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

January 20, 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

Need Number: ME-2019-049

Process Stage: Solution Meeting 1/20/2022

Previously Presented: Need Meeting 7/31/2019

Project Driver:

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

Specific Assumption Reference:

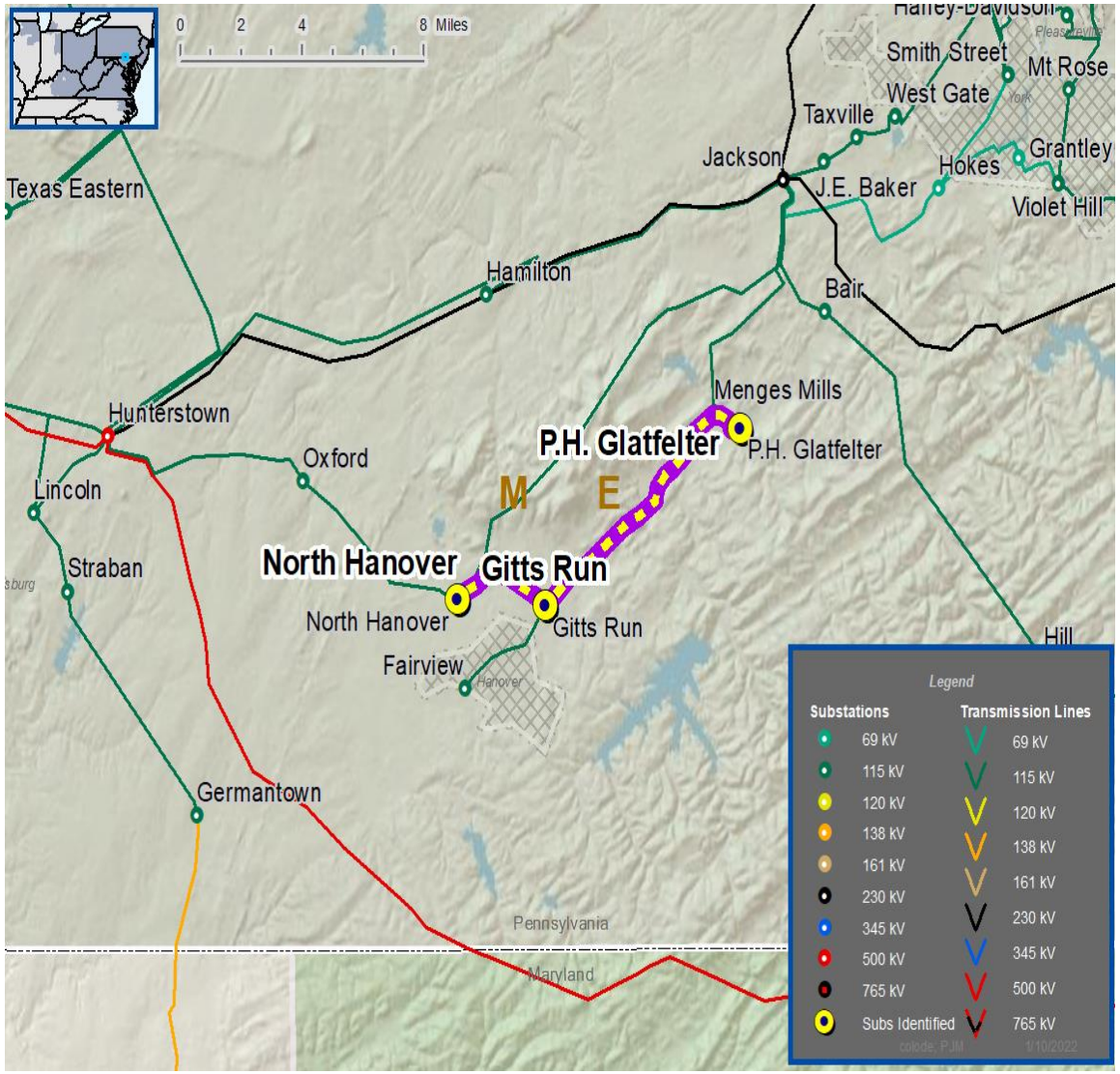
System Performance Projects Global Factors

- System reliability and performance
- Substation/line equipment limits

Upgrade Relay Schemes

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

Continued on next slide…



Problem Statement:

- FirstEnergy has identified protection schemes using a certain vintage of relays and communication equipment that have a history of misoperation.
- Proper operation of the protection scheme requires all the separate components perform adequately during a fault.
- In many cases the protection equipment cannot be repaired due to a lack of replacement part and available expertise in the outdated technology.
- Transmission line ratings are limited by terminal equipment.

ME-2019-	Transmission Line / Substation Locations	Existing Line Rating (SN / SE)	Existing Conductor Rating (SN / SE)	Limiting Terminal Equipment
049	North Hanover – Gitts Run 115 kV Line Gitts Run – PH Glatfelter 115 kV Line	232/282 221/263	232/282 232/282	- Substation Conductor

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

Proposed Solution:

ME-2019-	Transmission Line / Substation Locations	New MVA Line Rating (SN / SE)	Scope of Work	Estimate Costs ($ M)	Target ISD
049	North Hanover – Gitts Run 115 kV Line Gitts Run – PH Glatfelter 115 kV Line	232/282 232/282	• North Hanover 115 kV Substation – Replace line relaying, disconnect switches, substation conductor, line trap, and circuit breaker • PH Glatfelter 115 kV Substation – Replace line relaying, disconnect switches, substation conductor, line trap, and circuit breaker	$2.7M	12/21/2022

Alternatives Considered:
- Maintain existing condition

No topology changes, no bubble diagram required.

