

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

January 14, 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-2019-047 and ME-2019-048

Process Stage: Solution Meeting 1/14/2021

Previously Presented: Need Meeting 07/31/2019

Project Driver:

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

Specific Assumption Reference:

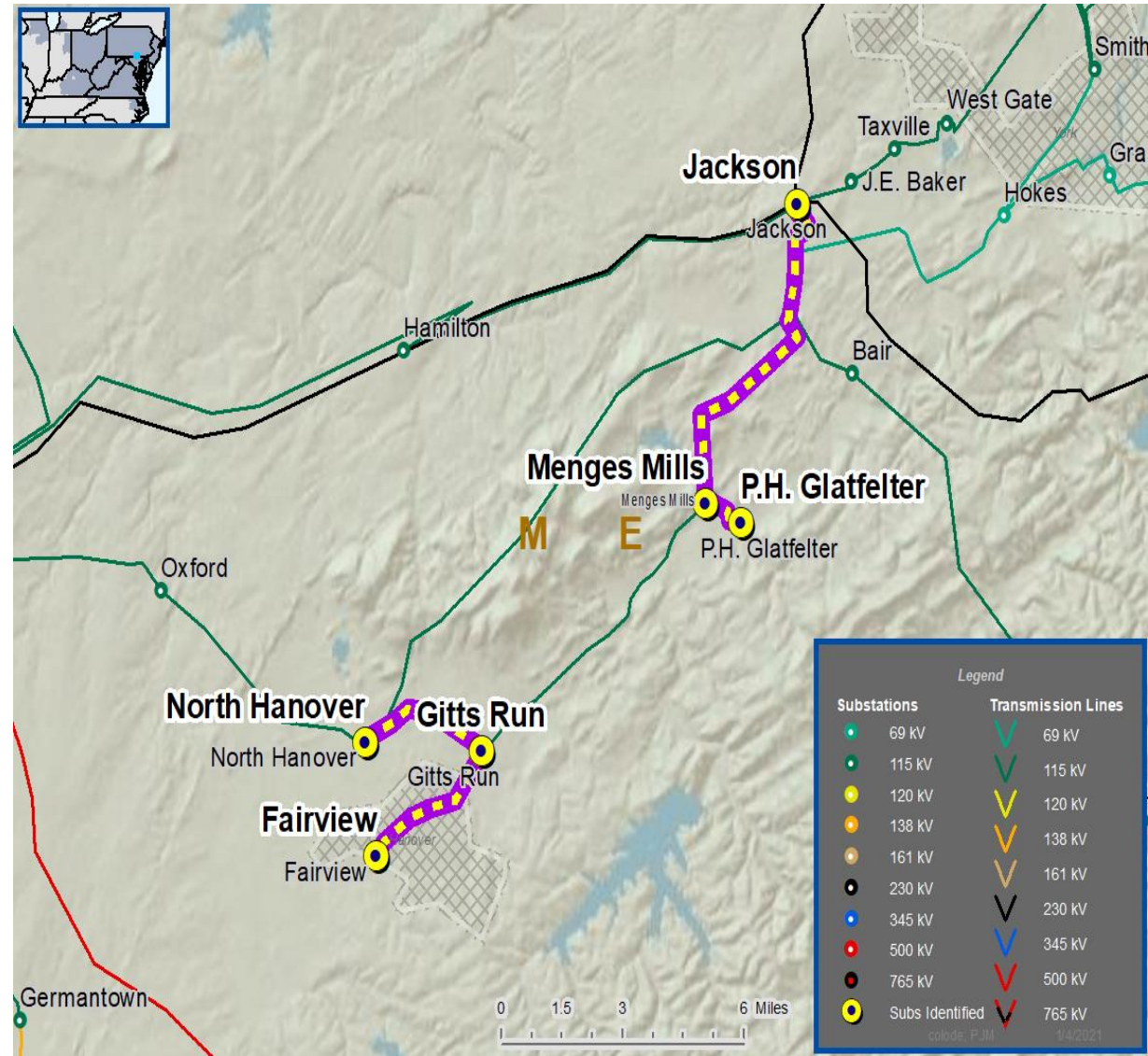
System Performance Projects Global Factors

- 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

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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cases the protection equipment cannot be repaired due to a lack of replacement parts and available expertise in the outdated technology.
- Transmission line ratings are limited by terminal equipment.

Need Number	Transmission Line / Substation Locations	Existing Line Rating (SN / SE)	Existing Conductor Rating (SN / SE)	Limiting Terminal Equipment
ME-2019-047	North Hanover – Gitts Tap 115 kV Line Gitts Tap – Fairview 115 kV Line	221/263 232/282	232/282 232/282	Substation Conductor -
ME-2019-048	Jackson – Menges Mills 115 kV Line Menges Mills – PH Glatfelter 115 kV Line	163/185 221/263	184/223 232/282	Line Trap Substation Conductor



Penelec 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-2019-047	North Hanover – Gitts Tap 115 kV Line Gitts Tap – Fairview 115 kV Line	232/282 232/282	<ul style="list-style-type: none"> At North Hanover – Replace substation conductor, and line relaying. 	\$0.7	12/31/2022
ME-2019-048	Jackson – Menges Mills 115 kV Line Menges Mills – PH Glatfelter 115 kV Line	184/223 232/282	<ul style="list-style-type: none"> At Jackson – Replace line trap, and line relaying At PH Glatfelter – Replace substation conductor, line trap, disconnect switches, circuit breaker, and line relaying. 	\$1.0	12/31/2022

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

1/4/2021 – V1 – Original version posted to pjm.com