

# Montville - Jackson Rd 230 kV line project

## 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	716
Project title	Montville - Jackson Rd 230 kV line project
Project description	Build a 7.6 mile 230 kV underground line from the JCPL Montville Substation to the PSEG Jackson Rd Substation. Expand the Montville 230 kV to a breaker and a half configuration by adding one new bay on the west side of the yard to terminate the new line. At Jackson Rd, terminate the new line in the open bay position next to transformer 40.
Email	Proprietary Information
Project in-service date	03/2030
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Proprietary Information

## Project Components

1. Montville - Jackson Rd 230 kV underground line
2. Montville Substation Expansion
3. Jackson Rd Substation Upgrade

## Greenfield Transmission Line Component

Component title Montville - Jackson Rd 230 kV underground line

Project description Proprietary Information

Point A Montville

Point B Jackson Rd

Point C

### Normal ratings

### Emergency ratings

Summer (MVA) 624.000000 830.000000

Winter (MVA) 659.000000 850.000000

Conductor size and type 5000 kcmil copper XLPE laminate sheath cable

Nominal voltage AC

Nominal voltage 230

Line construction type Underground

General route description

The Montville – Jackson Road 230 kV transmission line will connect the existing Montville Substation to the existing Jackson Road Substation. The line will be approximately 7.6 miles long and be constructed underground. Both the Montville and Jackson Road Substations will be modified to accommodate the new transmission line. The conceptual route was selected to minimize impacts to the built and natural environments to the extent practical based on publicly available information. The conceptual route traverses a combination of private and public lands and road right of way. Approximately 90% of the route is situated within road right of way and 10% on public and privately owned land. The conceptual route originates at the Montville 230 kV substation and generally progresses eastward towards the Jackson Road 230 kV substation. The final route will be determined as part of the siting approval process. Proposer will assign a Right of Way Team to oversee all real estate related activities for the Project including appraisals, title work, surveying, land acquisition and restoration. Where the route crosses privately owned land Proposer will negotiate with the owners to acquire right of way. Where the transmission line is situated within the road right of way, Proposer will work with the appropriate authorities to obtain the required approvals to construct the facilities. The right of way acquisition activities will be coordinated with the outreach plan to assure complete and transparent communications. The right of way agent will be the primary point of contact for landowner negotiations and during the construction/restoration process.

Terrain description

Low lying land near water table. One half mile section of hilly, rocky terrain. Pompton River crossing.

Right-of-way width by segment

The Montville – Jackson Road 230 kV transmission line will connect the existing Montville Substation to the existing Jackson Road Substation. The line will be approximately 7.6 miles long and be constructed underground. Both the Montville and Jackson Road Substations will be modified to accommodate the new transmission line. The conceptual route was selected to minimize impacts to the built and natural environments to the extent practical based on publicly available information. The conceptual route traverses a combination of private and public lands and road right of way. Approximately 90% of the route is situated within road right of way and 10% on public and privately owned land. The conceptual route originates at the Montville 230 kV substation and generally progresses eastward towards the Jackson Road 230 kV substation. The final route will be determined as part of the siting approval process. Proposer will assign a Right of Way Team to oversee all real estate related activities for the Project including appraisals, title work, surveying, land acquisition and restoration. Where the route crosses privately owned land Proposer will negotiate with the owners to acquire right of way. Where the transmission line is situated within the road right of way, Proposer will work with the appropriate authorities to obtain the required approvals to construct the facilities. The right of way acquisition activities will be coordinated with the outreach plan to assure complete and transparent communications. The right of way agent will be the primary point of contact for landowner negotiations and during the construction/restoration process.

Electrical transmission infrastructure crossings

N/A

Civil infrastructure/major waterway facility crossing plan

Proposer will employ industry standard methods for identifying and deconflicting existing civil infrastructure and waterway facilities, particularly employing subsurface utility engineering (SUE) to minimize risk to existing utilities. Proposer will adhere to the ASCE 38-22 standard (Standard Guideline for Investigating and Documenting Existing Utilities) to identify, document, and design around existing utilities. In situations where conflict with existing utilities are unavoidable, Proposer will coordinate in good faith for a limited relocation that is amenable to both parties and the jurisdictional transportation agency. The project will most likely require the implementation of SUE Quality Level A as defined in ASCE 38-22. The preliminary route will be evaluated through a records review of existing documented utilities and coordination with known utility operators in the project area, followed by a field inspection identifying buried utility aboveground appurtenances. At a more advanced state of project design Proposer will employ Quality Level A, utilizing a combination of geophysical methods such as ground penetrating radar and/or physical exposure through non-destructive excavation (such as hydro excavation or an air knife). The use of non-destructive excavation will allow for the precise vertical and horizontal location of the existing utility in situations where routing may cause a conflict, minimizing risk of damage to the existing assets. Through the use of SUE principles, the project design will minimize the risk of damage to existing utilities.

