

Jackson Road 230kV Station to Cedar Grove 230kV Station (3500kcmil cable)

General Information

Proposing entity name	Competitive and Confidential
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Competitive and Confidential
Company proposal ID	Competitive and Confidential
PJM Proposal ID	496
Project title	Jackson Road 230kV Station to Cedar Grove 230kV Station (3500kcmil cable)
Project description	New 230kV XLPE Circuit using (230kV rated 3500kcmil cable) from Jackson Road 230kV Station to Cedar Grove 230kV Station
Email	Proposer Contact Information
Project in-service date	06/2028
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Competitive and Confidential

Project Components

1. New 230kV XLPE Circuit (3500kcmil) from Jackson Road 230kV Station to Cedar Grove 230kV Station
2. Cedar Grove 230kV Station
3. Jackson Road 230kV Station

Greenfield Transmission Line Component

Component title	New 230kV XLPE Circuit (3500kcmil) from Jackson Road 230kV Station to Cedar Grove 230kV Station
Project description	Competitive and Confidential
Point A	Cedar Grove 230kV Station
Point B	Jackson Road 230kV Station
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	457.000000	677.000000
Winter (MVA)	492.000000	700.000000
Conductor size and type	3500 kcmil XLPE	
Nominal voltage	AC	
Nominal voltage	230	
Line construction type	Underground	
General route description	Approximately 4 miles between Jackson Road 230kV Station and Cedar Grove 230kV Station	
Terrain description	All on Public Right-of-Way (roads) except for the (4) four special crossings (and their approaches). The (4) four special crossings include (2) bridge attachments (Route 46 and a Railroad) and (2) river crossings (Passaic River and Peckman River).	
Right-of-way width by segment	The project is within public Right-Of-Way with the exception of the river crossings which will require a 20-ft permanent easement and an agreement with the bridge owner for the ductbank installation.	
Electrical transmission infrastructure crossings	The route will require crossing an existing underground transmission circuit.	

Civil infrastructure/major waterway facility crossing plan

The installation process will typically involve the following tasks: - Open Trench Excavation/Duct Bank Installation. The cable trench will be excavated to dimensions of approximately 6 to 10 feet deep and 5 to 7 feet wide. - Vault Excavation/Installation. At intervals along the cable route, areas will be excavated for the installation of below-grade reinforced-concrete vaults, within which cable and fiber sections will be connected. - Proofing/Cable Installation. After successful proofing, the transmission cables will be installed and spliced within the vaults. Special Crossings - Along the cable route, where open trenching is not viable, special crossing techniques will be used to install the cable while minimizing environmental impacts. - Bridge Attachments are planned to be used to cross Route 46 and a Railroad. This method is applicable in areas where an open-cut installation is not practical and the cable system can instead be attached to an existing bridge, thereby effectively spanning features such as railroads or highway underpasses. - For the Passaic River and the Peckman River Crossings, the proposed method of construction is microtunneling. - Special crossing construction methods are subject to change based on detailed engineering findings.

Environmental impacts

A GIS analysis was performed to locate and avoid known public lands and environmentally sensitive areas for this project scope. NJDEP, FEMA, and NJGeoWeb data layers were reviewed as part of the proposed routing analysis. Upon award a detailed field based analysis will be completed. Field based delineations and assessments will include wetlands and streams delineations, and as applicable, habitat surveys and cultural resource studies. Construction timing will be scheduled in accordance with USFWS and NJDEP specifications to minimize adverse project impacts. At a minimum, approvals and permits are anticipated to be acquired from the NJDEP, NJDOT, Passaic County, local road opening permits, and HEP (Hudson, Essex Passaic) Soil Conservation District. Work will be planned and completed in accordance with the standards and specifications of applicable regulations and ordinances.

Tower characteristics

N/A, the route will be entirely underground

Construction responsibility

Competitive and Confidential

Benefits/Comments

Competitive and Confidential

Component Cost Details - In Current Year \$

Engineering & design

Competitive and Confidential

Permitting / routing / siting

Competitive and Confidential

ROW / land acquisition

Competitive and Confidential

Materials & equipment

Competitive and Confidential

Construction & commissioning

Competitive and Confidential

Construction management	Competitive and Confidential
Overheads & miscellaneous costs	Competitive and Confidential
Contingency	Competitive and Confidential
Total component cost	\$71,403,456.94
Component cost (in-service year)	\$78,719,105.95

Substation Upgrade Component

Component title	Cedar Grove 230kV Station
Project description	Competitive and Confidential
Substation name	Cedar Grove 230kV Station
Substation zone	PSEG
Substation upgrade scope	Expand a new 230kV bay at the existing Cedar Grove with one line position by adding two 230kV circuit breaker and associated disconnect switches.

