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

August 13, 2020

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

Need Number: PN-2020-013

Process Stage: Need Meeting 8/13/2020

Project Driver:
Equipment Material Condition, Performance and Risk

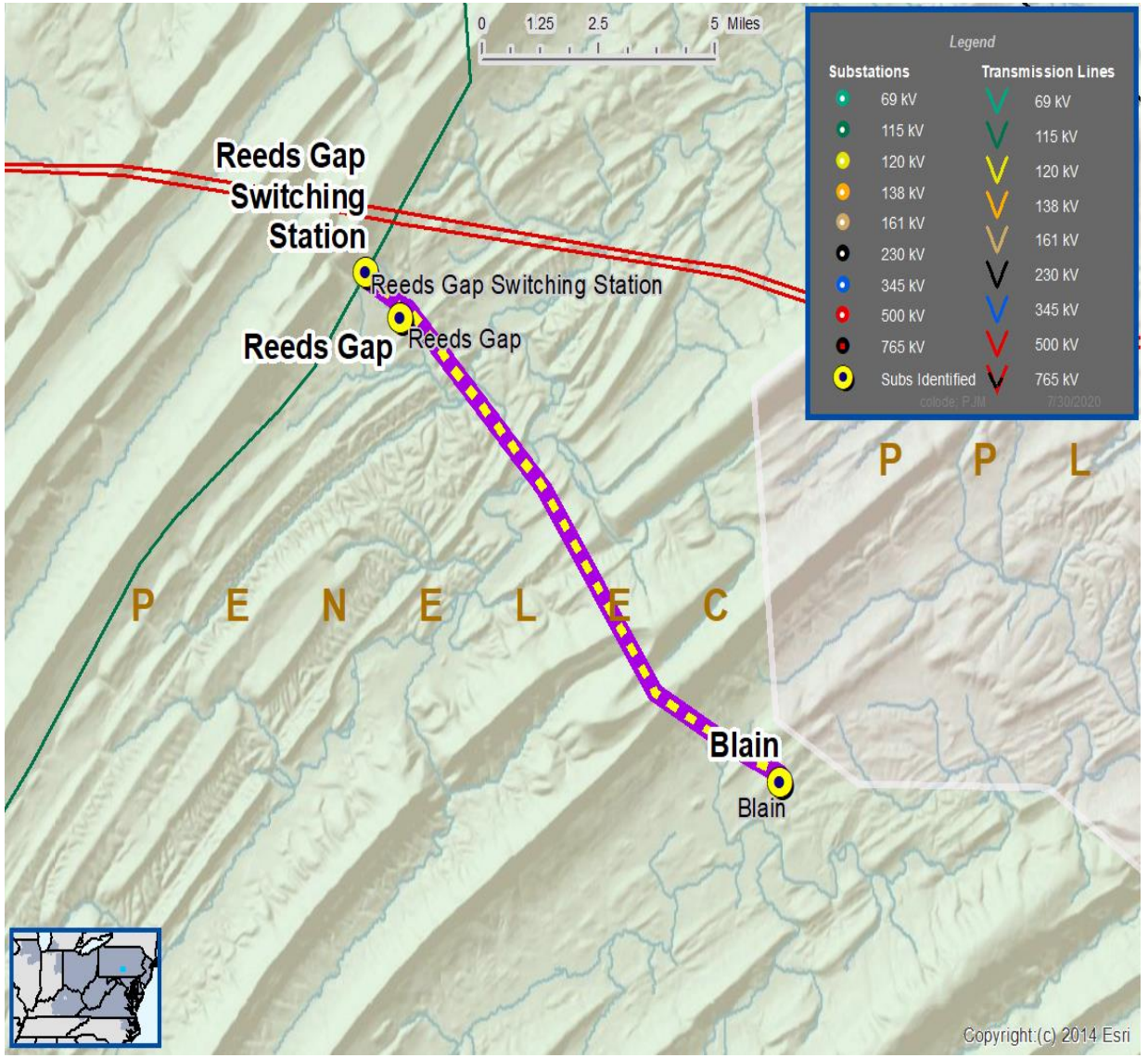
Specific Assumption Reference:
Line Condition Rebuild/Replacement
- Age/condition of wood pole transmission line structures

Substation Performance Projects Global Factors
- Substation/line equipment limits

Problem Statement:
The Reeds Switching Station – Reeds Gap – Blain 115 kV line was originally constructed in 1967 and is exhibiting deterioration.
- Total line distance is approximately 9.8 miles
- 72 out of 77 wood structures failed inspection (93% failure rate)
- Failure reasons include rotten/cracked poles, decay, top rot, woodpecker, and cracked arms and braces

Transmission line ratings are limited by terminal equipment.
Reeds Switching Station – Reeds Gap 115 kV Line (substation conductor)
- Existing line rating: 86 / 99 MVA (SN / SE)
- Existing conductor rating: 95 / 99 MVA (SN / SE)

Reeds Gap – Blain 115 kV Line (substation conductor)
- Existing line rating: 88 / 129 MVA (SN / SE)
- Existing conductor rating: 133 / 160 MVA (SN / SE)



