

Transmission Expansion Advisory Committee FirstEnergy Supplemental Projects

December 3rd, 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

APS Transmission Zone M-3 Process Ringgold No. 4 230/138 kV Transformer

Need Number: APS-2024-081

Process Stage: Need Meeting – 12/03/2024

Project Driver:

Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

System Performance Projects Global Factors

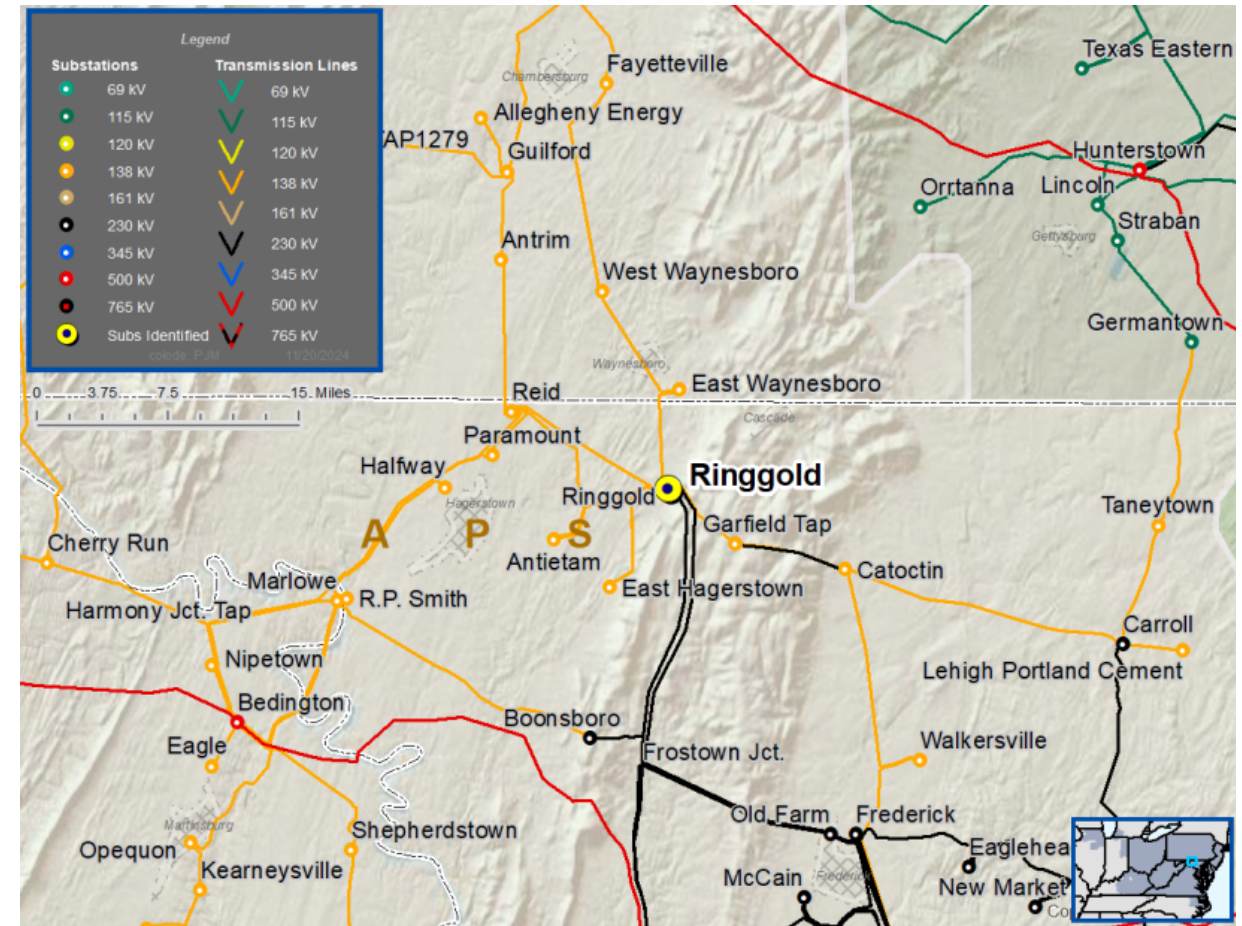
- System reliability and performance
- Substation/line equipment limits

Add/Replace Transformers

Past System Reliability/Performance

Problem Statement:

- The Ringgold No. 4 230/138 kV Transformer is approximately 45 years old and is approaching end of life.
- The transformer has experienced an increase in the level of methane and ethane.
- The transformer is limited by terminal equipment.
- Existing transformer ratings:
 - 164 / 206 MVA (SN/SSTE)
 - 216 / 248 MVA (WN/WSTE)



