

West New Philadelphia Breaker Installation

General Information

Proposing entity name	AEP SCT
Company proposal ID	AEP_A
PJM Proposal ID	179
Project title	West New Philadelphia Breaker Installation
Project description	At West New Philadelphia station, AEP is proposing to add a highside 138 kV breaker on the 138/69 kV transformer #2 along with a 138 kV breaker on the line towards Newcomerstown. No ratings change anticipated for this proposal.
Project in-service date	06/2025
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

Project Components

1. West New Philadelphia Breaker Install

Substation Upgrade Component

Component title	West New Philadelphia Breaker Install
Substation name	West New Philadelphia
Substation zone	205 - AEP

Substation upgrade scope	Install 138kV circuit breaker and associated foundation on the high side of transformer #2. Install breaker disconnect switches and new 3 phase CCVT with associated steel support and foundation. New conductors will be installed from the transmission line all the way to the transformer#2. In addition, a new 138kV breaker and potential equipment for relaying will be installed in the 138kV Line towards Newcomerstown. New bus disconnect switches and jumper connections to line and bus will be installed. An expansion of the existing DICM will be required in order to accommodate the new protection panels. A small station expansion on the North side will be required for the addition of the DICM expansion module (16'x18'). The expansion will require minimal grading work on an approximate area of 900 square feet. The station fence and ground grid will be adjusted to accommodate this expansion. A removal of the existing transformer high side MOAB disconnect switch as well as high speed ground switch and steel support structure will be required in order to accommodate the new breaker addition. In addition a removal of existing 138kV switch on the Newcomerstown line as well as two existing CCVTs will be required for the new breaker addition.
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Transformer Information

None	
New equipment description	- (qty. 2) 138kV, 3000A, 40kA SF6 Circuit Breaker - (qty. 4) 138kV, 3000A, 100kA, 3PH VEE-CB switches - (qty. 6) 138kV, TEVF-145 CCVTs - (qty. 6) 88kV MCOV Sta. Class Arresters
Substation assumptions	An assumption that the existing lattice dead-end can be modified to add a lattice steel beam required to support the new line disconnect switch for the breakers.
Real-estate description	Station fence will need to be expanded on the north side of the station. Area to be expanded into is owned by AEP and no additional land purchase will be required. KMZ file with this expansion provided.
Construction responsibility	AEP
Additional 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	\$2,020,275.40
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
AEP-T356	245227	05GEN TIRE	245240	05NEWCOMTW	1	35	205	FERC 715 Thermal
AEP-T357	245227	05GEN TIRE	245240	05NEWCOMTW	1	35	205	FERC 715 Thermal
AEP-T358	245228	05GREER	245245	05MILL ST SS	1	35	205	FERC 715 Thermal
AEP-T359	245228	05GREER	245245	05MILL ST SS	1	35	205	FERC 715 Thermal
AEP-T360	245228	05GREER	245245	05MILL ST SS	1	35	205	FERC 715 Thermal
AEP-T361	245228	05GREER	245245	05MILL ST SS	1	35	205	FERC 715 Thermal
AEP-T362	245212	05GREERZ	245229	05GREER	1	69	205	FERC 715 Thermal
AEP-T363	245212	05GREERZ	245229	05GREER	1	69	205	FERC 715 Thermal
AEP-T364	245236	05NEWPHIL_1Z	247447	05NEW PHILA	1	35	205	FERC 715 Thermal
AEP-T365	245236	05NEWPHIL_1Z	247447	05NEW PHILA	1	35	205	FERC 715 Thermal

New Flowgates

None

Financial Information

Capital spend start date 09/2023

Construction start date

02/2025

Project Duration (In Months)

21

Additional comments

None