

Line 8 Rebuild - Brema to Scottsville Interconnection (APCO)

General Information

Proposing entity name	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Company proposal ID	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
PJM Proposal ID	873
Project title	Line 8 Rebuild - Brema to Scottsville Interconnection (APCO)
Project description	Rebuild approximately 7.3 miles of Line #8 from Brema to Scottsville, to achieve a rating of 472 MVA. Upgrade substation terminal equipment at Brema to 2400 A. Coordination with AEP is needed for this tie-line (refer to proposal IDs 2024-W1-738 & 2024-W1-949).
Email	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Project in-service date	06/2029
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Project Components

1. Line #8 Rebuild - Brema to Scottsville
2. Brema Substation Terminal Equipment Upgrade

Transmission Line Upgrade Component

Component title	Line #8 Rebuild - Brema to Scottsville
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Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.	
Impacted transmission line	Line #8	
Point A	Bremo	
Point B	Scottsville	
Point C		
Terrain description	Refer to "993429 Real Estate and Permitting summary" for Terrain Description.	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	397.5 ACSR (26/7) 100°C MOT	
Hardware plan description	New hardware will be used for line rebuild.	
Tower line characteristics	The existing line 8 lattice towers were constructed in 1950. The existing structures are primarily double circuit galvanized steel lattice towers, with one side vacant. The existing Structures will be removed and new structures will be used for this rebuild.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	472.000000	472.000000
Winter (MVA)	494.000000	494.000000
Conductor size and type	1-768.2 ACSS/TW/HS (20/7) 250°C MOT	
Shield wire size and type	(2) DNO-10410 shield wire	
Rebuild line length	7.30 Miles	

Rebuild portion description	<p>EXISTING FACILITIES TO BE REMOVED: 1. Remove twenty-nine (29) existing double circuit suspension steel tower structures as follows: a. Structures 8/100-101, 104, 107-109, 109A, 112-113, 115-121, 122-126, 128-135 2. Remove three (3) existing double circuit running angle steel tower structures as follows: a. Structures 8/106, 110, 114 3. Remove six (6) existing double circuit DDE steel tower structures as follows: a. 8/102-103, 105, 111, 127, 136 4. Remove two (2) existing single circuit wood suspension monopoles structures as follows: a. Structures 8 /111A, 121A 5. Remove approx. 7.3 miles of single (1) 397.5 ACSR (26/7) conductor from structure 8/99 to 8/136. 6. Remove approx. 7.3 miles of single (1) 7/16 steel shield wire from structure 8/99 to 8/136.</p> <p>MODIFICATIONS TO EXISTING FACILITIES: 1. Replace three (3) existing 230kV conductor strain insulator assemblies with three (3) 230kV bundled conductor crossing stain assemblies (32.338) as follows: a. Three (3) per structure at structure 8/99 2. Replace two (2) existing shield wire strain insulator assemblies with two (2) OPGW strain assemblies (96.060) as follows: a. Two (2) per structure at structure 8/99 3. Remove and replace one (1) existing switch (829) on existing backbone structure 8/99 with one (1) 3000A vertically mounted switch on the same structure.</p> <p>PERMANENT FACILITIES TO BE INSTALLED: 1. Install twenty-nine (29) 230 kV double circuit steel suspension N1 lattice towers [Reference Drawing 12.951] on foundations as follows: a. Structures 8/100-101, 107-109, 109A, 111A, 112-121, 121A, 123-126, 128-133, 135 2. Install seven (7) 230 kV double circuit DDE steel N2 lattice towers [Reference Drawing 12.957] on foundations as follows: a. Structures 8/104-106, 110, 122, 127, 134 3. Install two (2) 230 kV double circuit steel N3 DDE lattice towers [Reference Drawing 12.960] on foundations as follows: a. Structures 8/103,111 4. Install one (1) 230 kV double circuit steel N4 DDE lattice towers [Reference Drawing 12.966] on foundations as follows: a. Structure 8/102 5. Install one (1) 230kV double circuit engineered steel monopole double deadend structure [Reference Drawing 12.614] on a foundation as follows: a. Structure 8/136 6. Install approximately 7.3 miles of 3-phase single (1) 768.2 ACSS/TW/HS (20/7) "Maumee" conductor from structure 8/99 to 8/136. 7. Install approximately 7.3 miles of dual (2) DNO-11410 OPGW from structure 8/99 to 8/136. a. Assumes 8 OPGW splices throughout the line.</p> <p>Existing Right-of-Way shall be used.</p>
Right of way	
Construction responsibility	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Benefits/Comments	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Component Cost Details - In Current Year \$	
Engineering & design	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Permitting / routing / siting	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
ROW / land acquisition	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Materials & equipment	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction & commissioning	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Construction management	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Overheads & miscellaneous costs	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Contingency	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Total component cost	\$41,840,570.01
Component cost (in-service year)	\$44,811,250.47

