

Sub Regional RTEP Committee: Western AMPT Supplemental Projects

June 15, 2022

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 ATSI Transmission Zone M3 Process

Rye Beach Road, Greenfield – Shinrock 69 kV line

Need Number: AMPT-2021-001

Process Stage: Solution Meeting – 6/15/2022

Process Stage: Need Meeting – 5/21/2021

Supplemental Project Driver(s): Customer Service

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

Problem Statement:

Rye Beach Road 69kV Substation (AMP Transmission)

The existing interconnection is a 0.15 mile single radial tap from the ATSI Greenfield-Shinrock 69kV line to the Rye Beach Road (Huron Muni) substation.

Current peak load at Rye Beach Road is 26 MW, projected to increase to 38 MW by 10/1/21 and 40 MW by 10/1/22.

Also, AMPT Interconnection requirements specify a need for a second source for loads 5 MVA and above.



AMPT Projects in ATSI Transmission Zone M3 Process

Rye Beach Road, Greenfield – Shinrock 69 kV line

Need Number: AMPT-2021-001

Process Stage: Solution Meeting – 6/15/2022

Supplemental Project Driver(s): Customer Service

Proposed Solution:

AMPT Identified Scope (\$5.7 M)

- At Rye Beach Road (Huron Muni) 69/12 kV Substation - Expand the current 69 kV station to a 4-CB ring bus arrangement to accommodate a 2nd 69 kV circuit (toward Shinrock). Build the new 69 kV ring bus to 2000A ratings; Install four (4) 69 kV circuit breakers; Install one (1) 69 kV circuit switcher; install ten (10) 69 kV bus disconnect switches (2000A);
- Relocate existing FE revenue metering at the substation as a result of the system reconfiguration.

FE Identified Scope (\$2.8 M)

- Build approximately 0.2 miles 69 kV line into AMPT's Rye Beach Road substation in a separate right of way using 556 kcmil ACSR conductor.
- Loop in/out the Greenfield-Shinrock 69 kV line into AMPT's Rye Beach Road Substation.
- FE will install two dead-end structures just outside of the AMPT's substation, for the new and existing line, this structure will be the point of interconnection (POI).
- The FE facilities/lines will terminate at the dead-end structure.
- FE will install two 1200 A motor-operated switches on the new and existing line at the dead-end structures.
- Adjust relay settings at Shinrock Substation
- Replace existing Greenfield (Shinrock Line) relay with a standard line relaying panel



AMPT Projects in ATSI Transmission Zone M3 Process

Rye Beach Road, Greenfield – Shinrock 69 kV line

Alternatives Considered:

No alternatives considered for this project.

Total Estimated Transmission Cost: \$8.5 M

Projected In-Service: 06/01/2025

Project Status: Scoping (AMPT)

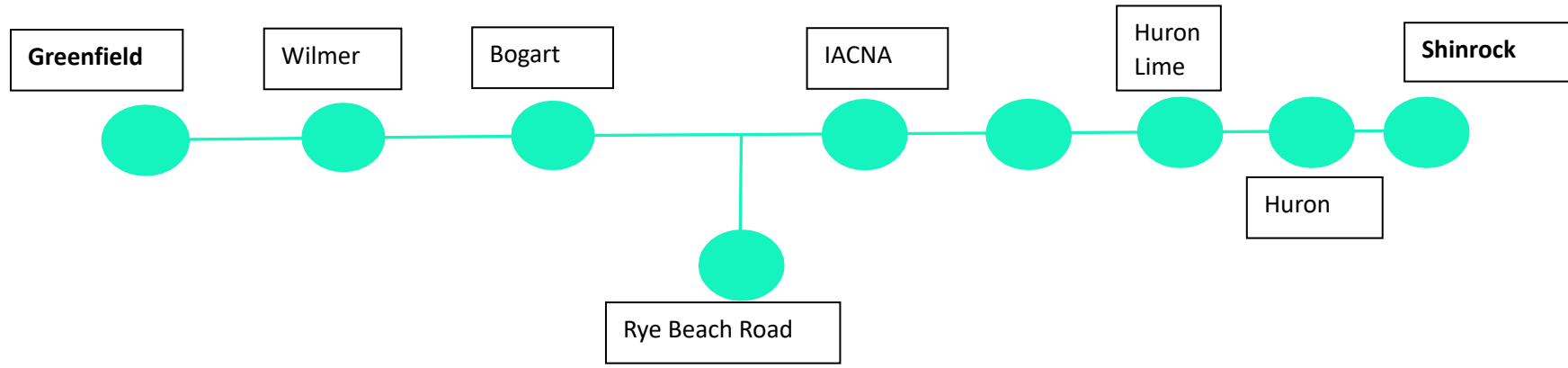
Conceptual (FE)



