

Accoville-Becco 69 kV

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_H
PJM Proposal ID	365
Project title	Accoville-Becco 69 kV
Project description	AEP proposes to install a motorized phase over phase switch at Accoville station on the 69kV Line and build approximately 2 miles of new 69kV line from Accoville to Becco station. A 69/46kV 45 MVA transformer will be added at Becco station and connected to the 46kV bus with a circuit breaker on the high and low side. The breaker bypass on circuit breaker D at Huff Creek will be removed and relays updated for the new line connection to Becco. Proposed Ratings (SN/SE/WN/WE MVA): 244525 to 290457: 102/142/129/160 290457 to 244471: 45/45/45/45
Email	nckoebler@aep.com
Project in-service date	06/2026
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

Project Components

1. Accoville Phase over Phase Switch Addition
2. Huff Creek Remote End Relaying
3. Becco Station Expansion

4. Accoville-Becco 69 kV Line

Substation Upgrade Component

Component title	Accoville Phase over Phase Switch Addition
Project description	Install a 3 Way Phase over Phase switch pole at ACCOVILLE station to connect BECCO to HUFF CREEK. Two Switches are motorized and the third one is a GOAB switch.
Substation name	Accoville
Substation zone	205 - AEP
Substation upgrade scope	Install a 3 Way Phase over Phase switch pole at ACCOVILLE station to connect BECCO to HUFF CREEK. Two Switches are motorized and the third one is a GOAB switch.

Transformer Information

None	
New equipment description	SWITCH, PHASE OVER PHASE, STATION STANDARD, 3-WAY, SB, 69KV, 1200A, 61KA MOM, 350KV BIL, GOAB, W/ CO_NTROL MECH F/ USE W/ WORM GEAR, 3PST
Substation assumptions	- Assuming soil is compatible with different foundations required for the switch - Assumes no expansion required for switch location.
Real-estate description	
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	\$548,784.00
Component cost (in-service year)	\$.00

Substation Upgrade Component

Component title	Huff Creek Remote End Relaying
Project description	Remove the breaker bypass on circuit breaker D. Upgrade relaying for new line protection to Becco.
Substation name	Huff Creek
Substation zone	205 - AEP
Substation upgrade scope	REMOVE CIRCUIT BREAKER D BYPASS AND ADDING CCVT ON THE LINE TOWARDS ACCOVILLE.

Transformer Information

None	
New equipment description	COUPLING CAPACITOR VOLTAGE TRANSFORMER (CCVT):TRANSFORMER, INSTRUMENT CCVT, RELAYING, OUTDOOR, 69KV NOMINAL SYSTEM VOLTAGE, 72.5KV MAX. SYSTEM VOLTAGE, 350KV BIL, 10000PF, 2 WINDINGS, 350/600:1 & 350/600:1 RATIO
Substation assumptions	Assumes space available in existing location to install required relaying equipment.
Real-estate description	N/A. Work to be done in existing fence and footprint.
Construction responsibility	AEP
Benefits/Comments	

Component Cost Details - In Current Year \$

Engineering & design	Detailed cost breakdown
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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	\$361,615.00
Component cost (in-service year)	\$.00

Substation Upgrade Component

Component title	Becco Station Expansion
Project description	Install a 69/46kV transformer with a high and low side circuit breaker.
Substation name	Becco
Substation zone	205 - AEP
Substation upgrade scope	INSTALL A 45MVA 69/46KV TRANSFORMER, 2 CIRCUIT BREAKERS, GROUNDING TRANSFORMER AND MONOPOLE STRUCTURES

Transformer Information

	Name	Capacity (MVA)		
Transformer	Becco 69/46 Transformer 1	45		
		High Side	Low Side	Tertiary
Voltage (kV)		69	46	

New equipment description	(1) TRANSFORMER, POWER, 45MVA, 69/46KV ; (2) BREAKER,CIRCUIT, STATION, SF6 DEAD TANK, DT1-72.5 F1 FK, 72.5KV, 3PH, 3000AMP CONT, 40KA, 3 CYCLE, 350KV BIL, CONT VOLT 125VDC, (1) TRANSFORMER, POWER, GROUNDING, 20 OHM, 46000V, ZIG ZAG CONN, 3 PH, 65 DEG RISE, NON-LTC
Substation assumptions	ASSUMES THAT THE FENCE CAN BE CLOSER TO THE ROAD THAN IT IS TO ALLOW FOR MORE DRIVE PATH. ASSUMING GOOD SOIL COMPATIBILITY WITH FOUNDATIONS
Real-estate description	The existing Becco Station will be expanded to the north of the existing station sited on Kelly Mt. Rum Creek Road, 0.10 of a mile north of its intersection with Buffalo Creek Road in the town of Amherstdale, Logan County, West Virginia on undeveloped commercial lands. The tabletop analysis found there were no public lands required for this Project. The private land use is undeveloped residential acreage as tabletop analysis found and was verified through the Logan County Clerk's Office which classification/assessment. The private land requirements include approximately 0.40 acres for the existing station expansion. The total Project acreage is 0.40 acres to be purchased in fee. Station expansion site was chosen for its proximity to the existing station.
Construction responsibility	AEP
Benefits/Comments	Business confidential practices.
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	\$3,774,806.00
Component cost (in-service year)	\$.00

