

Sub Regional RTEP Committee: Western AMPT Supplemental Projects

October 14, 2022

Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

AMPT Projects in ATSI Transmission Zone M3 Process Cuyahoga Falls, OH

Need Number: AMPT-2022-004

Process Stage: Need Meeting – 10/14/2022

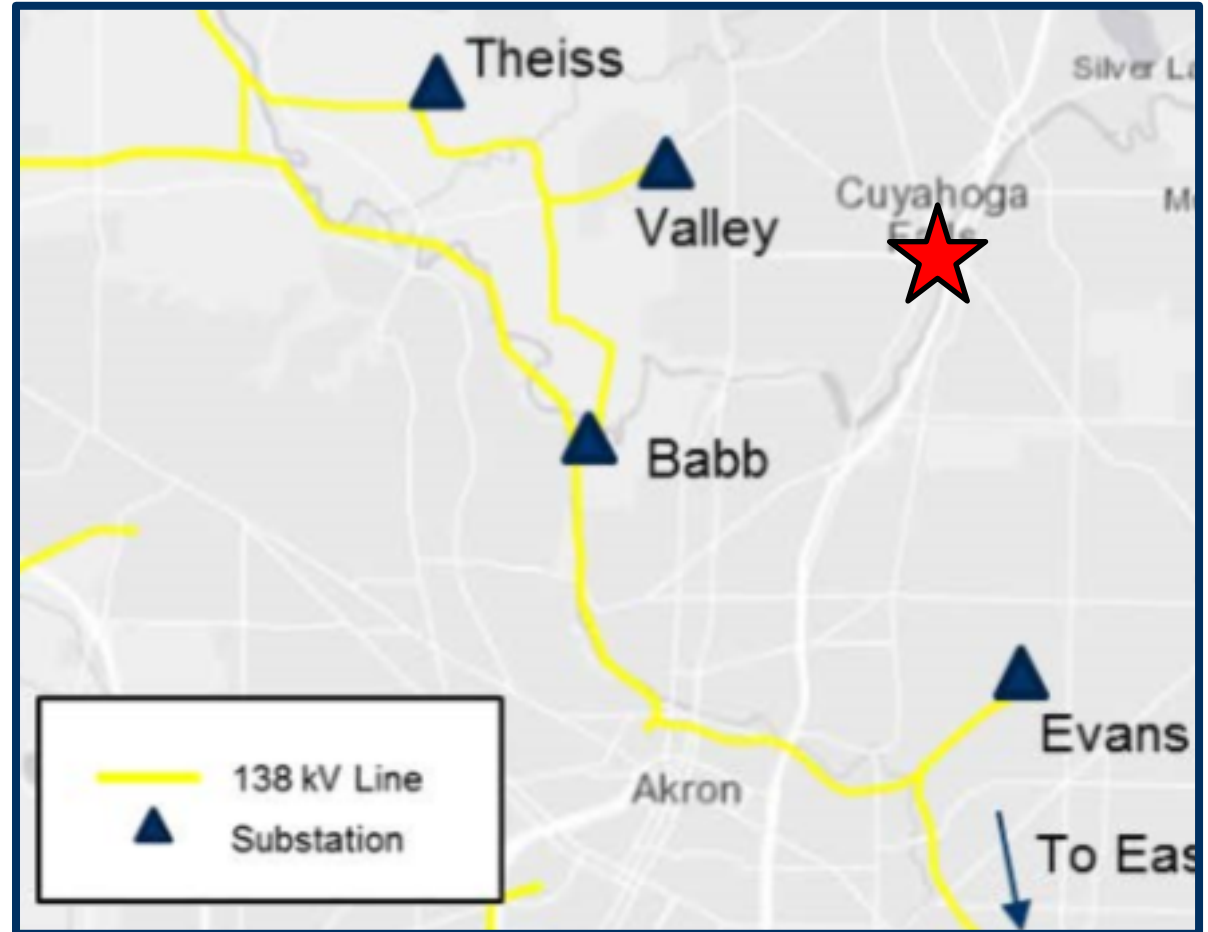
Supplemental Project Driver(s): Customer Service

Specific Assumption Reference(s): AMPT Transmission Facilities Interconnection Requirements Document

Problem Statement:

The Valley and Thiess 138 kV substations serve the Cuyahoga Falls 23.8 kV sub-transmission system. This sub-transmission system supports the City's distribution load. Cuyahoga Falls' peak load is approximately 106 MW.