Environmental impacts

As part of the review of the proposed Montville-Jackson Rd 230 kV Transmission project, Proposer reviewed the corridor for impacts to threatened & endangered (T&E) species, wetlands & waterways, known and publicly available cultural resource sites, storm water management, and known contaminated sites. Since the project will largely be sited underground, impacts to known above ground historic resources will be minimal. Potential habitat for several known T&E species occur in the proposed project area; Proposer will consult with the US Fish and Wildlife Service and New Jersey DEP to minimize adverse impacts. Proposer believes, based on experience, that project impacts will be minor and consistent with typical construction projects, and will not create a project schedule delay. Proposer will design a storm water management plan consistent with NPDES and NJ DEP regulations. While it appears that the project will impact mapped wetlands, impacts are anticipated to be minimal and mostly temporary in nature. Up to six known contaminated sites have been identified through NJ DEP records within the vicinity of the proposed project. If required, Proposer will coordinate with the assigned LSRP (site professional in charge of remediation) to minimize or avoid impacts to on-going remediation efforts, ensure contaminated soils and ground remain in situ, and ensure safe handling of contaminated media when excavation is required.

Tower characteristics

The Montville – Jackson Road 230 kV transmission line will be installed underground utilizing industry standard methods. The proposed project will utilize 5,000kcmil Copper XLPE conductor to provide a reliable and low maintenance transmission asset. Trenchless installation technology such as direction drilling or conventional boring methods will be used for prominent crossings throughout the route where excavation/trench installation methods are not acceptable. Excavation/trenched sections of the line will be buried underground in a thermal concrete encased duct bank and backfilled with appropriate material.

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

\$204,340,772.64

Component cost (in-service year)

\$224,869,544.91

**Substation Upgrade Component**

Component title

Montville Substation Expansion

Project description

Proprietary Information

Substation name

Montville 230/34.5 kV Substation

Substation zone

JCPL

Substation upgrade scope

Expand the 230 kV at Montville Substation into a breaker and a half design by extending the 230 kV buses west and adding a new 2-breaker bay to allow termination of the new line from Jackson Rd. Move the existing capacitor bank to the east end of the station. Add two (2) 3,000 A circuit breakers and five (5) 3,000 A MODs in the new bay. Bus and bay conductor will be double-bundle 1590 ACSR conductor or larger as necessary.

**Transformer Information**

None	
New equipment description	Two (2) 3,000 A 230 kV circuit breakers Five (5) 3,000 A 230 kV MODs Double-bundle 1590 ACSR bus and bay conductor
Substation assumptions	The 230 kV station can be expanded to accommodate an additional bay on the west side.
Real-estate description	No new real estate necessary.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
<b>Component Cost Details - In Current Year \$</b>	
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	\$6,373,599.46
Component cost (in-service year)	\$7,083,261.07
<b>Substation Upgrade Component</b>	
Component title	Jackson Rd Substation Upgrade
Project description	Proprietary Information
Substation name	Jackson Rd
Substation zone	PSEG

Substation upgrade scope

Terminate the new 230 kV underground line from Montville in bay position 5-6 next to transformer 40 in the Jackson Rd 230 kV GIS station.

## Transformer Information

None

New equipment description

N/A Assumes that bay position 5-6 is available to accept a new line and cables can be routed in the GIS building to bay position location.

Substation assumptions

Assumes that bay position 5-6 is available to accept a new line and cables can be routed in the GIS building to bay position location.

Real-estate description

No real-estate expansion anticipated to be necessary.

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

\$368,012.50

Component cost (in-service year)

\$408,988.46

## 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-T1	218159	TOTOWA69	218196	JACKSON_69	1	69/69	231/231	FERC 715	Included
2023W2-PSEG-T2	218159	TOTOWA69	218196	JACKSON_69	1	69/69	231/231	FERC 715	Included
2023W2-PSEG-T3	218159	TOTOWA69	218196	JACKSON_69	1	69/69	231/231	FERC 715	Included
2023W2-PSEG-T22	218155	CEDARGROVE69	218760	DRTTOTOWA	1	69	231	FERC 715	Included
2023W2-PSEG-T12	218159	TOTOWA69	218196	JACKSON_69	1	69	231	FERC 715	Included
2023W2-PSEG-T42	218155	CEDARGROVE69	218760	DRTTOTOWA	1	69	231	FERC 715	Included
2023W2-PSEG-T32	218159	TOTOWA69	218760	DRTTOTOWA	1	69	231	FERC 715	Included
2023W2-PSEG-T62	218159	TOTOWA69	218196	JACKSON_69	1	69	231	FERC 715	Included
2023W2-PSEG-T52	218155	CEDARGROVE69	218161	GR NOTCH69	2	69	231	FERC 715	Included
2023W2-PSEG-T82	218159	TOTOWA69	218196	JACKSON_69	1	69	231	FERC 715	Included
2023W2-PSEG-T10	218159	TOTOWA69	218760	DRTTOTOWA	1	69	231	FERC 715	Included
2023W2-PSEG-T92	218155	CEDARGROVE69	218760	DRTTOTOWA	1	69	231	FERC 715	Included

## New Flowgates

Proprietary Information

## Financial Information

Capital spend start date 07/2024

Construction start date 05/2027

Project Duration (In Months) 68

## Cost Containment Commitment

Cost cap (in current year) Proprietary Information

Cost cap (in-service year)

Proprietary Information

### **Components covered by cost containment**

1. Montville - Jackson Rd 230 kV underground line - Proposer

### **Cost elements covered by cost containment**

Engineering & design	Yes
Permitting / routing / siting	No
ROW / land acquisition	No
Materials & equipment	Yes
Construction & commissioning	No
Construction management	Yes
Overheads & miscellaneous costs	No
Taxes	No
AFUDC	No
Escalation	No
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