Green Chapel-Vassell 345kV Circuit #2

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_U
PJM Proposal ID	873
Project title	Green Chapel-Vassell 345kV Circuit #2
Project description	Install second 345kV circuit between Green Chapel and Vassell substations
Email	jmperez@aep.com
Project in-service date	05/2030
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

Project Components

1. Vassell-Green Chapel 345kV Circuit #2
2. Vassell 345kV Station
3. Green Chapel 345kV Station

Transmission Line Upgrade Component

Component title	Vassell-Green Chapel 345kV Circuit #2

Project description	String and energize ~12.5 mi conductor on vacant side of the Vassell – Green Chapel 345kV path, encompassing portions of the Green Chapel-Vassell corridor and the Vassell-Curleys corridor.
Impacted transmission line	Vassell-Green Chapel 345kV
Point A	Green Chapel 345kV
Point B	Vassell 345kV
Point C	
Terrain description	Flat. Some agricultural areas with some urban pockets.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2-1590 ACSR Falcon
Hardware plan description	Hardware will need to be installed as necessary on the vacant side of the existing 345kV lines from Green Chapel to Vassell and Vassell to Curleys.
Tower line characteristics	Double Circuit Steel Poles
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	3113.000000	3113.000000
Winter (MVA)	3858.000000	3858.000000

Conductor size and type	2-1590 ACSR Falcon
Shield wire size and type	OPGW
Rebuild line length	12.5 miles

Rebuild portion description	Install second 345kV circuit on soon to be existing Vassell-Green Chapel 345kV and Vassell-Curleys 345kV Lines (2026 ISD). New circuit will originate at Vassell and terminate at Green Chapel.
Right of way	As the Green Chapel-Vassell 345kV Line and Vassell-Curleys 345kV Lines are in the process of being built with an ISD of 2026, it is assumed right of way and easements will be adequate for this proposal and thus no new easements will be 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	$51,915,003.38
Component cost (in-service year)	$51,915,003.38

Substation Upgrade Component

Component title	Vassell 345kV Station
Project description	Install 1-345kV circuit breaker at Vassell station for new Green Chapel-Vassell 345kV circuit
Substation name	Vassell 345kV
Substation zone	205

Substation upgrade scope	Install 1-345kV circuit breaker at Vassell station for new Green Chapel-Vassell 345kV circuit

Transformer Information

None

New equipment description	1-345kV, 5000A 63kA Breaker
Substation assumptions	Assume removed low bus support foundations will be removed completely to avoid interference with new breaker, hi bus support foundations can be taken 6” below grade. Assume existing shield wire pole will need to be removed as it is located in path of t-line exit. Utilize existing cable trench. Utilize existing control house.
Real-estate description	N/A- No expansion required.
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	$3,325,054.12
Component cost (in-service year)	$3,325,054.12

Substation Upgrade Component

Component title	Green Chapel 345kV Station
Project description	Install 1-345kV circuit breaker at Green Chapel 345kV station to accommodate Vassell-Green Chapel 345kV circuit #2
Substation name	Green Chapel 345kV
Substation zone	205
Substation upgrade scope	Install 1-345kV circuit breaker at Green Chapel 345kV station to accommodate Vassell-Green Chapel 345kV circuit #2

Transformer Information

None

New equipment description	1-345kV circuit breaker, 5000A, 63kA
Substation assumptions	Assume removed bus support foundations will be removed completely to avoid interference with new breaker. Assume existing shield wire pole will need to be removed as it is located in path of t-line exit. Utilize existing cable trench. Utilize existing control house.
Real-estate description	No expansion necessary.
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	$3,325,054.12
Component cost (in-service year)	$3,325,054.12

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-N11-ST138	290254	05INNOVATION	290577	05INNOVAT1EQ	1	138/1.0	205	N-1-1 Thermal	Included
2025W1-N11-ST127	290573	05INNOVATION	288789	05INNOVAT2EQ	2	345/1.0	205	N-1-1 Thermal	Included
2025W1-N11-ST128	290254	05INNOVATION	288789	05INNOVAT2EQ	2	138/1.0	205	N-1-1 Thermal	Included
2025W1-N11-ST139	290254	05INNOVATION	288789	05INNOVAT2EQ	2	138/1.0	205	N-1-1 Thermal	Included
2025W1-N11-ST135	290573	05INNOVATION	288789	05INNOVAT2EQ	2	345/1.0	205	N-1-1 Thermal	Included
2025W1-N11-ST129	290573	05INNOVATION	290577	05INNOVAT1EQ	1	345/1.0	205	N-1-1 Thermal	Included
2025W1-N11-ST130	290254	05INNOVATION	290577	05INNOVAT1EQ	1	138/1.0	205	N-1-1 Thermal	Included
2025W1-N11-ST132	290573	05INNOVATION	290577	05INNOVAT1EQ	1	345/1.0	205	N-1-1 Thermal	Included

New Flowgates

None

Financial Information

Capital spend start date	04/2026
Construction start date	12/2028
Project Duration (In Months)	49

Additional Comments

None