 500kV line (approximately 25 miles via a mix of brownfield and greenfield likely running parallel to the existing circuits from Dickerson 230kV down to Brighton 230kV lines)
Email	Properiatary
Project in-service date	06/2032
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	Proprietary

Project Components

1. Dickerson 500kV Substation
2. Dickerson - Brighton 500kV Line

Substation Upgrade Component

Component title	Dickerson 500kV Substation
Project description	Construct new Dickerson 500kV substation in accordance with PEPCO Substation Configuration Standards or Guidelines.
Substation name	Dickerson 230kV
Substation zone	233
Substation upgrade scope	Construct new Dickerson 500kV substation in accordance with PEPCO Substation Configuration Standards or Guidelines. 500kV portion will accommodate three breaker and a half (BAAH) bays with 6 breakers initially installed and with provisions for 3 additional future breakers. 2 – 500 kV circuit terminals by cutting into new 5015 500 kV circuit. 1 – 500/230 kV transformer to connect to Dickerson H 230 kV station. Install 2 new 230 kV breakers at existing 230 kV substation to accommodate the low-side connection for the new 500/230 kV transformer and 23104 relocation.

Transformer Information

None

New equipment description	500kV portion will accommodate three breaker and a half (BAAH) bays with 6 breakers initially installed and with provisions for 3 additional future breakers. 2 – 500 kV circuit terminals by cutting into new 5015 500 kV circuit. Ratings of terminals intercepting 5015 circuit should retain or exceed the existing planned circuit ratings (4357SN/4357SE/4909WN/5155WE). 1 – 500/230 kV transformer to connect to Dickerson H 230 kV station. Ratings of the high-side terminal should be consistent with utilizing standard 500/230 kV transformers. All 500 kV circuit breakers should be rated for 5000A/63 kA. Install 2 new 230 kV breakers at existing 230 kV substation to accommodate the low-side connection for the new 500/230 kV transformer and 23104 relocation. Additional 230 kV breakers should be rated for 4000A/63 kA
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	
Construction responsibility	PEPCO
Benefits/Comments	Proprietary
Component Cost Details - In Current Year $	
Engineering & design	Proprietary

Permitting / routing / siting	Proprietary
ROW / land acquisition	Proprietary
Materials & equipment	Proprietary
Construction & commissioning	Proprietary
Construction management	Proprietary
Overheads & miscellaneous costs	Proprietary
Contingency	Proprietary
Total component cost	$257,605,442.00
Component cost (in-service year)	$283,978,366.00

Transmission Line Upgrade Component

Component title	Dickerson - Brighton 500kV Line
Project description	Build a new Dickerson – Brighton 500kV line (approximately 25 miles via a mix of brownfield and greenfield likely running parallel to the existing circuits from Dickerson 230kV down to Brighton 230kV lines)
Impacted transmission line	500kV Dickerson - Brighton
Point A	Dickerson
Point B	Brighton
Point C	
Terrain description	Within existing ROWs
Existing Line Physical Characteristics	
Operating voltage	500
Conductor size and type	Triple-bundled 959.6kcm ACSS/TW “Suwanee”
Hardware plan description	All new hardware will be installed

Tower line characteristics	Single circuit steel pole line	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	4503.000000	5022.000000
Winter (MVA)	5206.000000	5802.000000
Conductor size and type	Triple-bundled 959.6kcm ACSS/TW “Suwanee”	
Shield wire size and type	Single 0.610” 144f DNO-12650 OPGW	
Rebuild line length	25 miles	
Rebuild portion description	TBD	
Right of way	A mix of brownfield and greenfield likely running parallel to the existing Dickerson 230kV down to Brighton 230kV lines.	
Construction responsibility	PEPCO	
Benefits/Comments		
Component Cost Details - In Current Year $		
Engineering & design	Proprietary	
Permitting / routing / siting	Proprietary	
ROW / land acquisition	Proprietary	
Materials & equipment	Proprietary	
Construction & commissioning	Proprietary	
Construction management	Proprietary	

Overheads & miscellaneous costs	Proprietary
Contingency	Proprietary
Total component cost	$599,615,161.00
Component cost (in-service year)	$669,276,434.00

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

None

Financial Information

Capital spend start date	06/2026
Construction start date	09/2028
Project Duration (In Months)	72

Additional Comments

None