Frackville - Siegfried 500 kV line

General Information

Proposing entity name	Proprietary Information
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Proprietary Information
Company proposal ID	Proprietary Information
PJM Proposal ID	794
Project title	Frackville - Siegfried 500 kV line
Project description	Adjacent to the existing Frackville - Siegfried 230 kV line, construct a 40-mile Frackville - Siegfried 500 kV line using 1113 ACSS 54/19 conductor. Build a Frackville 500 kV yard adjacent to the existing Frackville 230/69 kV Substation. Construct a three bay 500 kV breaker and a half design with six 500 kV 4,000 amp circuit breakers, and twelve 500 kV 4,000 amp MODs (with space for a total of five bays in the final design).
Email	Proprietary Information
Project in-service date	05/2030
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Proprietary Information

Project Components

1. Frackville - Siegfried 500 kV line
2. Frackville 500 kV yard upgrade

Transmission Line Upgrade Component

Component title	Frackville - Siegfried 500 kV line
Project description	Proprietary Information
Impacted transmission line	Frackville - Siegfried 230 kV line
Point A	Frackville
Point B	Siegfried
Point C	
Terrain description	Terrain is comprised of mountains punctuated by valleys dominated by farming.
Existing Line Physical Characteristics	
Operating voltage	230
Conductor size and type	795 ACSR 30/19 conductor, 1590 ACSS 54/19 conductor
Hardware plan description	The existing Siegfried - Frackville 230 kV line will not be touched for this project. This project will be constructed adjacent to the existing 230 kV line.
Tower line characteristics	The existing Siegfried - Frackville 230 kV line will not be touched for this project. This project will be constructed adjacent to the existing 230 kV line.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Conductor size and type	Triple bundle 1113 54/19 ACSS conductor	

Shield wire size and type	OPGW
Rebuild line length	No line rebuild is involved in this project component. 500 kV line will be constructed adjacent to existing 230 kV line
Rebuild portion description	No line rebuild is involved in this project component. The 500 kV line will be constructed adjacent to the existing 230 kV line.
Right of way	Developer will provide comprehensive Siting and Right of Way (ROW) support starting with project development through construction and site restoration/project close out, to construct a new 500 kV transmission line between Developer's existing Frackville and Siegfried Substations. Siting will prepare and file a Full Siting Application (FSA) with the Pennsylvania Public Utility Commission (PUC) to obtain necessary approvals. A FSA is required for constructing the new 500 kV Line. Developer proposes to utilize an existing 500 kV future use ROW corridor and acquire additional ROW where necessary to accommodate the 500 kV transmission line project. Potential siting and ROW risks include potential interveners in the Siting approval process (impact to schedule) and ROW acquisition. The Siting and ROW Teams will engage proactively with landowners in the local community and serve as project liaisons to address landowner questions and maintain positive relationships throughout the project lifecycle. These efforts will include communicating the project and construction details, as well as calculating and issuing compensation for any crop damages resulting from the project.
Construction responsibility	Proprietary Information
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	$207,334,350.58
Component cost (in-service year)	$232,865,655.49

Substation Upgrade Component

Component title	Frackville 500 kV yard upgrade
Project description	Proprietary Information
Substation name	Frackville 230/69 kV Substation
Substation zone	PPL EU
Substation upgrade scope	Build a Frackville 500 kV yard adjacent to the existing Frackville 230/69 kV Substation. Construct a three bay 500 kV breaker and a half design with six 500 kV 4,000 amp circuit breakers, and twelve 500 kV 4,000 amp MODs (with space for a total of five bays in the final design).

Transformer Information

None

New equipment description	Three 500 kV breaker and a half bays Six 500 kV 4,000 amp circuit breakers Twelve 500 kV 4,000 amp MODs
Substation assumptions	Developer has reviewed existing property ownership and determined space is sufficient for the 500 kV yard addition.
Real-estate description	No new real estate is required to accommodate this project.
Construction responsibility	Proprietary Information
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	$46,162,373.03
Component cost (in-service year)	$51,880,109.30

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
2025W1-GD-S478	207973	FRAC	208072	SIEG	1	230	229	Generation Deliverability	Included
2025W1-32GD-S128	207973	FRAC	208072	SIEG	1	230	229	2032 Generation Deliverability	Included

New Flowgates

Proprietary Information

Financial Information

Capital spend start date	02/2026
Construction start date	03/2028
Project Duration (In Months)	51

Cost Containment Commitment

Cost cap (in current year)	Proprietary Information

Cost cap (in-service year)	Proprietary Information

Components covered by cost containment

1. Frackville - Siegfried 500 kV line - PPL
2. Frackville 500 kV yard upgrade - PPL

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	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