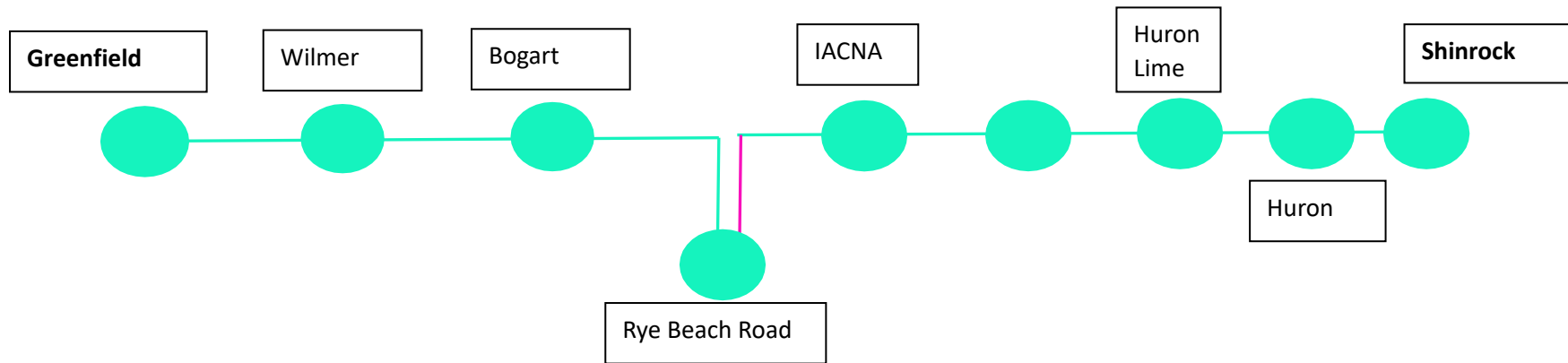
AMPT Projects in ATSI Transmission Zone M3 Process