Transformer Information

None	
New equipment description	Expanding the existing breaker and a half configuration with two (2) 230kV circuit breaker (230kV 63kA 4000A), (6) 230kV circuit breaker disconnect switches, one line position, and installing new underground termination structure.
Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. Systems will accommodate the new equipment; Geotechnical data is available; The existing cable trench has space for the new cables; The existing control house has space for the new relay panels; Existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No additional property required in order to expand the existing station.
Construction responsibility	Competitive and Confidential
Benefits/Comments	Competitive and Confidential

Component Cost Details - In Current Year \$

Engineering & design	Competitive and Confidential
Permitting / routing / siting	Competitive and Confidential
ROW / land acquisition	Competitive and Confidential
Materials & equipment	Competitive and Confidential
Construction & commissioning	Competitive and Confidential
Construction management	Competitive and Confidential
Overheads & miscellaneous costs	Competitive and Confidential
Contingency	Competitive and Confidential
Total component cost	\$6,659,254.56
Component cost (in-service year)	\$7,341,529.21

Substation Upgrade Component

Component title	Jackson Road 230kV Station
Project description	Competitive and Confidential
Substation name	Jackson Road 230kV Station
Substation zone	PSEG
Substation upgrade scope	Replace the existing HPFF termination structure with a new XLPE termination structure to connect to spare GIS bay position.

Transformer Information

None	
New equipment description	Not applicable

Substation assumptions	This proposal assumes that the open position at Jackson Road Switching Yard can be used for this project and that all necessary outages will be available; existing AC, DC, and telecom. Geotechnical data is available; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No additional property required in order to expand the existing station.
Construction responsibility	Competitive and Confidential
Benefits/Comments	Competitive and Confidential
Component Cost Details - In Current Year \$	
Engineering & design	Competitive and Confidential
Permitting / routing / siting	Competitive and Confidential
ROW / land acquisition	Competitive and Confidential
Materials & equipment	Competitive and Confidential
Construction & commissioning	Competitive and Confidential
Construction management	Competitive and Confidential
Overheads & miscellaneous costs	Competitive and Confidential
Contingency	Competitive and Confidential
Total component cost	\$830,469.19
Component cost (in-service year)	\$915,555.00

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
2023W2-PSEG-T2	218155	CEDARGROVE69	218760	DRTTOTOWA	1	69	231	FERC 715	Included
2023W2-PSEG-T1	218159	TOTOWA69	218196	JACKSON_69	1	69	231	FERC 715	Included
2023W2-PSEG-T4	218155	CEDARGROVE69	218760	DRTTOTOWA	1	69	231	FERC 715	Included
2023W2-PSEG-T3	218159	TOTOWA69	218760	DRTTOTOWA	1	69	231	FERC 715	Included
2023W2-PSEG-T1	218159	TOTOWA69	218196	JACKSON_69	1	69/69	231/231	FERC 715	Included
2023W2-PSEG-T1	218159	TOTOWA69	218196	JACKSON_69	1	69/69	231/231	FERC 715	Included
2023W2-PSEG-T1	218159	TOTOWA69	218196	JACKSON_69	1	69/69	231/231	FERC 715	Included
2023W2-PSEG-T6	218159	TOTOWA69	218196	JACKSON_69	1	69	231	FERC 715	Included
2023W2-PSEG-T5	218155	CEDARGROVE69	218161	GR NOTCH69	2	69	231	FERC 715	Included
2023W2-PSEG-T8	218159	TOTOWA69	218196	JACKSON_69	1	69	231	FERC 715	Included
2023W2-PSEG-T1	218159	TOTOWA69	218760	DRTTOTOWA	1	69	231	FERC 715	Included
2023W2-PSEG-T9	218155	CEDARGROVE69	218760	DRTTOTOWA	1	69	231	FERC 715	Included

New Flowgates

Competitive and Confidential

Financial Information

Capital spend start date 06/2024

Construction start date 01/2026

Project Duration (In Months) 48

Cost Containment Commitment

Cost cap (in current year) Competitive and Confidential

Cost cap (in-service year) Competitive and Confidential

Components covered by cost containment

1. New 230kV XLPE Circuit (3500kcmil) from Jackson Road 230kV Station to Cedar Grove 230kV Station - PSEG
2. Cedar Grove 230kV Station - PSEG
3. Jackson Road 230kV Station - PSEG

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	Yes
AFUDC	No
Escalation	Yes
Additional Information	Competitive and Confidential
Is the proposer offering a binding cap on ROE?	No
Is the proposer offering a Debt to Equity Ratio cap?	Competitive and Confidential

Additional Comments

All attachments included in this proposal are considered confidential.