

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

September 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-2021-003

Process Stage: Solution Meeting 9/14/2021

Previously Presented: Need Meeting 6/15/2021

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:

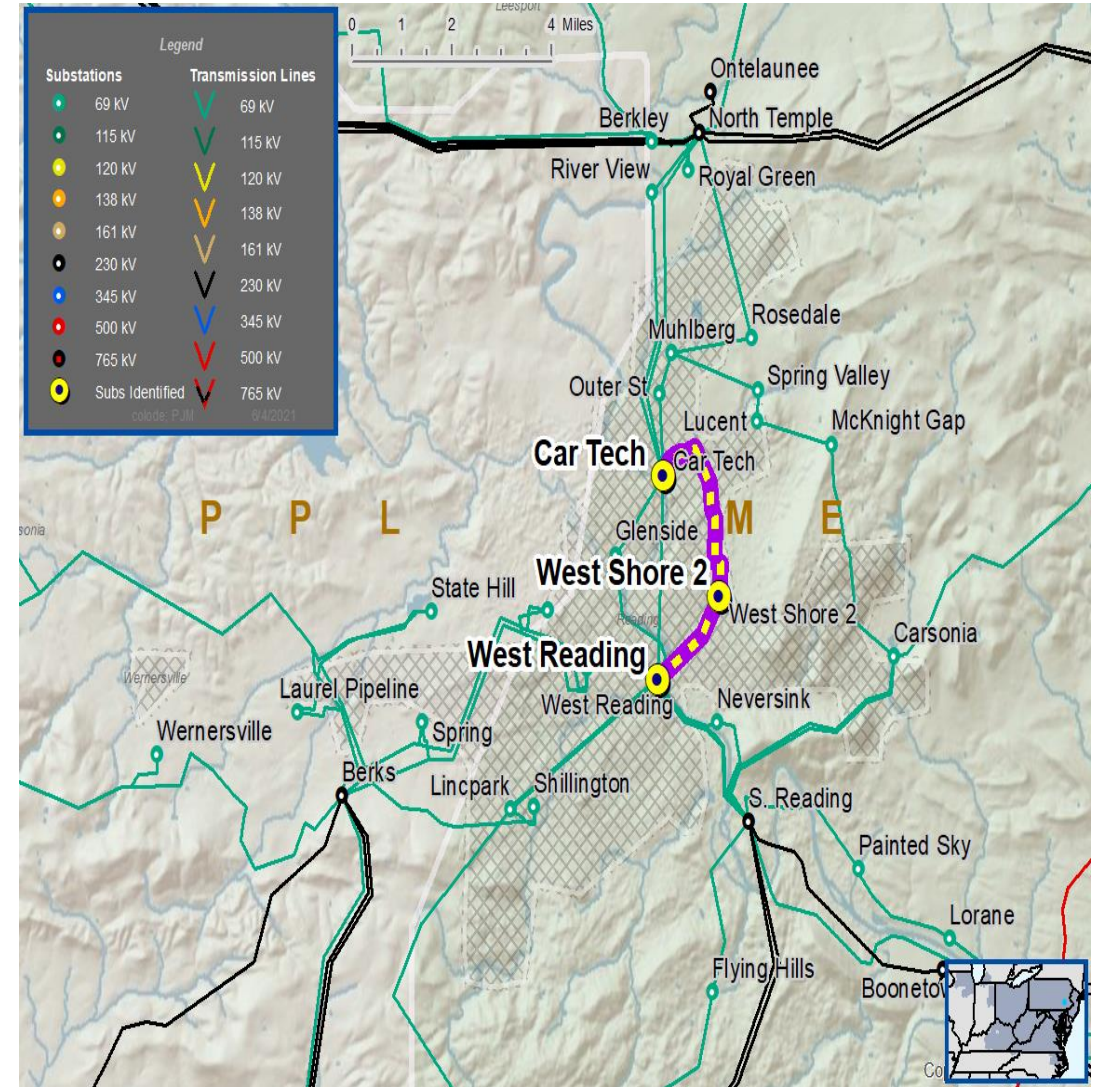
A communication service carrier has notified FirstEnergy of the anticipated retirement of an analog communications channel in the Met-Ed service territory. The existing Potential Overreaching Transfer Trip (POTT) scheme on the West Reading - Car Tech 69 kV line will be impacted by this planned retirement.

The existing relaying and terminal hardware on the Cartech – West Reading 69 kV line does not maintain compatibility with available communications protocols and FirstEnergy standards.

The relaying type is identified by FirstEnergy as being prone to frequent misoperations.

The anticipated analog circuit retirement is anticipated 6/8/2021 .

Continued on next slide...



| Need Number | Transmission Line / Substation Locations | Existing Line Rating (SN / SE) | Existing Conductor Rating (SN / SE) | Limiting Terminal Equipment |
|-------------|--|--------------------------------|-------------------------------------|--|
| ME-2021-003 | Carpenter Technology - West Shore Tap 25 69 kV Line West Shore Tap - West Reading 25 69 kV Line | 100 / 100 139 / 169 | 139 / 169 139 / 169 | Line Relaying, Substation Conductor N/A |

| Need Number | Transmission Line / Substation Locations | New MVA Line Rating (SN / SE) | Scope of Work | Estimated Cost (\$ M) | Target ISD |
|-------------|--|-------------------------------|--|-----------------------|------------|
| ME-2021-003 | Carpenter Technology - West Shore Tap 25 69 kV Line West Shore Tap - West Reading 25 69 kV Line | 132/ 158 139 / 169 | <ul style="list-style-type: none"> • At Carpenter Technology – Replace circuit breaker, and line relaying. • At West Reading – Replace circuit breaker, and line relaying. | \$2.1 | 6/9/2021 |

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

9/2/2021 – V1 – Original version posted to pjm.com