Rye Beach Road, Greenfield – Shinrock 69 kV line

Existing



Proposed



Legend	
500 kV	
345 kV	
138 kV	
69 kV	
34.5 kV	
23 kV	
New	

AMPT Projects in ATSI Transmission Zone M3 Process Pioneer, Ohio

Need Number: AMPT-2022-001

Process Stage: Solution Meeting – 6/15/2022

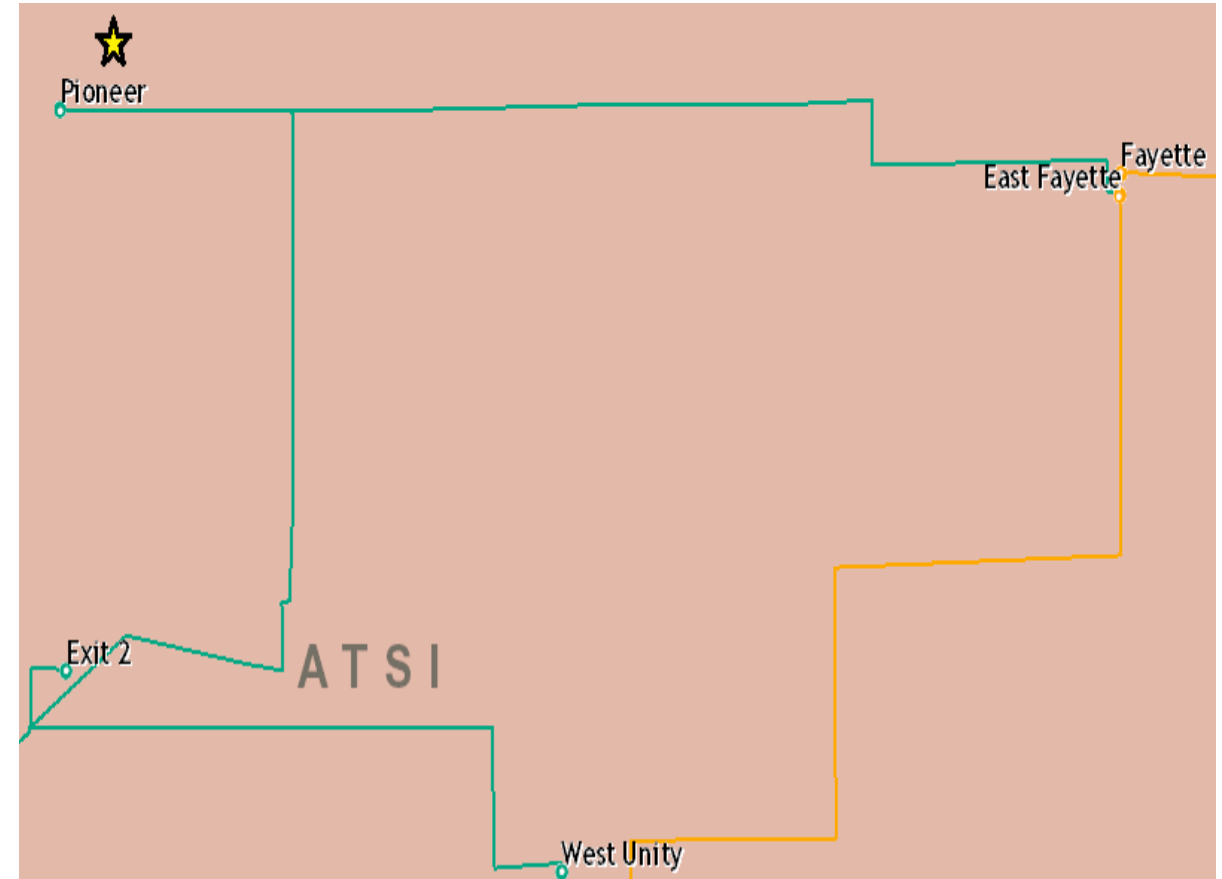
Process Stage: Need Meeting – 1/21/2022

Supplemental Project Driver(s): Customer Service

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

Problem Statement:

New Customer Connection – The Village of Pioneer has requested a new 69 kV service point near the AMPT tap off ATSI's East Fayette-Exit 2 69 kV line. This request was made to support a new retail customer with an anticipated load of approximately 16 MVA.



AMPT Projects in ATSI Transmission Zone M3 Process Pioneer, OH

Need Number: AMPT-2022-001

Process Stage: Solution Meeting – 6/15/2022

Supplemental Project Driver(s): Customer Service

Proposed Solution:

AMPT Identified Scope (\$13.2 M)

- Construct a greenfield 69 kV single circuit line for approximately 3 miles using 795 26/7 ACSR conductor and break into the existing AMPT Pioneer Tap off ATSI’s East Fayette-Exit 2 69 kV line. Install one (1) 69 kV three-way switch to accommodate the new tap to the existing AMPT line. **(\$4.7 M)**
- Construct a new Kexon 69/12 kV substation. Install four (4) CBs, 21.6 MVAR capacitor bank (split into three (3) 7.2 MVAR blocks), and two (2) 69 kV circuit switchers for two (2) 69/12 kV transformers*. **(\$8.5 M)**

* The 69/12 kV transformers are distribution costs and not included in the identified scope cost.