Penelec Transmission Zone M-3 Process

Need Number: PN-2020-017

Process Stage: Need Meeting 8/13/2020

Project Driver:
Operational Flexibility and Efficiency

Specific Assumption Reference:
Add/Expand Bus Configuration
- Eliminate simultaneous outages to multiple network elements

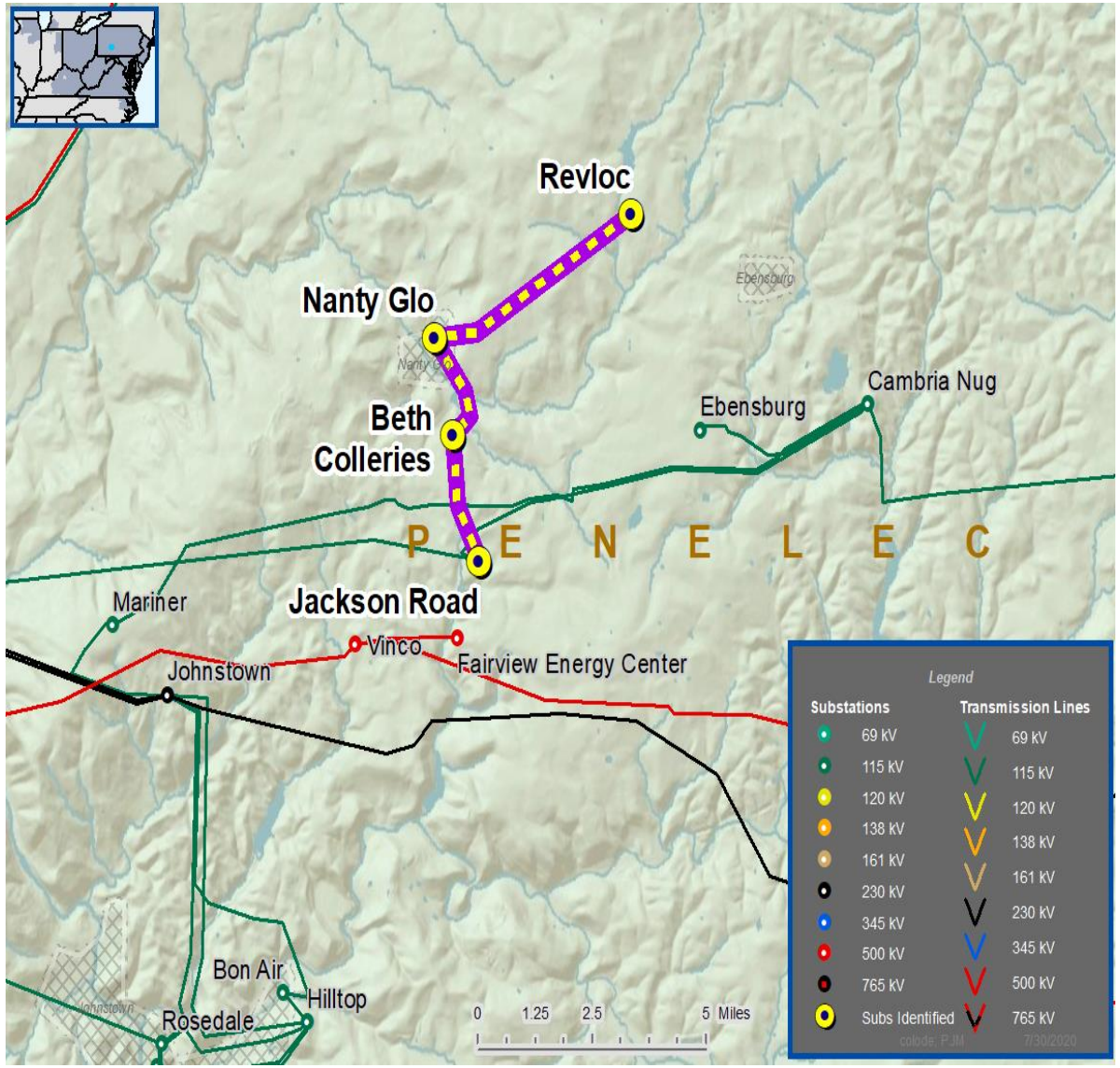
System Performance Projects
- Substation/line equipment limits

Problem Statement:
The loss of Nanty Glo substation results in loss of approximately 6.6 MW of load and approximately 1,600 customers. Substation consists of:
- Four networked 46 kV lines
- Two distribution transformers connected with switches

Transmission line ratings are limited by terminal equipment.
Nanty Glo – Revloc 46 kV Line (line relaying, substation conductor)
- Existing line rating: 26 / 26 MVA (SN / SE)
- Existing conductor rating: 37 / 37 MVA (SN / SE)

Nanty Glo – Beth Colleries S 46 kV Line (line relaying)
- Existing line rating: 25 / 25 MVA (SN / SE)
- Existing conductor rating: 32 / 32 MVA (SN / SE)

Beth Colleries – Jackson Road S 46 kV Line (line relaying, substation conductor)
- Existing line rating: 33 / 33 MVA (SN / SE)
- Existing conductor rating: 49 / 50 MVA (SN / SE)



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

8/3/2020 – V1 – Original version posted to pjm.com