Subregional RTEP Committee – Mid-Atlantic
FirstEnergy Supplemental Projects

November 14, 2024

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

Penelec Transmission Zone M-3 Process
Cooper and Prospect Substation Terminal Upgrades

Need Number: PN-2024-032
Process Stage: Need Meeting – 11/14/2024

Project Driver:
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
System Performance Global Factors
- System reliability and performance
- Substation/line equipment limits

Substation Condition Rebuild/Replacement
- Limited availability of spare parts, software obsolescence and/or compatibility, or vendor technical support
- Expected service life (at or beyond) or obsolescence

Problem Statement:
- The 115 kV B-7 Breaker and associated disconnect switches at the terminal of Cooper Substation towards Rosedale Junction are 63 years old and are beyond the end of their service life.
- The 115 kV B-14 Breaker and associated disconnect switches at the terminal of Prospect Substation towards Rosedale Junction are 63 years old and are beyond the end of their service life.
- Transmission lines are limited by terminal equipment.
- Cooper – Rosedale Junction 115 kV Line
  - Existing Transmission Line Rating: 249 / 300 / 309 / 351 MVA (SN/SE/WN/WE)
  - Existing Transmission Line Conductor Rating: 273 / 333 / 309 / 395 MVA (SN/SE/WN/WE)
- Prospect – Rosedale Junction 115 kV Line
  - Existing Transmission Line Rating: 147 / 191 / 211 / 237 MVA (SN/SE/WN/WE)
  - Existing Transmission Line Conductor Rating: 202 / 245 / 228 / 290 MVA (SN/SE/WN/WE)

Geographic Map:
Include all facilities mentioned on slide, small locator map and a legend.

Penelec Transmission Zone M-3 Process
East Pike – Glory 115 kV Line

Need Number: PN-2024-027

Process Stage: Need Meeting – 11/14/2024

Project Driver:

Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

System Performance Global Factors

- Past system reliability/performance

Line Condition Rebuild/Replacement

- Age/condition of wood pole transmission line structures

Problem Statement:

- The East Pike – Glory 115 kV Line was constructed approximately 66 years ago and is approaching end of life. The line is approximately 13 miles long with 104 wood pole and two lattice transmission line structures.
- Per recent inspections, the line is exhibiting deterioration. Inspection findings include:
  - 56 structures have cracked/deteriorated wood poles and/or braces.
  - 14 structures are phase raised.
- Since 2019, the line has had two unscheduled, sustained outages.
- East Pike – Glory 115 kV Line
  - Existing Transmission Line Rating: 202 / 245 / 228 / 290 MVA (SN/SE/WN/WE)
  - Existing Transmission Conductor Line Rating: 202 / 245 / 228 / 290 MVA (SN/SE/WN/WE)

Geographic Map:
Include all facilities mentioned on slide, small locator map and a legend.

Penelec Transmission Zone M-3 Process
Blairsville East – Shelocta 115 kV Line

Need Number: PN-2024-029

Process Stage: Need Meeting – 11/14/2024

Project Driver:

Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

System Performance Global Factors

- Past system reliability/performance
- Substation/Line equipment limits

Line Condition Rebuild/Replacement

- Age/condition of wood pole transmission line structures

Problem Statement:

- The Blairsville East – Shelocta 115 kV Line was constructed approximately 60 years ago and is approaching end of life. The line is approximately 15 miles long with 96 wood pole and one steel transmission line structures.
- Per recent inspections, the line is exhibiting deterioration. Inspection findings include:
  - 29 structures have woodpecker damage and require replacement.
  - 93 structures have shell rot.
  - 118 historical repair conditions on structures due to hardware degradation.
- Since 2020, the line has had four unscheduled, sustained outages.
- The line is currently limited by terminal equipment.
- Blairsville East – Shelocta 115 kV Line
  - Existing Transmission Line Rating: 147 / 191 / 211 / 237 MVA (SN/SE/WN/WE)
  - Existing Transmission Line Conductor Rating: 201 / 244 / 227 / 288 MVA (SN/SE/WN/WE)

Geographic Map:
Include all facilities mentioned on slide, small locator map and a legend.

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

11/04/2024 – V1 – Original version posted to pjm.com