The City of Cuyahoga Falls has requested a 69 kV supply to support off-loading its heavily loaded 23.8 kV sub-transmission system.

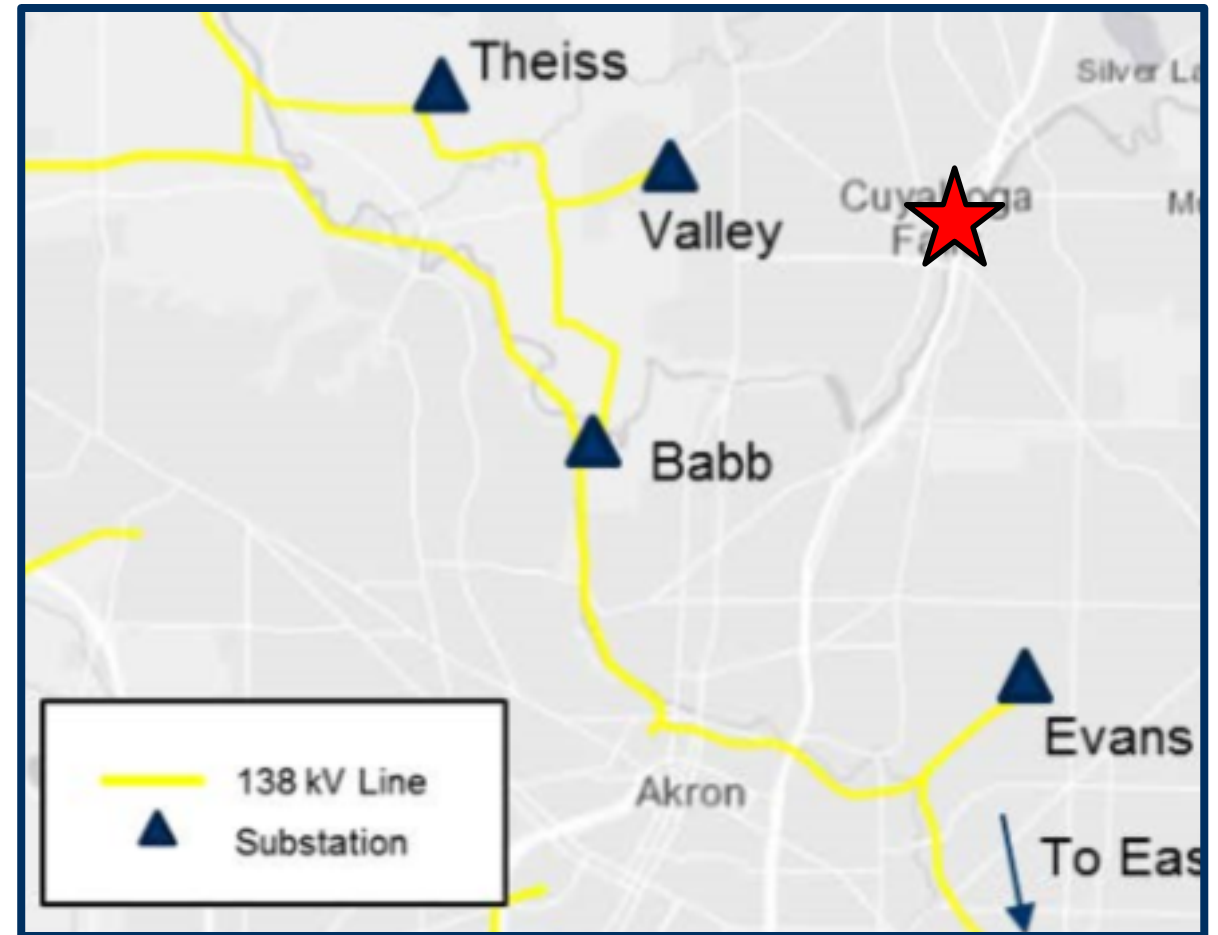


AMPT Projects in ATSI Transmission Zone M3 Process Cuyahoga Falls, OH

Problem Statement Continued:

