

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

May 20, 2021

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

Need Number: ME-2021-001

Process Stage: Need Meeting 5/20/2021

Project Driver:

Customer Service

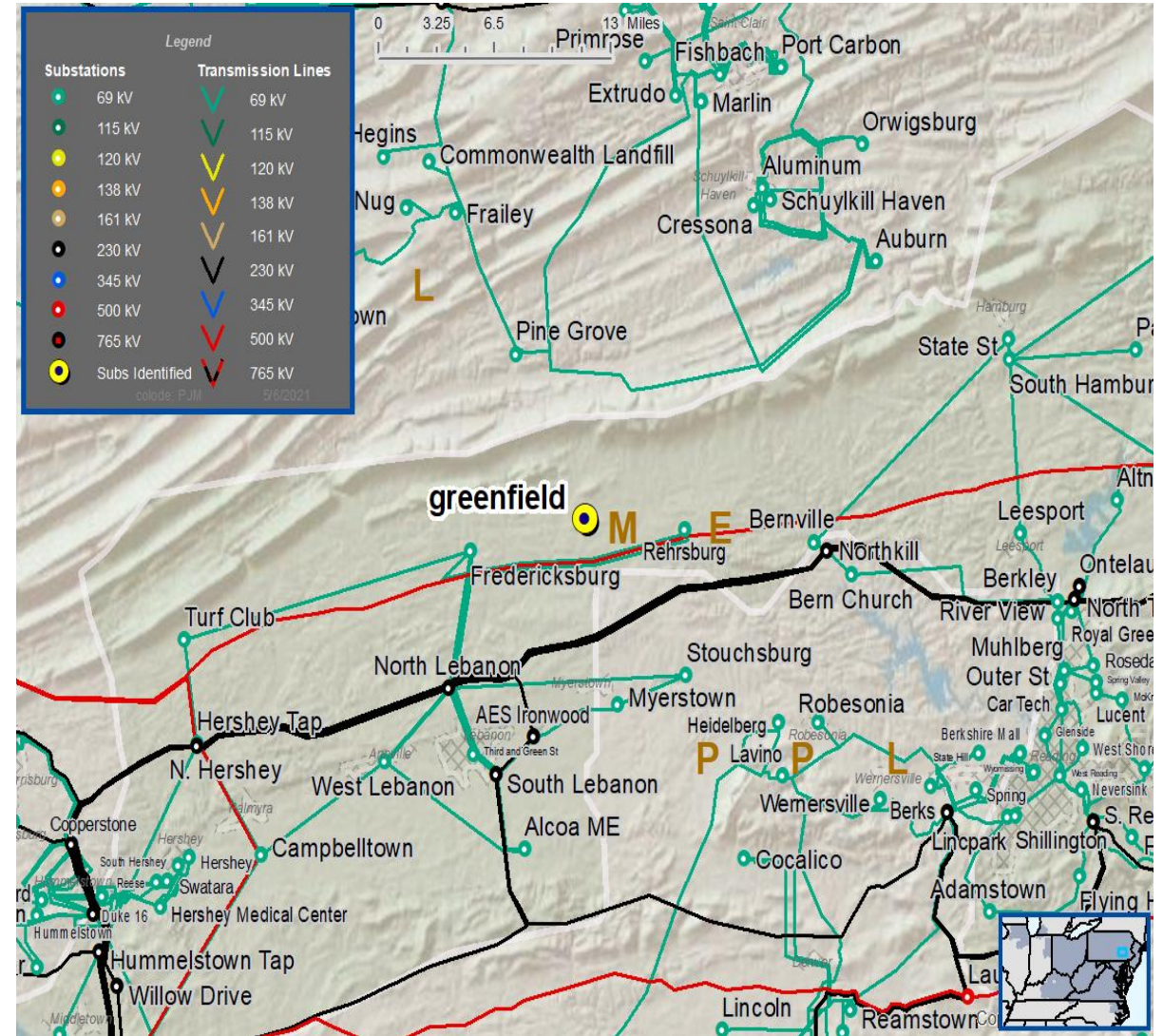
Specific Assumption Reference:

Customer request will be evaluated per FirstEnergy’s “Requirements for Transmission Connected Facilities” document and “Transmission Planning Criteria” document.

Problem Statement:

New Customer Connection – A customer requested 69 kV service; anticipated load is 12 MVA; location is near the Frystown 69 kV substation

Requested in-service date is 11/1/2021



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: ME-2020-004

Process Stage: Solution Meeting 5/20/2021

Previously Presented: Need Meeting 4/16/2020

Project Driver:

Equipment Material Condition, Performance and Risk, Operational Flexibility and Efficiency

Specific Assumption Reference:

System Performance Projects Global Factors

- System reliability and performance
- Substation/line equipment limits

System Condition Projects

- Substation Condition Rebuild/Replacement

Upgrade Relay Schemes

- Relay schemes that have a history of misoperation
- Obsolete and difficult to repair communication equipment (DTT, Blocking, etc.)
- Communication technology upgrades

Problem Statement:

North Boyertown– West Boyertown 69 kV line – Terminal equipment has an increased risk of failure (line relaying and circuit breaker) due to obsolescence of equipment. Limited spare parts are available.

