Dickerson 500kV Substation

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	919
Project title	Dickerson 500kV Substation
Project description	Expand the existing 230kV Dickerson substation by cutting into the 5015 line and installing two new 500/230kV transformers.
Email	Proprietary
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

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 500kV Substation
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. 2 – 500/230 kV transformers to connect to Dickerson H 230 kV station. Install 4 new 230 kV breakers at existing 230 kV substation to accommodate low-side connections for the new 500/230 kV transformers and 23035 relocation. Install a reactor on line 23111 Dickerson H - Edwards Ferry.

Transformer Information

	Name		Capacity (MVA)	
Transformer	Dickerson 500-1		1000	
	High Side	Low Side		Tertiary
Voltage (kV)	500	230		

	Name		Capacity (MVA)	
Transformer	Dickerson 500-2		1000	
	High Side	Low Side		Tertiary
Voltage (kV)	500	230		

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). 2 – 500/230 kV transformers to connect to Dickerson H 230 kV station. Ratings of the high-side terminals should be consistent with utilizing standard 500/230 kV transformers. All 500 kV circuit breakers should be rated for 5000A/63 kA Install 4 new 230 kV breakers at existing 230 kV substation to accommodate low-side connections for the new 500/230 kV transformers and 23035 relocation. Additional 230 kV breakers should be rated for 4000A/63 kA. Install reactor on line 23111 Dickerson H - Edwards Ferry.
Substation assumptions	Assumes that space is available in the existing substation
Real-estate description	This project will be constructed in Pepco owned land. No new real estate is required.
Construction responsibility	PEPCO
Benefits/Comments	Capacitors can be added to Dickerson 500kV and Dickerson H 230kV stations at additional cost up to around 800 MVARs.
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

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type
FG-919-1	235105	01Doubs	235459	01Doubs	1	500/230	APS	Summer 2032 Generation Delivera
FG-919-2	235105	01Doubs	235459	01Doubs	2	500/230	APS	Summer 2032 Generation Delivera
FG-919-3	235105	01Doubs	235459	01Doubs	3	500/230	APS	Summer 2032 Generation Delivera
FG-919-4	235105	01Doubs	235459	01Doubs	4	500/230	APS	Summer 2032 Generation Delivera
FG-919-5	235105	01Doubs	200003	Brighton	1	500	PEPCO	Summer 2032 Generation Delivera
FG-919-6	314922	8Possum	200019	Burches	1	500	PEPCO	Summer 2032 Generation Delivera
FG-919-7	223938	DICKH230	314920	6Edferry	1	230	PEPCO	Summer 2032 Generation Delivera

Financial Information

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

Additional Comments

None