Customer Service

- The customer has indicated that the existing 23.8 kV sub-transmission system cannot support additional load.
- Additionally, the 23.8 kV system is antiquated and no longer an industry standard operating voltage.



Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

AMPT Projects in AEP Transmission Zone M3 Process Deshler, OH

Need Number: AMPT-2021-004

Process Stage: Solution Meeting – 10/14/2022

Process Stage: Need Meeting – 11/19/2021

Supplemental Project Driver(s): Customer Service

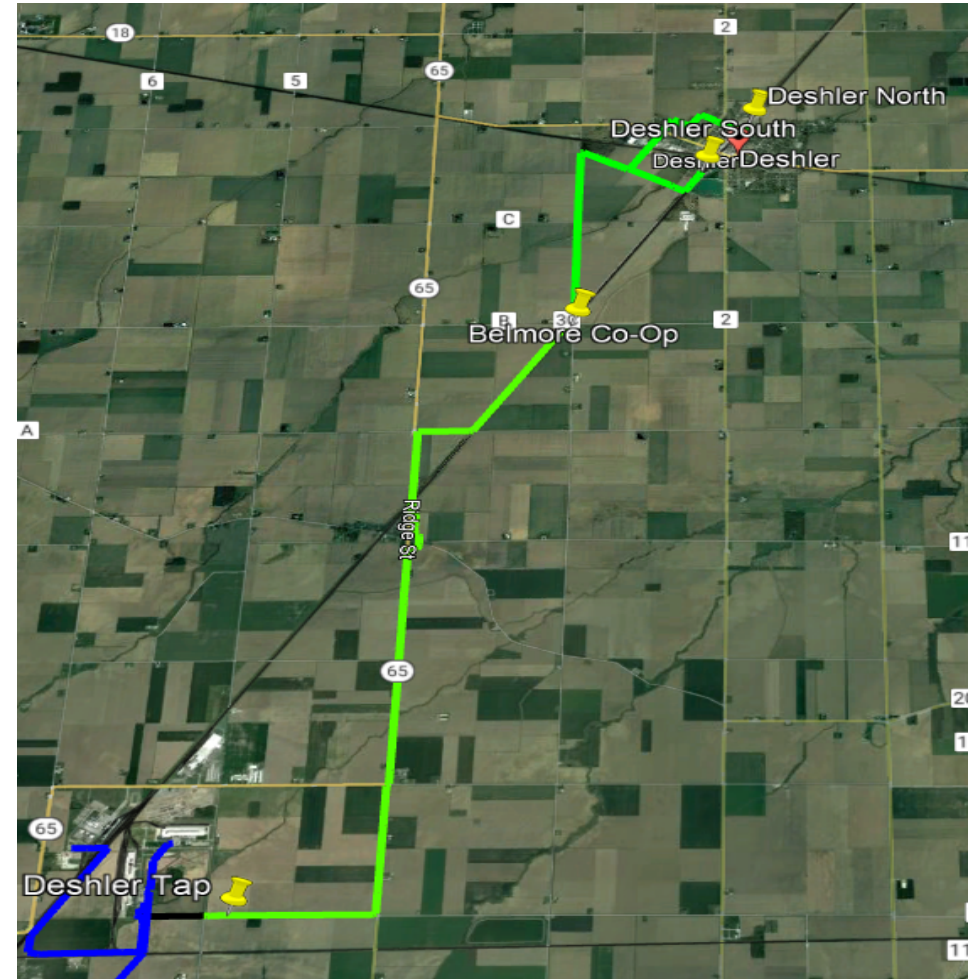
Specific Assumption Reference(s): AMPT Transmission Facilities Interconnection Requirements Document

Problem Statement:

AMPT's Deshler Tap is an approximately 10.7 mile radial 69 kV tap supplied from AEP's East Leipsic-East Ottawa 69 kV line. Three stations are served off the Tap – Belmore Co-op, Deshler South, and Deshler North.

