

Glen Lyn-Peters Mountain Rebuild

General Information

Proposing entity name	AEPSCT
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	AEP_C
PJM Proposal ID	196
Project title	Glen Lyn-Peters Mountain Rebuild
Project description	Rebuild the double circuit 138kV line from Glen Lyn station to Peter Mountain station at roughly 3.6 miles. The current line from Glen Lyn to Peters Mountain is sag derated to 205 MVA in the Summer case. To mitigate the overload, the Summer emergency rating needs to be 214 MVA or above.
Email	nckoehler@aep.com
Project in-service date	04/2027
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	Addresses towers that were originally installed in 1951.

Project Components

1. Glen Lyn-Peters Mountain 138 kV Rebuild
2. Peters Mountain Reconfiguration

Transmission Line Upgrade Component

Component title	Glen Lyn-Peters Mountain 138 kV Rebuild
-----------------	---

Project description	Rebuild 3.59 miles of the Glen Lyn - Hancock 138kV double circuit line asset from Glen Lyn to Peters Mountain stations.
Impacted transmission line	Glen Lyn-Peters Mountain
Point A	Glen Lyn
Point B	Peters Mountain
Point C	
Terrain description	Mountainous - See KMZ. Includes crossing of the New River.

Existing Line Physical Characteristics

Operating voltage	138 kV
Conductor size and type	556.5 MCM 26/7 ACSR DOVE
Hardware plan description	Existing hardware to be removed. New hardware to be installed.
Tower line characteristics	"Existing structures are double circuit lattice steel towers AGE: ~70+ years (1951 vintage)

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	296.000000	392.000000
Winter (MVA)	375.000000	464.000000
Conductor size and type	1033.5 MCM 54/7 ACSR CURLEW	
Shield wire size and type	(1) 144-count Fiber OPGW and (1) 7#8 AW	
Rebuild line length	3.59 miles	

Rebuild portion description	"Approximately 3.59 line miles are being Rebuilt. Applicable section being removed is from the existing Glen Lyn Station Frame to existing Structure 42-16 (Glen Lyn - Hancock 138kV Line) and further through existing Structure 36-1A (Peters Mountain 138kV Loop) into the existing Peters Mountain Station Frame. Main line will be rebuilt mainly in new, adjacent right-of-way from the new proposed Glen Lyn Station Frame (Glen Lyn Station Rebuild project) to existing Structure 42-16 (reconfigured, but remains). The new proposed Peters Mountain 138kV Extension will tap off proposed Structure 42-15B and attach further through proposed Structure 42-15C into a new location on the existing Peters Mountain Station Frame.
Right of way	Project is required to be built mainly off centerline in new standard 100 FT right-of-way due to outage constraints and terrain considerations. The following spans may require expanded rights-of-way given evaluated conductor zone under an active blowout condition: a) Span between proposed STRs 42-4A to 42-5A: 110 FT blowout width for 1,426 FT span length. b) Span between proposed STRs 42-8A to 42-9A: 110 FT blowout width for 1,430 FT span length. c) Span between proposed STRs 42-11A to 42-12A: 360 FT blowout width for 2,726 FT span length. d) Span between proposed STRs 42-14A to 42-15A: 110 FT blowout width for 1,530 FT span length.
Construction responsibility	AEP
Benefits/Comments	
Component Cost Details - In Current Year \$	
Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	\$21,251,524.00
Component cost (in-service year)	\$.00

Substation Upgrade Component

Component title	Peters Mountain Reconfiguration
Project description	Work at Peters Mountain station due to reconnecting the 138kV line from the East side to the West side of the station due to Right of way constraints.
Substation name	Peters Mountain
Substation zone	205 - AEP
Substation upgrade scope	Terminate rebuilt Glen Lyn - Peters Mountain line into a new location at Peters Mountain Station. Install new motor operated line switch, risers, CCVT's and associated relaying.

Transformer Information

None	
New equipment description	3000A LINE SWITCH (SN-3440A/ SE-3774A/ WN-4466/ WE-4741A), 2-1272AAC CONDUCTOR - (SN-2451A/ SE-2856A/ WN-3098A/ WE-3398A)
Substation assumptions	N/A. Work will be completed on existing footprint with no expansion required.
Real-estate description	N/A
Construction responsibility	AEP
Benefits/Comments	

Component Cost Details - In Current Year \$

Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown

Overheads & miscellaneous costs

Detailed cost breakdown

Contingency

Detailed cost breakdown

Total component cost

\$638,304.00

Component cost (in-service year)

\$.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
2022W3-GD_LL15	2242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-N1-LLT1	2242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT2	2242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT3	2242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT4	2242651	05GLENL2	242749	05PETERM	1	138/138	205/205	Light Load N-1	Included

New Flowgates

None

Financial Information

Capital spend start date

01/2024

Construction start date

08/2026

Project Duration (In Months)

39

Additional Comments

None