

Subregional RTEP Committee – Mid-Atlantic FirstEnergy (Penelec) Supplemental Projects

February 16, 2021

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

Need Number: PN-2021-001

Process Stage: Solutions Meeting 2/16/2021

Previously Presented: Need Meeting 1/14/2021

Project Driver:

Operational Flexibility and Efficiency

Specific Assumption Reference:

Upgrade Relay Schemes

- Ancillary benefits (i.e., automated fault location or increased oscillography)

System Performance Projects

- Substation/line equipment limits

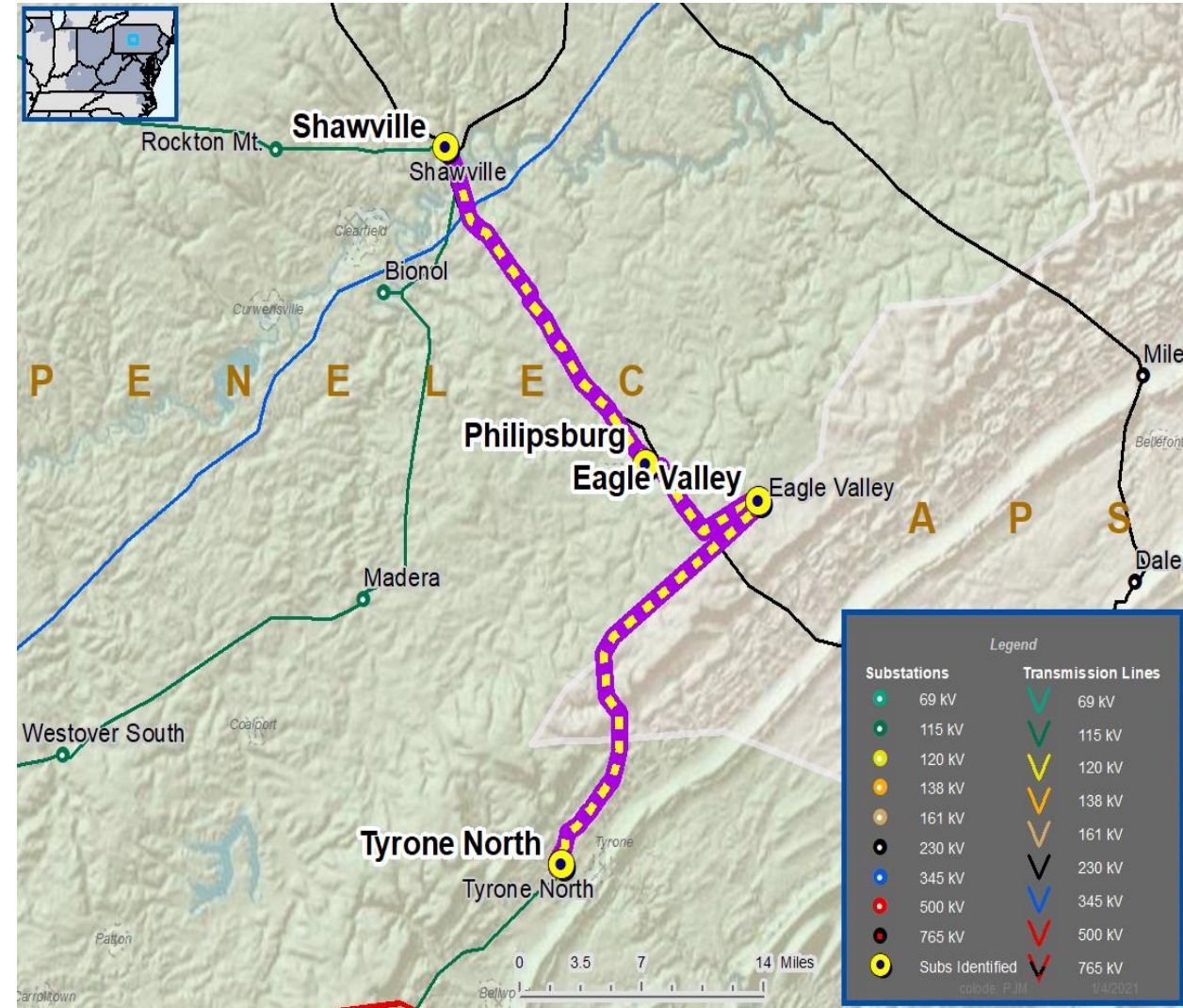
Problem Statement:

The Chestnut Flats and Sandy Ridge 115 kV wind generators can island with 34.5 kV load at Philipsburg, and 46 kV load at Tyrone North and Westfall under certain N-1-1 conditions.

Transmission line ratings are limited by terminal equipment.

Philipsburg – Shawville 115 kV Line (line trap, circuit breaker)

- Existing line rating: 163 / 185 MVA (SN / SE)
- Existing conductor rating: 167 / 202 MVA (SN / SE)





Penelec Transmission Zone M-3 Process Eagle Valley & Thirty-First Street 115 kV Anti-Islanding

Need Number: PN-2021-001

Process State: Solutions Meeting 2/16/2021

Proposed Solution:

Shawville 115 kV Substation:

- Replace line side breaker disconnect, line trap, CCVT, and line arresters.
- Install new PLC transmitter/receiver.

Philipsburg 115 kV Substation:

- Replace bus section breaker.
- Replace breaker disconnects, line arresters, CCVT, and line trap.

Eagle Valley 115 kV Substation:

- Install PLC transmitter/receive and adjust existing PLC settings

Westfall 115 kV Substation:

- Adjust PLC settings

Thirty-First Street 115 kV Substation:

- Adjust PLC settings.

Transmission Line Ratings:

- Philipsburg – Shawville 115 kV Line
 - Before Proposed Solution: 163 / 185 MVA (SN/SE)
 - After Proposed Solution: 167 / 202 MVA (SN/SE)

Alternatives Considered:

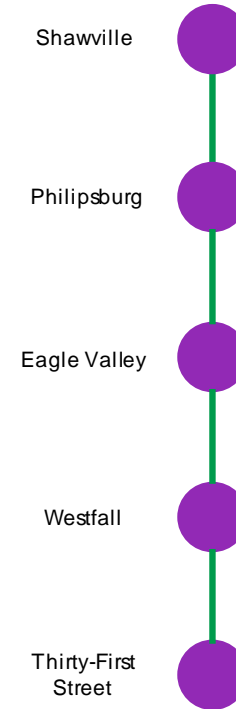
- None

Estimated Project Cost: \$1.3M

Projected In-Service: 6/1/2021

Project Status: Engineering

Model: 2016 RTEP model for 2021 Summer (50/50)



Legend	
500 kV	
345 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
34.5 kV	
23 kV	
New	

Questions?



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

2/5/2021 – V1 – Original version posted to pjm.com