

Juniata - Sunbury 500 kV DCT Line Rebuild

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	435
Project title	Juniata - Sunbury 500 kV DCT Line Rebuild
Project description	Take advantage of an in-flight project to rebuild the Juniata - Sunbury 500 kV line with double circuit construction for baseline project B4029.8 from the RTEP 2025 Reliability Window to better prepare to accommodate potential west-east transfers through the territory under generation futures similar to the one posed in the 2034 case should such a generation portfolio future materialize. String the second circuit as a part of this project.
Email	Proprietary Information
Project in-service date	04/2032
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. Juniata - Sunbury 500 kV # 2 line using a double circuit tower design with existing # 1 line
2. Juniata 500 kV Substation expansion to add JUNI-SUNB #2 terminal
3. Sunbury 500 kV station expansion to terminate new JUNI-SUNB # 2 line

Transmission Line Upgrade Component

Component title	Juniata - Sunbury 500 kV # 2 line using a double circuit tower design with existing # 1 line		
Project description	Proprietary Information		
Impacted transmission line	Juniata - Sunbury 500 kV line		
Point A	Juniata		
Point B	Sunbury		
Point C			
Terrain description	Existing transmission corridor with established access points to structures, generally composed of rural farm field areas with rolling hills.		
Existing Line Physical Characteristics			
Operating voltage	500		
Conductor size and type	Double Bundle 2493 ACAR 54/37 conductor		
Hardware plan description	All infrastructure associated with the line will consist of new 500 kV hardware and assemblies.		
Tower line characteristics	Existing structures will be completely removed and replaced with new 500 kV steel monopole structures on concrete foundations.		
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 ACSS		

Shield wire size and type	19n9 OHGW
Rebuild line length	38 miles
Rebuild portion description	Developer proposes to rebuild the entire line between Juniata and Sunbury, offset from center line to mitigate long-duration 500 kV outages for the rebuild.
Right of way	Developer plans to leverage existing brownfield ROW for the rebuild.
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	\$72,029,993.00
Component cost (in-service year)	\$88,707,298.00
Substation Upgrade Component	
Component title	Juniata 500 kV Substation expansion to add JUNI-SUNB #2 terminal
Project description	Proprietary Information
Substation name	Juniata

Substation zone	PPL
Substation upgrade scope	Terminate the Juniata - Sunbury 500 kV # 2 line at the new Juniata 500 kV yard in the same breaker and a half bay as the Mountain Stone 765/500 kV transformer # 3. Add a new 5000 A circuit breaker and two 5000 A MODs.
Transformer Information	
None	
New equipment description	One 5000 A circuit breaker Two 5000 A MODs
Substation assumptions	NextEra Project 237 proceeds and a new Juniata 500 kV yard # 2 is constructed to interconnect that project.
Real-estate description	No new property is required beyond what is already owned by the Developer.
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	\$6,347,990.00
Component cost (in-service year)	\$7,817,758.00

Substation Upgrade Component

Component title	Sunbury 500 kV station expansion to terminate new JUNI-SUNB # 2 line
Project description	Proprietary Information
Substation name	Sunbury
Substation zone	PPL
Substation upgrade scope	Terminate the Juniata - Sunbury 500 kV # 2 line at Sunbury in one open existing breaker and a half 500 kV GIS bay position.

Transformer Information

None	
New equipment description	N/A
Substation assumptions	No assumptions associated with this work. An existing bay position is available to accommodate the new termination.
Real-estate description	No new property is need to accommodate this station expansion work.
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	\$11,151,161.00
Component cost (in-service year)	\$13,733,020.00

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

Proprietary Information

Financial Information

Capital spend start date	02/2027
Construction start date	03/2027
Project Duration (In Months)	62

Cost Containment Commitment

Cost cap (in current year)	Proprietary Information
Cost cap (in-service year)	Proprietary Information

Components covered by cost containment

1. Juniata - Sunbury 500 kV # 2 line using a double circuit tower design with existing # 1 line - PROPOSER
2. Juniata 500 kV Substation expansion to add JUNI-SUNB #2 terminal - PROPOSER
3. Sunbury 500 kV station expansion to terminate new JUNI-SUNB # 2 line - PROPOSER

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 cost containment measures not covered above	Proprietary Information

Additional Comments

None