All projects are in the Conceptual phase.

Model: 2021 RTEP model for 2026 Summer (50/50)

Need Number: ME-2021-004

Process Stage: Solution Meeting 1/20/2022

Previously Presented: Need Meeting 10/14/2021

Project Driver:

Customer Service

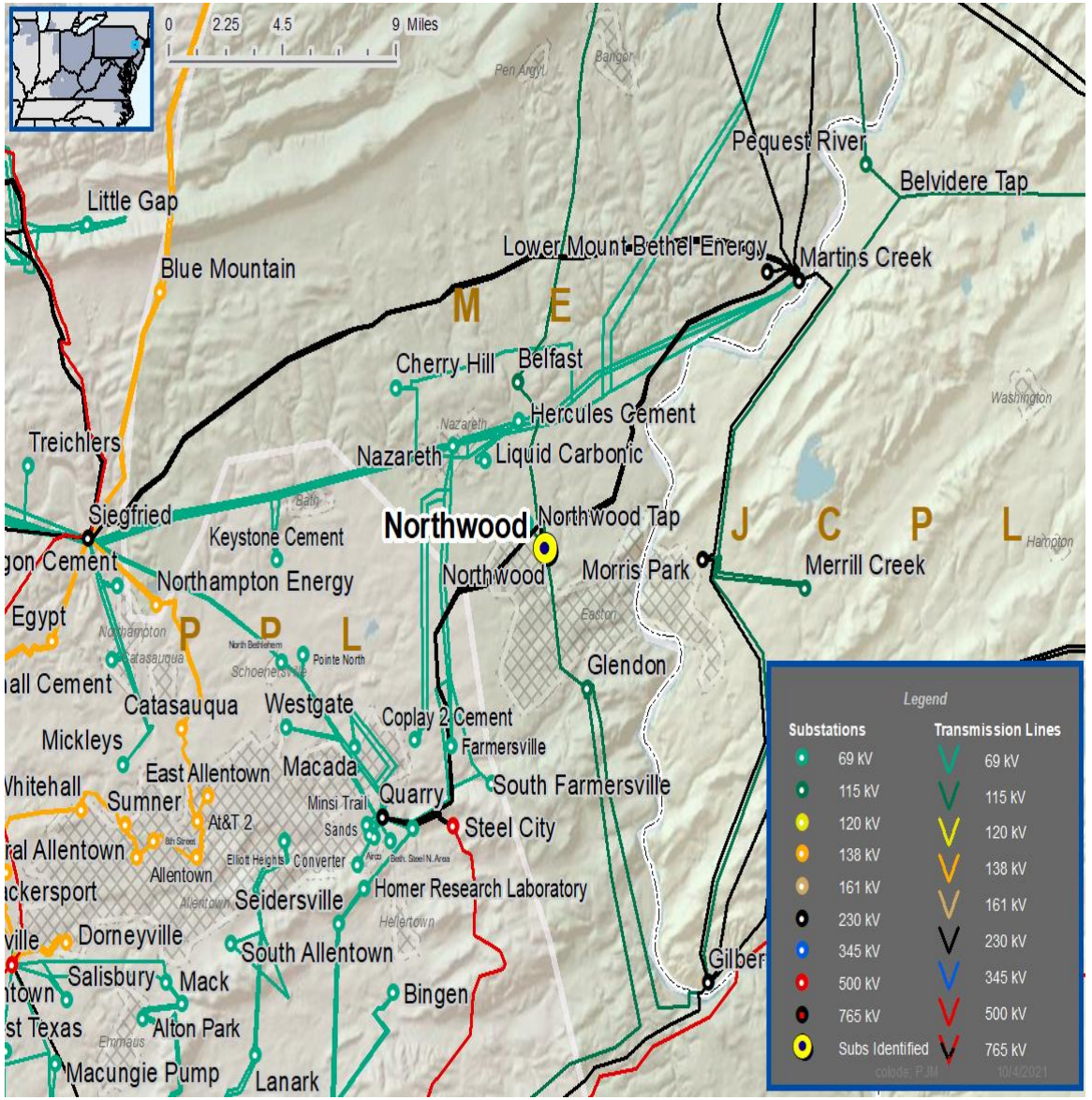
Specific Assumption Reference:

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 115 kV service; anticipated load is 30 MVA; location is near the Northwood 230 & 115 kV substation

Requested in-service date is 5/31/2022



Need Number: ME-2021-004

Process Stage: Solution Meeting 1/20/2022

Proposed Solution:

- Tap the Northwood - Belfast 115 kV line
- Install 115 kV switches
- Construct ~1 span of 115 kV to customer substation

Alternatives Considered:

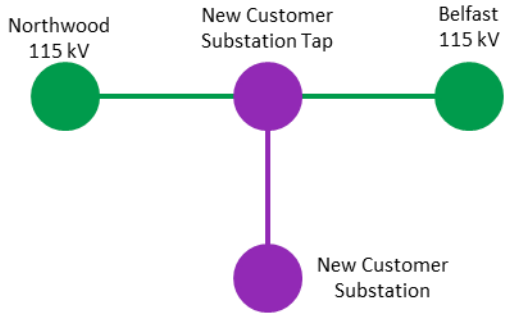
- None

Estimated Project Cost: $2.2M

Projected In-Service: 9/30/2022

Project Status: Conceptual

Model: 2022 RTEP model for 2026 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

1/10/2022 – V1 – Original version posted to pjm.com