Substation Upgrade Component

Component title	Bremo Substation Terminal Equipment Uprate
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Substation name	Bremo
Substation zone	363
Substation upgrade scope	Purchase & Install Substation Material: 1. One (1), 138kV, 3000A End Break Disconnect Switch 2. One (1), 138kV, 3000A Wave Trap 3. Foundations, steel, conductors, connectors, conduit, control cables, and grounding material as necessary per engineering standards Remove Substation Material: 1. One (1), 138kV, 2000A, End Break Disconnect Switch 2. One (1), 138kV, 2000A Wave Trap 3. Foundations, steel, conductors, connectors, conduit, control cables, and grounding material as necessary per engineering standards

Transformer Information

None	
New equipment description	1. One (1), 138kV, 3000A End Break Disconnect Switch 2. One (1), 138kV, 3000A Wave Trap
Substation assumptions	1. The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary. 2. Relay Settings and P&C design will be revised as part of the SPE Scope of Work. 3. It was determined that the GA would not need any additional equipment or equipment relocation thus it has been omitted from the submittal.
Real-estate description	Substation is not being expanded.
Construction responsibility	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Benefits/Comments	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Component Cost Details - In Current Year \$

Engineering & design	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Permitting / routing / siting	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
ROW / land acquisition	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Materials & equipment	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction & commissioning	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Construction management	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Overheads & miscellaneous costs	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Contingency	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Total component cost	\$264,185.50
Component cost (in-service year)	\$282,942.14

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
2024W1-GD-SNEW19	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1IPDSNew148	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDLLNEW6	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1-GD-SNEW18	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1IPDSNew147	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDLLNEW5	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1IPDSNew146	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDLLNEW4	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2024W1IPDSNew145	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDLLNEW3	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1-GD-SNEW23	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1IPDLLNEW10	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1-GD-LL1	242792	05SCOTSV	314746	4BREMO	1	138	205/345	Light Load Gen Deliv	Included
2024W1-GD-SNEW22	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1IPDLLNEW9	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1-GD-SNEW21	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1IPDLLNEW8	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1-GD-SNEW20	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1IPDSNew149	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDLLNEW7	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1IPDSNew140	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew144	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew143	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew142	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew141	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1-GD-SNEW25	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1N1STNEW1	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1IPDLLNEW11	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1N1STNEW6	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1N1STNEW5	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1N1STNEW4	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1N1STNEW3	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1IPDSNew152	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1N1STNEW10	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1IPDSNew151	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1N1STNEW9	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2024W1IPDSNew150	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1N1STNEW8	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1N1STNEW7	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1N1STNEW2	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1-GD-LL4	242792	05SCOTSV	314746	4BREMO	1	138	205/345	Light Load Gen Deliv	Included
2024W1IPDSNew156	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew155	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1-GD-LL2	242792	05SCOTSV	314746	4BREMO	1	138	205/345	Light Load Gen Deliv	Included
2024W1IPDSNew154	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1-GD-LL3	242792	05SCOTSV	314746	4BREMO	1	138	205/345	Light Load Gen Deliv	Included
2024W1IPDSNew153	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1N1STNEW11	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Summer Thermal	Included
2024W1IPDSNew159	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew158	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew157	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1-GD-SNEW1	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1IPDSNew162	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew161	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1IPDSNew160	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1-GD-SNEW5	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1N1LLTNEW1	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Light Load Thermal	Included
2024W1-GD-SNEW4	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1-GD-SNEW3	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1-GD-SNEW2	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1-GD-SNEW7	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1-GD-SNEW6	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1-GD-SNEW8	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1N1LLTNEW4	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Light Load Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2024W1N1LLTNEW3	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Light Load Thermal	Included
2024W1N1LLTNEW2	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Light Load Thermal	Included
2024W1GDLLNEW3	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load Gen Deliv	Included
2024W1-GD-SNEW11	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1GDLLNEW2	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load Gen Deliv	Included
2024W1IPDSNew139	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1-GD-SNEW10	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1GDLLNEW1	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load Gen Deliv	Included
2024W1IPDSNew138	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer IPD	Included
2024W1-GD-SNEW9	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1N1LLTNEW5	999	NEWBUS	314746	4BREMO	1	138/138	205/345	Light Load Thermal	Included
2024W1IPDLLNEW2	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1-GD-SNEW14	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1IPDLLNEW1	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load IPD	Included
2024W1-GD-SNEW13	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included
2024W1GDLLNEW4	999	NEWBUS	314746	4BREMO	1	138	205/345	Light Load Gen Deliv	Included
2024W1-GD-SNEW17	999	NEWBUS	314746	4BREMO	1	138	205/345	Summer Gen Deliv	Included

New Flowgates

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Financial Information

Capital spend start date 02/2025

Construction start date 06/2025

Project Duration (In Months) 52

Additional Comments

None