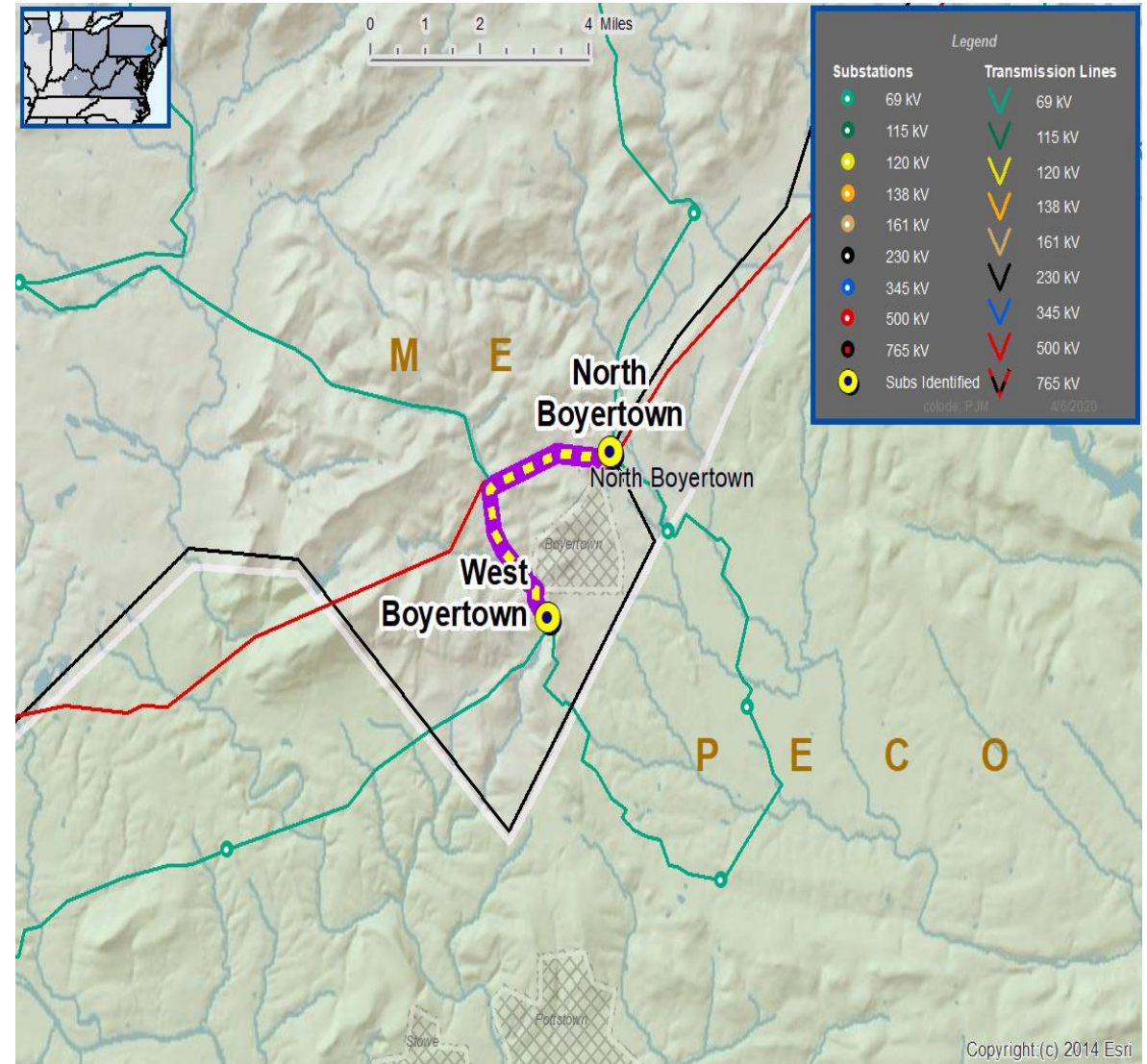
- FirstEnergy has identified protection schemes using a certain vintage of relays and communication equipment that have a history of misoperation.
- Circuit breakers are 50+ years old with Type U bushings

Transmission line rating is limited by terminal equipment:

North Boyertown– West Boyertown 69 kV line (substation conductor, line relaying)

Existing line rating: 71/72 MVA (SN/SE)

Existing conductor rating: 80/96 MVA (SN/SE)





Met-Ed Transmission Zone M-3 Process Misoperation Relay Projects

Proposed Solution:

Need Number	Transmission Line / Substation Locations	New MVA Line Rating (SN / SE)	Scope of Work	Estimated Cost (\$ M)	Target ISD
ME-2020-004	North Boyertown – West Boyertown 69 kV Line	80/96	<ul style="list-style-type: none">At North Boyertown – Replace substation conductor, circuit breaker, disconnect switches, and line relaying.At West Boyertown – Replace substation conductor, circuit breaker, disconnect switches, and line relaying.	\$1.6	11/20/2022

Alternatives Considered: Maintain existing condition

Project Status: Conceptual

Model: 2020 RTEP model for 2025 Summer (50/50)

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

5/10/2021 – V1 – Original version posted to pjm.com