

# Fieldale-Franklin 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_A
PJM Proposal ID	477
Project title	Fieldale-Franklin Rebuild
Project description	AEP proposes rebuilding the 138 kV double circuit line section between Fieldale and Franklin Substations
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	The Fieldale-Franklin line section is associated with the larger Roanoke-Carolina 138 kV line asset, which has identified physical condition needs, described in Need AEP-2023-AP015. The rebuild will eliminate all physical condition issues between Fieldale and Franklin substations with a newly rebuilt line section.

## Project Components

1. Fieldale-Franklin 138 kV Rebuild

### Transmission Line Upgrade Component

Component title	Fieldale-Franklin 138 kV Rebuild
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Project description	Rebuild 19.2 miles of the 138 kV double circuit line asset between Fieldale and Franklin substations. Update relay settings at Fieldale and Blaine substations.
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	No existing hardware will be used. The entire existing double circuit line from Fieldale 138kV to Franklin 138kV will be rebuilt.
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)	257.000000	360.000000
Winter (MVA)	325.000000	404.000000
Conductor size and type	1033 ACSR	
Shield wire size and type	144 ct 0.646" OPGW & 159kcmil 12/7 ACSR	

Rebuild line length	19.2 miles
Rebuild portion description	To mitigate the overload issues between this section, this project proposes rebuilding approximately 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. Work also includes remote end settings updates at Franklin and Blaine stations. No physical construction is required at those stations.
Right of way	Due to the current outage availability of the corridor between Fieldale 138kV and Franklin 138kV, the project will be built directly adjacent to the existing line located within Henry and Franklin County. The majority of the line will be built approximately 50' from existing centerline to allow for proper construction and safety clearances. The proposed ROW width is 100', so approximately 50' will overlap with existing ROW, and 50' will be new ROW. After detailed analysis additional ROW width may be required in some spans to encompass conductor sway. The attached kmz shows how the proposed line will parallel existing ROW on undeveloped residential and commercial lands. Due to some siting constraints there are a few sections where the line must be built on existing cL or cross over the existing centerline. Those sections have been identified as the following: Franklin to 77A 85A to 86A 95A to Thornton Sub 102A to 103A 112A to 114A 128A to Oak Level 129A to 131A 140A to 141A 164A to 168A 170A to Fieldale
Construction responsibility	AEP
Benefits/Comments	Completely addresses a portion of the supplemental need AEP-2023-AP015 between Fieldale and Franklin stations.
<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 \$74,887,399.00

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-LLT1	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_L153	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 07/2026

Project Duration (In Months) 41

### Additional Comments

None