The village of Deshler has requested a 2nd supply to support the load (approximately 4.2 MVA). The radial supply presents a single point of failure that could jeopardize reliability for the village.

AMPT's Transmission Facilities Interconnection Requirements specify looped facilities for loads exceeding 5 MVA or 35 MW-mile thresholds.



AMPT Projects in AEP Transmission Zone M3 Process Deshler, OH

Need Number: AMPT-2021-004

Process Stage: Solution Meeting – 10/14/2022

Supplemental Project Driver(s): Customer Service

Proposed Solution:

AMPT Identified Scope (Estimated Transmission Cost: \$27.5 M)

- Construct a greenfield 69 kV single circuit transmission line for approximately 11.8 miles using 795 26/7 ACSR conductor from AMPT’s Bremer 69 kV substation to a structure outside of ATSI’s Weston 69 kV ring bus station. Install four (4) 69 kV load break air switches in total on the existing Bremer Tap. Install the switches on either side of the Keyser and Belmore Co-op stations for sectionalizing. Install one (1) load break air switch outside of ATSI’s Weston 69 kV station on the new line between Bremer and Weston. **(\$23.7 M)**
- Expand the existing Bremer 69 kV station to a new 3-CB ring bus configuration to accommodate a second 69 kV circuit. Install a total of four (4) new CBs - including one (1) 69 kV CB for the 69/12 kV transformer high side protection. **(\$3.8 M)**

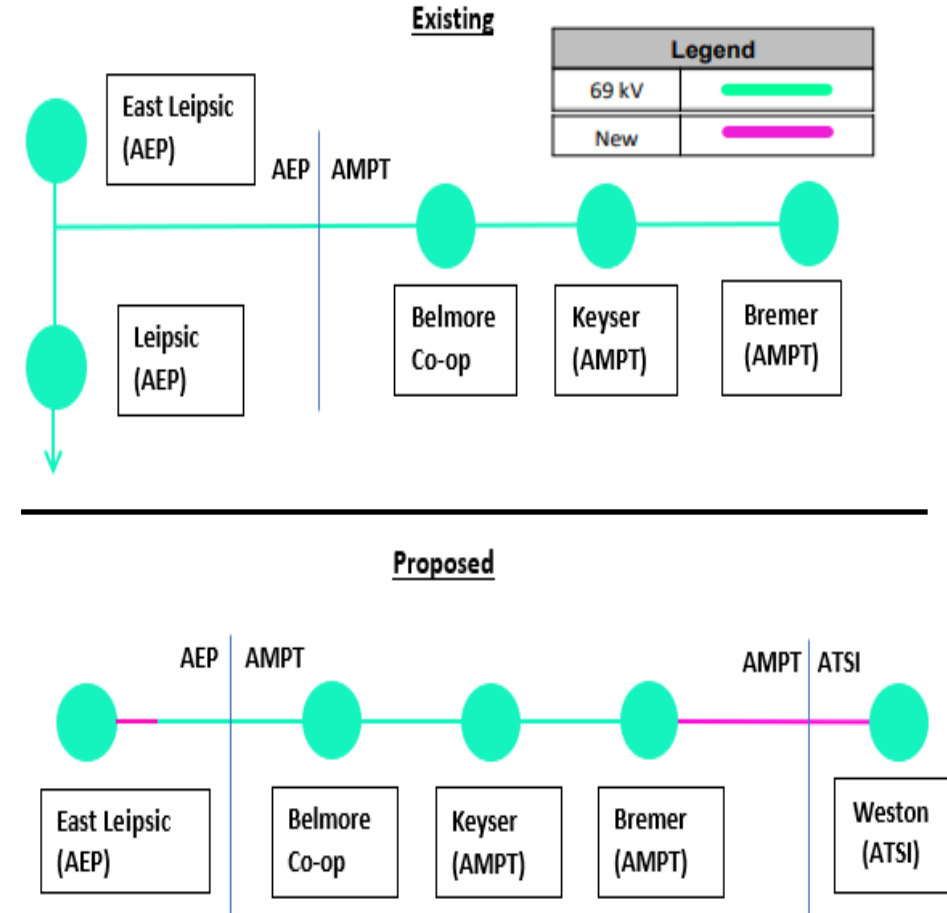
AEP Identified Scope (Estimated Transmission Cost: \$8.01 M)

