

Pierce Brook Substation: Install second 230/115 kV transformer

General Information

Proposing entity name	Company Specific
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	Company Specific
PJM Proposal ID	101
Project title	Pierce Brook Substation: Install second 230/115 kV transformer
Project description	Install a second 230/115 kV transformer at Pierce Brook Substation. Install additional breakers to expand the 230 kV and 115 kV ring bus with an additional position for the new transformer. Review and adjust relaying at remote end stations as necessary.
Email	Company specific
Project in-service date	06/2026
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

Project Components

1. Pierce Brook Substation: Install second 230/115 kV Transformer
2. Lewis Run Substation: Review and revise relay settings
3. Farmers Valley Substation: Review and revise relay settings
4. Potter Substation: Review and revise relay settings.

Substation Upgrade Component

Component title	Pierce Brook Substation: Install second 230/115 kV Transformer
Project description	Install a second 230/115 kV transformer and associated facilities.
Substation name	Pierce Brook
Substation zone	Penelec
Substation upgrade scope	Install a second 230/115 kV transformer and associated facilities. Install one 230 kV breaker and one 115 kV breaker, and associated facilities, to create new terminal positions for the high and low side of the transformer.

Transformer Information

	Name	Capacity (MVA)		
Transformer	No. 3 Transformer	180/240/300 MVA		
	High Side	Low Side	Tertiary	
Voltage (kV)	230	115		
New equipment description	Install a second 180/240/300 MVA 230/115 kV transformer and associated facilities. New 230 and 115 kV breakers will be installed to expand the 230 kV and 115 kV yards to four-breaker ring buses. All high and low side terminal equipment will be sized such that the transformer will be the limiting element of the circuit.			
Substation assumptions	- Control house has sufficient space for new panels - AC and DC systems are sufficient for new equipment - SCADA and DFR have sufficient spare points for new equipment - Existing ground grid is sufficient for new equipment - Breaker failure relaying can be installed in existing panels Note: Initial substation design included provisions for an eventual second transformer, including positions for future breakers in the 230 kV and 115 kV ring buses.			
Real-estate description	Not Applicable - No substation expansion is required.			
Construction responsibility	Company Specific			
Benefits/Comments				

Component Cost Details - In Current Year \$

Engineering & design	This information is considered confidential and proprietary
Permitting / routing / siting	This information is considered confidential and proprietary
ROW / land acquisition	This information is considered confidential and proprietary
Materials & equipment	This information is considered confidential and proprietary
Construction & commissioning	This information is considered confidential and proprietary
Construction management	This information is considered confidential and proprietary
Overheads & miscellaneous costs	This information is considered confidential and proprietary
Contingency	This information is considered confidential and proprietary
Total component cost	\$4,991,289.70
Component cost (in-service year)	\$5,723,879.00

Substation Upgrade Component

Component title	Lewis Run Substation: Review and revise relay settings
Project description	Review and update relay settings at Lewis Run Substation
Substation name	Lewis Run
Substation zone	Penelec
Substation upgrade scope	Review and update relay settings, as necessary, at Lewis Run Substation due to the new transformer at Pierce Brook Substation.

Transformer Information

None	
New equipment description	No new equipment is required.
Substation assumptions	Existing relays will be re-used and settings updated as necessary.

Real-estate description	Not Applicable
Construction responsibility	Company Specific
Benefits/Comments	
Component Cost Details - In Current Year \$	
Engineering & design	This information is considered confidential and proprietary
Permitting / routing / siting	This information is considered confidential and proprietary
ROW / land acquisition	This information is considered confidential and proprietary
Materials & equipment	This information is considered confidential and proprietary
Construction & commissioning	This information is considered confidential and proprietary
Construction management	This information is considered confidential and proprietary
Overheads & miscellaneous costs	This information is considered confidential and proprietary
Contingency	This information is considered confidential and proprietary
Total component cost	\$23,283.81
Component cost (in-service year)	\$26,929.11
Substation Upgrade Component	
Component title	Farmers Valley Substation: Review and revise relay settings
Project description	Review and update relay settings at Farmers Valley Substation.
Substation name	Farmers Valley
Substation zone	Penelec
Substation upgrade scope	Review and update relay settings, as necessary, at Farmers Valley Substation due to the new transformer at Pierce Brook Substation.

Transformer Information

None	
New equipment description	No new equipment is required.
Substation assumptions	Existing relays will be re-used and settings updated as necessary.
Real-estate description	Not Applicable
Construction responsibility	Company Specific
Benefits/Comments	

Component Cost Details - In Current Year \$

Engineering & design	This information is considered confidential and proprietary
Permitting / routing / siting	This information is considered confidential and proprietary
ROW / land acquisition	This information is considered confidential and proprietary
Materials & equipment	This information is considered confidential and proprietary
Construction & commissioning	This information is considered confidential and proprietary
Construction management	This information is considered confidential and proprietary
Overheads & miscellaneous costs	This information is considered confidential and proprietary
Contingency	This information is considered confidential and proprietary
Total component cost	\$23,283.81
Component cost (in-service year)	\$26,929.11

Substation Upgrade Component

Component title	Potter Substation: Review and revise relay settings.
Project description	Review and update relay settings at Potter Substation
Substation name	Potter
Substation zone	APS

Substation upgrade scope

Review and update relay settings, as necessary, at Potter Substation due to the new transformer at Pierce Brook Substation.

Transformer Information

None

New equipment description

No new equipment is required.

Substation assumptions

Existing relays will be re-used and settings updated as necessary.

Real-estate description

Not Applicable

Construction responsibility

Company Specific

Benefits/Comments

Component Cost Details - In Current Year \$

Engineering & design

This information is considered confidential and proprietary

Permitting / routing / siting

This information is considered confidential and proprietary

ROW / land acquisition

This information is considered confidential and proprietary

Materials & equipment

This information is considered confidential and proprietary

Construction & commissioning

This information is considered confidential and proprietary

Construction management

This information is considered confidential and proprietary

Overheads & miscellaneous costs

This information is considered confidential and proprietary

Contingency

This information is considered confidential and proprietary

Total component cost

\$29,857.33

Component cost (in-service year)

\$34,497.19

Congestion Drivers

None

Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
N2-SVM48	200672	26MANSFIEL	200672	26MANSFIEL	0	115	226	Summer N-1-1 Voltage Magnitude	Included
N2-SVM49	200671	26NILES VA	200671	26NILES VA	0	115	226	Summer N-1-1 Voltage Magnitude	Included
N2-SVM50	200670	26SABINSVI	200670	26SABINSVI	0	115	226	Summer N-1-1 Voltage Magnitude	Included
N2-SVD26	235234	01POTTER	235234	01POTTER	0	115	201	Summer N-1-1 Voltage Drop	Included
N2-SVD29	200668	26FARM VLY	200668	26FARM VLY	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD23	200669	26GOLD	200669	26GOLD	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD22	203348	26HECTOR	203348	26HECTOR	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD19	200672	26MANSFIEL	200672	26MANSFIEL	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD20	200671	26NILES VA	200671	26NILES VA	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD24	200671	26NILES VA	200671	26NILES VA	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD28	200944	26PIERCEBRK	200944	26PIERCEBRK	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD21	200670	26SABINSVI	200670	26SABINSVI	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD25	200923	26TENGASVM	200923	26TENGASVM	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD27	200663	26TWO MILE	200663	26TWO MILE	0	115	226	Summer N-1-1 Voltage Drop	Included

New Flowgates

None

Financial Information

Capital spend start date 08/2024

Construction start date 02/2026

Project Duration (In Months) 22

Additional Comments

None