Glen Brook - Susquehanna T10 1 & 2 DCT line reconductor and Susquehanna T10 - Susquehanna # 3 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	588
Project title	Glen Brook - Susquehanna T10 1 & 2 DCT line reconductor and Susquehanna T10 - Susquehanna # 3 line
Project description	Glen Brook - Susquehanna T10 1 & 2 DCT line reconductor and Susquehanna T10 - Susquehanna # 3 line: On the Glen Brook - Susquehanna T10 1 & 2 (3.72 miles) lines, Supplemental Project s2373 has a scope that involves a line rebuild and reconductoring with double-bundle 1590 ACSS for 3.02 miles of the route. This project (2025-W1-588) scope involves reconducting the remaining 0.70 miles of the route with ACCC 1036/87/392 (2045 kcmil) conductor. Construct a new Susquehanna T10 - Susquehanna 230 kV # 3 line (approximately 2.7 miles) using an approximately 75% brownfield route (an unused circuit position on transmission line towers associated with presented M3 Solution PPL-2025-0003), with a short greenfield segment near the Susquehanna station. Construct a new breaker and a half bay at Susquehanna 230 kV Substation and initially populate with two 230 kV 3,000 amp circuit breakers and four 230 kV 3,000 amp MODs, leaving a position for a future breaker to be added. Construct a new breaker and a half bay at Susquehanna T10 230 kV Station and initially populate with two 230 kV 3,000 amp circuit breakers and four 230 kV 3,000 amp MODs, leaving a position for a future breaker to be added.
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. Glen Brook - Susquehanna T10 1 & 2 DCT line reconductor
2. Susquehanna T10 - Susquehanna 230 kV # 3 line
3. Susquehanna T10 230 kV Station expansion
4. Susquehanna 230 kV Substation expansion
5. Glen Brook 230/69 kV Substation MOD upgrades

Transmission Line Upgrade Component

Component title	Glen Brook - Susquehanna T10 1 & 2 DCT line reconductor
Project description	Proprietary Information
Impacted transmission line	Glen Brook - Susquehanna T10 1 & 2 DCT line
Point A	Glen Brook
Point B	Susquehanna
Point C	
Terrain description	Existing transmission ROW with good access points to each structure recently installed as part of Glen Brook Substation project.
Existing Line Physical Characteristics	
Operating voltage	230
Conductor size and type	1590 ACSR 45/7 conductor
Hardware plan description	The existing hardware that supports the 1590 ACSR will be removed and replaced with new hardware to support the ACCC 1036/87/392 (2045 kcmil) conductor.
Tower line characteristics	The reconductor segment of line is composed of DCT 230 kV steel poles recently installed as part of the Glen Brook Substation project.
Proposed Line Characteristics	

	Designed	Operating

Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1196.000000	1352.000000
Winter (MVA)	1269.000000	1425.000000
Conductor size and type	ACCC 1036/87/392 (2045 kcmil) conductor	
Shield wire size and type	OPGW	
Rebuild line length	No line rebuild is involved in this project component	
Rebuild portion description	For this project, 0.70 miles of the Glen Brook - Susquehanna T10 1 & 2 will be reconducted. No line rebuild is involved in this project component.	
Right of way	Existing ROW will not be altered.	
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	$2,628,081.53	

Component cost (in-service year)	$3,255,706.21

Transmission Line Upgrade Component

Component title	Susquehanna T10 - Susquehanna 230 kV # 3 line
Project description	Proprietary Information
Impacted transmission line	Susquehanna - Susquehanna Talen AWS 230 kV line
Point A	Susquehanna
Point B	Talen AWS
Point C	
Terrain description	Existing transmission corridor for approximately 75% of the route, traverses farm fields, hills, and heavy transmission line congestion near Talen facilities.
Existing Line Physical Characteristics	
Operating voltage	230
Conductor size and type	1590 ACSS 54/19 conductor
Hardware plan description	All hardware associated with the proposed line will be newly installed 230 kV hardware with glass insulator assemblies.
Tower line characteristics	Developer proposes single circuit 230 kV steel monopole transmission structures on concrete foundations.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	933.000000	1079.000000
Winter (MVA)	998.000000	1143.000000

Conductor size and type	1590 ACSS 54/19 conductor
Shield wire size and type	OPGW
Rebuild line length	2.0 miles
Rebuild portion description	Construct a new Susquehanna T10 - Susquehanna 230 kV # 3 line (approximately 2.7 miles) using an approximately 75% brownfield route (an unused circuit position on transmission line towers associated with presented M3 Solution PPL-2025-0003)
Right of way	Developer proposes new 150 foot ROW for approximately 25% of the line (segment near Talen facility). No ROW required for rebuild segment of the line.
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	$14,332,677.38
Component cost (in-service year)	$17,755,532.38

Substation Upgrade Component

Component title	Susquehanna T10 230 kV Station expansion

Project description	Proprietary Information
Substation name	Susquehanna T10 230 kV Station
Substation zone	PPL EU
Substation upgrade scope	Construct a new breaker and a half bay at Susquehanna T10 230 kV Station and initially populate with two 230 kV 3,000 amp circuit breakers and four 230 kV 3,000 amp MODs, leaving a position for a future breaker to be added.

