

# Fieldale-Franklin Sag Study

## 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_B
PJM Proposal ID	537
Project title	Fieldale-Franklin Sag Study
Project description	AEP proposes performing a sag clearance study to increase the summer emergency rating above the reported loadings for the Fieldale-Thornton and Thornton-Franklin line sections. Preliminary review using existing LiDAR data for that line recommends replacement of ferrous clamp hardware at each structure.
Email	nckoebler@aep.com
Project in-service date	11/2026
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

## Project Components

1. Fieldale-Franklin 138 kV Sag Study

### Transmission Line Upgrade Component

Component title	Fieldale-Franklin 138 kV Sag Study
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Project description	Replace all insulator assemblies along the 19.2 mile long Fieldale-Franklin 138 kV line to increase the emergency rating of the line.
Impacted transmission line	Fieldale-Franklin 138 kV Line
Point A	Fieldale
Point B	Thornton
Point C	Franklin
Terrain description	The project terrain ranges from rolling to mountainous terrain in the existing ROW located in Franklin and Henry County, Virginia. Elevation along the proposed route ranges from approximately 734' to 1533' above sea level, with an average elevation of 1128'.

**Existing Line Physical Characteristics**

Operating voltage	138 kV
Conductor size and type	336 ACSR
Hardware plan description	Existing deadend strain assemblies are assumed to be pressed deadend bodies based off imagery and recent structure photos. It is assumed that existing deadend assemblies will be re-used. All existing suspension insulator assemblies on the double circuit line from Fieldale 138kV to Franklin 138kV (19.2 miles) will be replaced with non ferrous clamps.
Tower line characteristics	The existing double circuit lattice steel line between Fieldale 138kV and Franklin 138kV was placed into service in 1926. All of the originally installed materials are well beyond their intended useful life.

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	138.000000	138.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	150.000000	212.000000
Winter (MVA)	189.000000	234.000000
Conductor size and type	336 ACSR	

Shield wire size and type	159 kcmil 12/7 "Guinea" ACSR.
Rebuild line length	19.2 miles
Rebuild portion description	To mitigate the overload issues between this section, this project proposes replacing the suspension insulator assemblies on the 19.2 miles of double circuit 138 kV line to current AEP standards from Fieldale 138 kV to Thornton 138 kV (~15 miles, 102.75% overload) and Thornton 138 kV to Franklin 138 kV (~4 miles, 100.29% overload) as shown on the proposed one-line diagram.
Right of way	No new ROW will be required for the insulator assembly project. It is assumed that all work can be performed under existing rights to maintain. The Proposing Entity will also pay for any crop damage and/or physical damage to property resulting from the construction and/or maintenance of the transmission line.
Construction responsibility	AEP
Benefits/Comments	
<b>Component Cost Details - In Current Year \$</b>	
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	\$30,187,138.00
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-N1-LLT	242638	05FIELDALE1	242831	05THORNT	1	138/138	205/205	Light Load N-1	Included
2022W3-GD_L19	242831	05THORNT	242642	05FRANKLIN	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-GD_L15	242638	05FIELDALE1	242831	05THORNT	1	138/138	205/205	Light Load Gen Deliv	Included

## New Flowgates

None

## Financial Information

Capital spend start date 01/2024

Construction start date 10/2025

Project Duration (In Months) 34

## Additional Comments

None