- At AEP’s East Leipsic station extend the 69kV bus and install a new 69kV breaker. Install 69kV To/To Metering. The station will need expanded to accommodate the work. **(\$1.5 M)**
- Construct a new greenfield 0.55 miles long 69kV single circuit line using 556 ACSR Dove from the new East Leipsic 69kV breaker to the AEP / AMPT POI. **(\$3.15 M)**
- Modify the East Leipsic Extension line **(\$1.68 M)**
- Modify the Yellow Creek - East Leipsic 69kV line. **(\$1.68 M)**

FE Identified Scope (Estimated Transmission Cost: \$1.9 M)

- Install one 69 kV circuit breaker and associated equipment at FE’s Weston 69 kV substation.
- Install one span of conductor to a structure outside the FE Weston 69 kV substation.
- Install tie line interchange revenue metering at FE’s Weston 69 kV substation.

Total Estimated Transmission Cost: \$37.41 M



AMPT Projects in AEP Transmission Zone M3 Process Deshler, OH

Projected In-Service: 8/1/2025

Project Status:

- Scoping (AMPT), Conceptual (FE), Conceptual (AEP)

Alternative Considered:

- Build a greenfield 69 kV 3-CB ring bus station between ATSI's Maroe and Malinta stations to accommodate three 69 kV circuits. Expand the existing Bremer 69 kV station to a new 3-CB ring bus station. Construct a greenfield 69 kV single circuit transmission line for approximately 11 miles using 795 26/7 ACSR conductor from AMPT's Bremer 69 kV substation to the new ring bus station. Reterminate the Deshler Tap into a new 69 kV bay position at AEP's East Leipsic substation.

Similar in scope to the preferred reinforcement option however is less cost effective than the selected option with the installation of a new ring bus station.

- Build a greenfield 69 kV 3-CB ring bus yard at AEP and AMPT's Deshler Tap demarcation point to break the existing East Leipsic-East Ottawa 69 kV line and Deshler Tap into three (3) 69 kV circuits. Expand the existing Bremer 69 kV station to a new 3-CB ring bus station. Construct a greenfield 69 kV single circuit transmission line for approximately 12 miles using 795 26/7 ACSR conductor from AMPT's Bremer 69 kV substation to ATSI's Weston 69 kV ring bus station.

Similar in scope to the preferred reinforcement option however is less cost effective than the selected option with the installation of a new ring bus station.

Appendix

High Level M-3 Meeting Schedule

Assumptions	Activity	Timing
	Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
	Stakeholder comments	10 days after Assumptions Meeting
Needs	Activity	Timing
	TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
	Stakeholder comments	10 days after Needs Meeting
Solutions	Activity	Timing
	TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
	Stakeholder comments	10 days after Solutions Meeting
Submission of Supplemental Projects & Local Plan	Activity	Timing
	Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
	Post selected solution(s)	Following completion of DNH analysis
	Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
	Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

Revision History

10/**/2022 – V1 – Original version posted to pjm.com

10/13/2022 – V2 – Updated Solution Date Slide 6-7