Transformer Information

None

New equipment description	One 230 kV breaker and a half bay Two 230 kV 3,000 amp circuit breakers Four 230 kV 3,000 amp MODs
Substation assumptions	Developer has confirmed there is adequate space on property for T10 yard expansion and addition of new bay.
Real-estate description	No new real estate 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	$6,619,658.00
Component cost (in-service year)	$8,200,530.08

Substation Upgrade Component

Component title	Susquehanna 230 kV Substation expansion
Project description	Proprietary Information
Substation name	Susquehanna 230 kV Substation
Substation zone	PPL EU
Substation upgrade scope	Reuse existing bay and upgrade to 3,000 amps. Existing bay at Susquehanna vacated by the former Sunbury line. Inspect all facilities, refurbish, and insure bay rating of 3,000 amps.

Transformer Information

None

New equipment description	N/A
Substation assumptions	Existing fully populated bay that we assume will be in working condition, and we have outlined scope to inspect and insure readiness for new line.
Real-estate description	No new real estate 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	$1,235,500.00
Component cost (in-service year)	$1,530,555.64

Substation Upgrade Component

Component title	Glen Brook 230/69 kV Substation MOD upgrades
Project description	Proprietary Information
Substation name	Glen Brook 230/69 kV Substation
Substation zone	PPL EU
Substation upgrade scope	At Glen Brook 230/69 kV Substation, replace ten 230 kV 2,000 amp MODs with 230 kV 3,000 amp MODs.

Transformer Information

None

New equipment description	Ten 230 kV 3,000 amp MODs
Substation assumptions	Replacement of existing equipment in kind with higher rated equipment.
Real-estate description	No new real estate is required for 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	$2,496,814.00
Component cost (in-service year)	$2,810,332.88

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
2025W1-32GD-S40	207915	GLBR	208120	SU10	2	230	229	2032 Generation Deliverability	Included
2025W1-32GD-S41	207915	GLBR	208120	SU10	2	230	229	2032 Generation Deliverability	Included
2025W1-GD-S180	208120	SU10	208113	SUSQ	2	230	229	Generation Deliverability	Included
2025W1-GD-S464	208120	SU10	208113	SUSQ	1	230	229	Generation Deliverability	Included
2025W1-N1-ST106	208120	SU10	208113	SUSQ	1	230/230	229/229	N-1 Thermal	Included
2025W1-N1-ST105	208120	SU10	208113	SUSQ	2	230/230	229/229	N-1 Thermal	Included
2025W1-32GD-S47	207915	GLBR	208120	SU10	1	230	229	2032 Generation Deliverability	Included
2025W1-32GD-S81	208120	SU10	208113	SUSQ	2	230	229	2032 Generation Deliverability	Included
2025W1-GD-S168	207915	GLBR	208120	SU10	1	230	229	Generation Deliverability	Included
2025W1-32GD-W4	208120	SU10	208113	SUSQ	1	230	229	2032 Generation Deliverability	Included
2025W1-32GD-S53	207915	GLBR	208120	SU10	2	230	229	2032 Generation Deliverability	Included
2025W1-N1-ST78	207915	GLBR	208120	SU10	1	230/230	229/229	N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-32GD-S54	208120	SU10	208113	SUSQ	1	230	229	2032 Generation Deliverability	Included
2025W1-32GD-W3	208120	SU10	208113	SUSQ	2	230	229	2032 Generation Deliverability	Included
2025W1-N1-ST77	207915	GLBR	208120	SU10	1	230/230	229/229	N-1 Thermal	Included
2025W1-32GD-S55	208120	SU10	208113	SUSQ	2	230	229	2032 Generation Deliverability	Included
2025W1-N1-ST76	207915	GLBR	208120	SU10	1	230/230	229/229	N-1 Thermal	Included
2025W1-N1-ST82	207915	GLBR	208120	SU10	2	230/230	229/229	N-1 Thermal	Included
2025W1-N1-ST81	207915	GLBR	208120	SU10	2	230/230	229/229	N-1 Thermal	Included
2025W1-N1-ST80	207915	GLBR	208120	SU10	2	230/230	229/229	N-1 Thermal	Included
2025W1-32GD-S52	207915	GLBR	208120	SU10	1	230	229	2032 Generation Deliverability	Included
2025W1-32GD-S39	207915	GLBR	208120	SU10	2	230	229	2032 Generation Deliverability	Included
2025W1-GD-S14	207915	GLBR	208120	SU10	2	230	229	Generation Deliverability	Included
2025W1-N1-ST84	207915	GLBR	208120	SU10	2	230/230	229/229	N-1 Thermal	Included
2025W1-GD-S13	207915	GLBR	208120	SU10	1	230	229	Generation Deliverability	Included
2025W1-N1-ST83	207915	GLBR	208120	SU10	2	230/230	229/229	N-1 Thermal	Included
2025W1-GD-S164	207915	GLBR	208120	SU10	2	230	229	Generation Deliverability	Included
2025W1-GD-S162	207915	GLBR	208120	SU10	2	230	229	Generation Deliverability	Included
2025W1-GD-S163	207915	GLBR	208120	SU10	2	230	229	Generation Deliverability	Included
2025W1-N1-ST99	207915	GLBR	208120	SU10	1	230/230	229/229	N-1 Thermal	Included
2025W1-GD-S161	207915	GLBR	208120	SU10	1	230	229	Generation Deliverability	Included
2025W1-32GD-S38	207915	GLBR	208120	SU10	1	230	229	2032 Generation Deliverability	Included

New Flowgates

Proprietary Information

Financial Information

Capital spend start date	02/2026
Construction start date	06/2028

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. Glen Brook - Susquehanna T10 1 & 2 DCT line reconductor - PPL
2. Susquehanna T10 - Susquehanna 230 kV # 3 line - PPL
3. Susquehanna T10 230 kV Station expansion - PPL
4. Susquehanna 230 kV Substation expansion - PPL
5. Glen Brook 230/69 kV Substation MOD upgrades - 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