

Allen-RP Mone 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_J
PJM Proposal ID	819
Project title	Allen-RP Mone Rebuild
Project description	Project will rebuild approximately 18.6 miles of 345 kV line between Allen and RP Mone stations.
Email	nckoebler@aep.com
Project in-service date	06/2027
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	Project will address ~24.6 miles of Paper Expanded (PE) conductor originally installed in 1955 and 1968 that has become an asset renewal concern for AEP across our footprint. AEP has concerns of increased core corrosion on PE conductors based upon review of conductor samples following recovery events. AEP shared additional details on the PE conductor concerns with stakeholders during the May 9th 2023 TEAC meeting. Additionally all but two of the existing structures on the line were originally installed in 1955 or 1968. This project will replace the structures that would close to 60 years and over 70 years old by the time the work is complete.

Project Components

1. Allen-RP Mone Rebuild

Transmission Line Upgrade Component

Component title	Allen-RP Mone Rebuild
Project description	Rebuild Allen - RP Mone 345 kV line (18.6 miles).
Impacted transmission line	Allen-RP Mone
Point A	Allen
Point B	RP Mone
Point C	
Terrain description	Flat terrain with a mix of urban and rural areas

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2303.5 ACAR 54/37, 1275 ACSR/PE 54/19, 1414 ACSR/PE 62/19
Hardware plan description	Existing hardware to be removed. All new hardware to be installed.
Tower line characteristics	This circuit is made up of two different line assets. About ~12.2 miles of the circuit is on a 30 mile line from 1955 constructed double circuit lattice towers with porcelain suspension insulators. This portion of the circuit has open conditions on 98% of the structures of the line. The open conditions include lacing with bent arm and loose arm conditions, shielding/grounding conditions related to shield wire with broken strands. The line has 224 open hardware conditions relating to worn insulator assembly hardware, worn shield wire hardware, broken insulator-suspension hardware and broken insulators. An aerial drone assessment identified that 100% of these structures have experienced paint loss or corrosion. The remaining ~6.4 miles of the circuit is on a 1968 double circuit lattice tower.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings

Summer (MVA)	1677.000000	1790.000000
Winter (MVA)	1790.000000	1790.000000
Conductor size and type	2-1590 Falcon ACSR 54/19	
Shield wire size and type	96 FIBER OPGW	
Rebuild line length	18.6 miles	
Rebuild portion description	The entire 18.4 mile 345kV circuit will be rebuild from Allen 345kV- RP Mone 345kV. Assume new T4SDA & T4VDA towers meet structural, clearance, and galloping criteria. This includes a portion of the Allen-Sorenson 345 kV circuit.	
Right of way	All existing ROW will be used. Supplemental easements may be required and will be obtained if/as needed.	
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	\$49,875,052.88	
Component cost (in-service year)	\$49,875,052.88	

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-GD-W12	243211	05ALLEN	242933	05RPMONE	1	345	205	Winter Gen Deliv	Included

New Flowgates

None

Financial Information

Capital spend start date 06/2024

Construction start date 06/2026

Project Duration (In Months) 36

Additional Comments

None