Beatty-Cole 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_J
PJM Proposal ID	626
Project title	Beatty-Cole 345kV Circuit #2
Project description	String Beatty-Cole 345kV circuit #2 on existing vacant side of Beatty-Cole 345kV Line
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	Leveraging existing infrastructure by stringing a second 345kV circuit on vacant side of already existing 345kV double circuit line.

Project Components

1. Beatty Road 345kV Station
2. Cole 345kV Station
3. Beatty-Cole 345kV Circuit

Substation Upgrade Component

Component title	Beatty Road 345kV Station

Project description	Install two 345kV Circuit Breakers to accommodate Beatty-Cole 345kV Circuit #2.
Substation name	Beatty Road 345kV
Substation zone	205
Substation upgrade scope	Install 2-345kV Circuit breakers, associated switches, foundations etc. to accommodate new Beatty-Cole 345kV Circuit #2.

Transformer Information

None

New equipment description	2-345kV Circuit breakers, 5000A, 63kA
Substation assumptions	Assume that there is enough space in existing control house will be utilized.
Real-estate description	No fence expansion necessary. All work is expected to occur within station footprint.
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	$7,366,906.69
Component cost (in-service year)	$7,366,906.69

Substation Upgrade Component

Component title	Cole 345kV Station
Project description	Install 2-345kV Circuit Breakers at Cole 345kV station to accommodate new Beatty-Cole 345kV circuit #2.
Substation name	Cole 345kV Station
Substation zone	205
Substation upgrade scope	Install 2-345kV, 5000A, 63kA circuit breakers at Cole 345kV station to accommodate new Beatty-Cole 345kV circuit #2.

Transformer Information

None

New equipment description	2-345kV, 5000A, 63kA circuit breakers
Substation assumptions	Assumes control house will need expanded and that cable trench will also need expanded.
Real-estate description	No fence expansion will be 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	$3,795,073.15
Component cost (in-service year)	$3,795,073.15

Transmission Line Upgrade Component

Component title	Beatty-Cole 345kV Circuit
Project description	Install second 345kV circuit on the Beatty-Hayden 345kV Line Asset from Beatty station to Cole station, approximately 9.8 miles.
Impacted transmission line	Beatty-Cole 345kV
Point A	Beatty Road 345kV Station
Point B	Cole 345kV Station
Point C	
Terrain description	Flat/Urban area
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2-954 ACSR 45/7 Rail
Hardware plan description	Existing hardware will be reused where possible.
Tower line characteristics	Double Circuit Lattice Structures with only one side presently strung. Originally installed in 1973.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1385.000000	1841.000000

Winter (MVA)	1750.000000	2092.000000
Conductor size and type	2-954 ACSR 45/7 Rail	
Shield wire size and type	7#8 Alumoweld AW7 Shield Wire	
Rebuild line length	N/A	
Rebuild portion description	N/A	
Right of way	The proposal plans to use existing ROW originally acquired when the double circuit was built in 1973. It is assumed ROW is adequate but may need to be supplemented in a few sections.	
Construction responsibility	AEP	
Benefits/Comments	Leverages existing infrastructure.	
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	$19,873,113.90	
Component cost (in-service year)	$19,873,113.90	

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-ST114	243469	05BEATTY	246716	05PHILLIPI	1	138	205	N-1-1 Thermal	Included
2025W1-N11-WT48	243485	05CLINTO	243576	05ST.CLX	1	138	205	N-1-1 Thermal	Included
2025W1-N11-ST77	243469	05BEATTY	243540	05MCCOMB	1	138	205	N-1-1 Thermal	Included
2025W1-N11-WT43	243485	05CLINTO	243576	05ST.CLX	1	138	205	N-1-1 Thermal	Included
2025W1-N11-ST123	243485	05CLINTO	243576	05ST.CLX	1	138	205	N-1-1 Thermal	Included
2025W1-N11-ST79	243469	05BEATTY	246716	05PHILLIPI	1	138	205	N-1-1 Thermal	Included
2025W1-N11-ST102	243469	05BEATTY	247896	05BOLTON	1	138	205	N-1-1 Thermal	Included
2025W1-N11-ST122	243485	05CLINTO	243576	05ST.CLX	1	138	205	N-1-1 Thermal	Included
2025W1-N11-ST109	243469	05BEATTY	247896	05BOLTON	1	138	205	N-1-1 Thermal	Included
2025W1-N11-ST94	243469	05BEATTY	246716	05PHILLIPI	1	138	205	N-1-1 Thermal	Included

New Flowgates

None

Financial Information

Capital spend start date	04/2026
Construction start date	10/2028
Project Duration (In Months)	49

Additional Comments

None