FE Identified Scope (\$0.25M)

- Provide two (2) 69 kV revenue metering equipment packages for the new Kexon Delivery Point.
- Revise relay settings at East Fayette and Snyder substations.

Alternatives Considered:

- Considering the location of the proposed distribution need by the Village, no other alternative was considered.

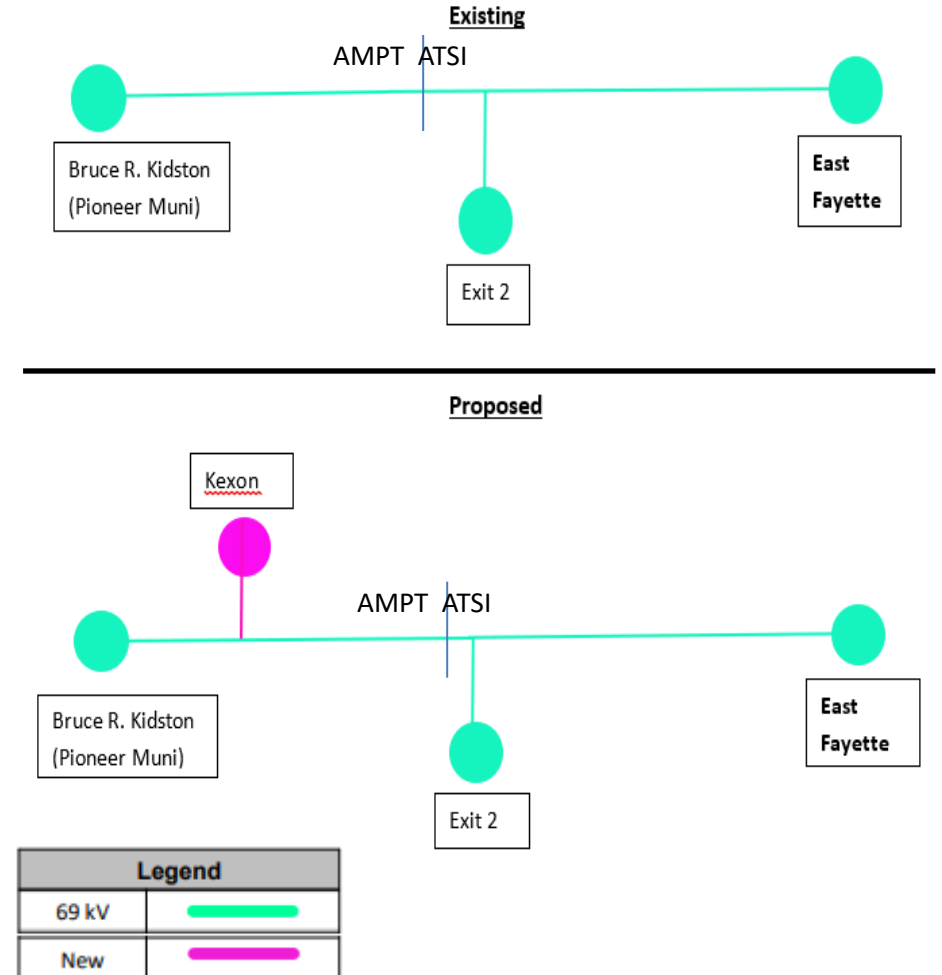
Ancillary Benefits:

- The capacitor bank provides additional voltage support to alleviate voltage magnitude concerns under certain 69 kV N-1-1 contingencies in the area.

Total Estimated Transmission Cost: \$13.45M

Projected In-Service: 10/31/2023

Project Status: Engineering



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

6/**/2022 – V1 – Original version posted to pjm.com