Trabue-Hilliard-Davidson 69kV Rebuild & Relay Upgrades

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_T
PJM Proposal ID	348
Project title	Trabue-Hilliard-Davidson 69kV Rebuild & Relay Upgrades
Project description	Rebuild the 336 ACSR conductor sections on the Trabue-Hilliard-Davidson 69kV line and upgrade relays at Hilliard 69kV Station.
Email	jmperez@aep.com
Project in-service date	03/2029
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

Project Components

1. Hilliard-Davidson
2. Hilliard-Trabue
3. Hilliard 69kV Station

Transmission Line Upgrade Component

Component title	Hilliard-Davidson

Project description	Rebuild approximately 3 miles of existing 336 ACSR conductor sections between Hilliard and Davidson 69kV stations. The targeted sections are from structure #74 to structure #142.
Impacted transmission line	Hilliard-Davidson 69kV Line
Point A	Structure #74 (just outside of Davidson station)
Point B	Structure #142 (0.74 miles NW of Hilliard station)
Point C	
Terrain description	Flat/urban with some industrial areas.
Existing Line Physical Characteristics	
Operating voltage	69
Conductor size and type	336 KCM ACSR
Hardware plan description	Hardware will be replaced
Tower line characteristics	Single pole wood structures originally built in 1968.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	69.000000	69.000000
	Normal ratings	Emergency ratings
Summer (MVA)	168.000000	196.000000
Winter (MVA)	212.000000	233.000000

Conductor size and type	477 ACSS Hawk
Shield wire size and type	OPGW
Rebuild line length	3 miles
Rebuild portion description	3 miles will be rebuilt using single circuit steel poles and 477 ACSS Hawk Conductor.

Right of way	Existing easements may need supplemented/augmented to accommodate rebuild
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	$12,337,301.22
Component cost (in-service year)	$12,337,301.22

Transmission Line Upgrade Component

Component title	Hilliard-Trabue
Project description	Rebuild approximately 1 mile of existing 336 KCM ACSR conductor sections between Trabue and Hilliard 69kV stations. The section being targeted is between structures 57 and 75.
Impacted transmission line	Hilliard-Trabue 69kV
Point A	Structure 57 (approximately 1.7 miles West of Trabue)
Point B	Structure 75 (approximately 3 miles south of Hilliard)
Point C	

Terrain description	Flat/urban
Existing Line Physical Characteristics	
Operating voltage	69
Conductor size and type	336 KCM ACSR Merlin
Hardware plan description	Hardware will be replaced as necessary.
Tower line characteristics	Hilliard-Trabue 69kV section was originally built in 1968 and has a mix of wood and steel pole structures.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	69.000000	69.000000
	Normal ratings	Emergency ratings
Summer (MVA)	168.000000	196.000000
Winter (MVA)	212.000000	233.000000

Conductor size and type	477 ACSS Hawk
Shield wire size and type	OPGW
Rebuild line length	1 mile
Rebuild portion description	Approximately 1 mile of 336 ACSR section from Hilliard to Trabue station will be rebuilt using single circuit steel poles and 477 ACSS Hawk conductor.
Right of way	Existing easements may need supplemented/augmented to accommodate rebuild
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	$3,246,658.22
Component cost (in-service year)	$3,246,658.22

Substation Upgrade Component

Component title	Hilliard 69kV Station
Project description	Replace existing relaying at Hilliard station to raise CT Thermal and Relay Thermal Limits.
Substation name	Hilliard Station
Substation zone	205
Substation upgrade scope	Replace existing relaying at Hilliard station to raise CT Thermal and Relay Thermal Limits.

Transformer Information

None

New equipment description	Relays and associated equipment.
Substation assumptions	Increase CTR from 80:1 to 240:1 (Max Ratio) for CT’s connected to 87-1B1 and 87-2B1: CB-C CB-B BUSTIE T1 T4 Reset settings on 138kV Bus #1 relays (87-1B1& 87-2B1). Update settings on line: Hilliard – Trabue 69kV Hilliard – Bethel 69kV
Real-estate description	No expansion necessary.
Construction responsibility	AEP

Benefits/Comments	Only relaying work associated with this component hence no station drawings attached.
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	$649,331.64
Component cost (in-service year)	$649,331.64

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
2025W1-AEP-T19	246588	05HILLIARD1	288638	05DAVIDS	1	69	205	FERC 715 Thermal	Included
2025W1-AEP-T14	246588	05HILLIARD1	288638	05DAVIDS	1	69	205	FERC 715 Thermal	Included
2025W1-AEP-T13	246687	05TRABUE	290174	05HILLIARD2	1	69	205	FERC 715 Thermal	Included
2025W1-AEP-T12	246687	05TRABUE	290174	05HILLIARD2	1	69	205	FERC 715 Thermal	Included
2025W1-AEP-T18	246588	05HILLIARD1	288638	05DAVIDS	1	69	205	FERC 715 Thermal	Included
2025W1-AEP-T17	246588	05HILLIARD1	288638	05DAVIDS	1	69	205	FERC 715 Thermal	Included
2025W1-AEP-T16	246588	05HILLIARD1	288638	05DAVIDS	1	69	205	FERC 715 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-AEP-T15	246588	05HILLIARD1	288638	05DAVIDS	1	69	205	FERC 715 Thermal	Included

New Flowgates

None

Financial Information

Capital spend start date	03/2026
Construction start date	10/2028
Project Duration (In Months)	36

Additional Comments

None