Greenfield Transmission Line Component

Component title	Accoville-Becco 69 kV Line	
Project description	Build approximately 2 miles of new overhead single circuit designed at 69kV. Structure types will be a combination of H-Frames, custom poles, and towers. Shieldwires will consist of 1 conventional 7 #8 ALUMOWELD and 1 OPGW.	
Point A	Accoville	
Point B	Becco	
Point C		
	Normal ratings	Emergency ratings
Summer (MVA)	102.000000	142.000000
Winter (MVA)	129.000000	160.000000
Conductor size and type	556.5 KCM ACSR 26/7 "Dove"	
Nominal voltage	AC	
Nominal voltage	69	
Line construction type	Overhead	
General route description	Route will begin at the existing Accoville Station and run in a Northeast direction over mountainous terrain terminating at the existing Becco Station.	
Terrain description	Mountanous	
Right-of-way width by segment	The proposed Accoville-Becco 69kV Line will require the acquisition of 2 miles of transmission line of 100' (50'/50') wide ROW. The project will begin at AEP's existing Accoville Station in Logan County, West Virginia and run in a northeasterly direction to the AEP's existing Becco Station in Logan County, Ohio. The tabletop analysis found there were no public lands required for this Project. The private land use is predominantly residential acreage & commercial that was verified through the Logan County Clerk's Offices classifications/assessments. The private land requirements include acquiring 100' (50'/50') wide ROW in Logan County, West Virginia where the land use is predominantly residential acreage & commercial with rolling/mountainous terrain.	

Electrical transmission infrastructure crossings	None
Civil infrastructure/major waterway facility crossing plan	N/A
Environmental impacts	Surveys for protected species and cultural resources will be conducted. A SWPPP permit will be required and as with all construction in mountainous terrain proper E&S controls will be required along the line route as well as the access roads
Tower characteristics	H-Frame structures will be the primary structure type with custom poles possibly being needed at the entrances to both stations due to space constraints. Single circuit lattice towers are proposed at the angle points along the line route.
Construction responsibility	AEP
Benefits/Comments	Business confidential practices.

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	\$8,363,146.00
Component cost (in-service year)	\$.00

Congestion Drivers

None

Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
AEP -T6	244471	05BECCO	244517	05SLAGLE	1	46	205	FERC 715 Thermal	Included
AEP-VD7	244471	05BECCO	244471	05BECCO	0	46	205	FERC 715 Voltage Drop	Excluded
AEP-VM7	244471	05BECCO	244471	05BECCO	0	46	205	FERC 715 Voltage Magnitude	Excluded
AEP-VM9	244482	05DEHUE	244482	05DEHUE	0	46	205	FERC 715 Voltage Magnitude	Excluded
AEP-VD9	244482	05DEHUE	244482	05DEHUE	0	46	205	FERC 715 Voltage Drop	Excluded
AEP -T7	244482	05DEHUE	244509	05PINE GAP	1	46	205	FERC 715 Thermal	Included
AEP -T8	244482	05DEHUE	244517	05SLAGLE	1	46	205	FERC 715 Thermal	Included
AEP-VM1	244526	05THREEFRK	244526	05THREEFRK	0	46	205	FERC 715 Voltage Magnitude	Excluded
AEP-VD1	244526	05THREEFRK	244526	05THREEFRK	0	46	205	FERC 715 Voltage Drop	Excluded
AEP-VD2	244520	05TONEYFRK	244520	05TONEYFRK	0	46	205	FERC 715 Voltage Drop	Excluded
AEP-VM2	244520	05TONEYFRK	244520	05TONEYFRK	0	46	205	FERC 715 Voltage Magnitude	Excluded
AEP-VD3	244541	05CYCLONE	244541	05CYCLONE	0	46	205	FERC 715 Voltage Drop	Excluded
AEP-VM3	244541	05CYCLONE	244541	05CYCLONE	0	46	205	FERC 715 Voltage Magnitude	Excluded
AEP-VM4	244505	05PARDEE SS	244505	05PARDEE SS	0	46	205	FERC 715 Voltage Magnitude	Excluded
AEP-VD4	244505	05PARDEE SS	244505	05PARDEE SS	0	46	205	FERC 715 Voltage Drop	Excluded
AEP-VM5	244537	05CRANEC2	244537	05CRANEC2	0	46	205	FERC 715 Voltage Magnitude	Excluded
AEP-VD5	244537	05CRANEC2	244537	05CRANEC2	0	46	205	FERC 715 Voltage Drop	Excluded
AEP-VD6	244481	05LATROBE	244481	05LATROBE	0	46	205	FERC 715 Voltage Drop	Excluded
AEP-VM6	244481	05LATROBE	244481	05LATROBE	0	46	205	FERC 715 Voltage Magnitude	Excluded
AEP-VD8	244517	05SLAGLE	244517	05SLAGLE	0	46	205	FERC 715 Voltage Drop	Excluded
AEP-VM8	244517	05SLAGLE	244517	05SLAGLE	0	46	205	FERC 715 Voltage Magnitude	Excluded

New Flowgates

None

Financial Information

Capital spend start date	01/2022
Construction start date	10/2024
Project Duration (In Months)	53

Additional Comments

None