Need Number: APS-2024-078

Process Stage: Need Meeting – 12/03/2024

Project Driver:

Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

System Performance Projects Global Factors

- System reliability and performance

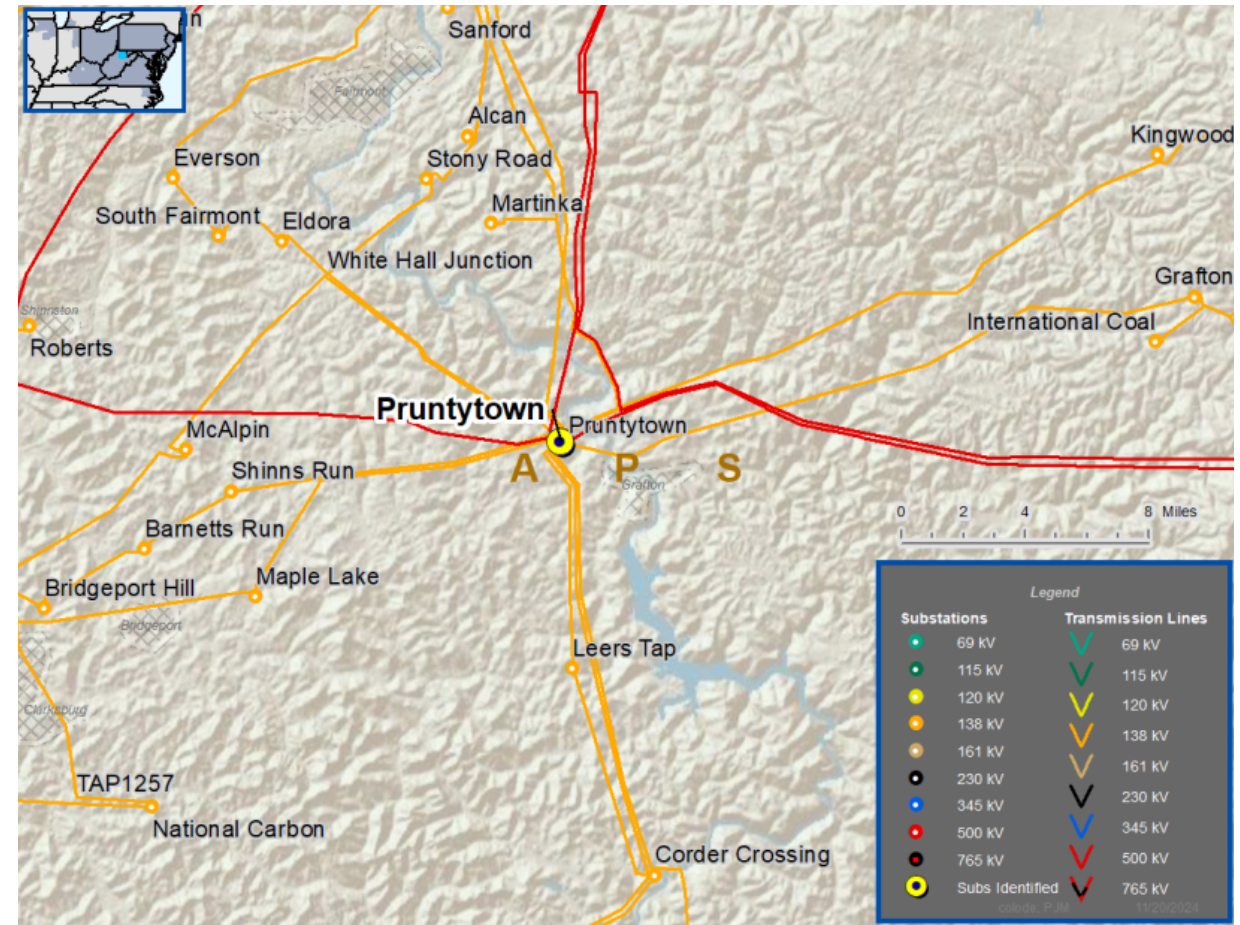
Add/Replace Transformers

Past System Reliability/Performance

Problem Statement:

- The Pruntytown No. 2 500/138 kV Transformer is approximately 56 years old and is approaching end of life.
- The transformer has increased moisture content which indicates presence of polar contaminants.
- Replacement components are difficult to source leading to non-standard repairs.
- Existing transformer ratings:
 - 469/ 486 MVA (SN/SSTE)
 - 551 / 567 MVA (WN/WSTE)

APS Transmission Zone M-3 Process Pruntytown No. 2 500/138 kV Transformer



Need Number: APS-2024-077

Process Stage: Need Meeting – 12/03/2024

Project Driver:

Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

System Performance Projects Global Factors

- System reliability and performance

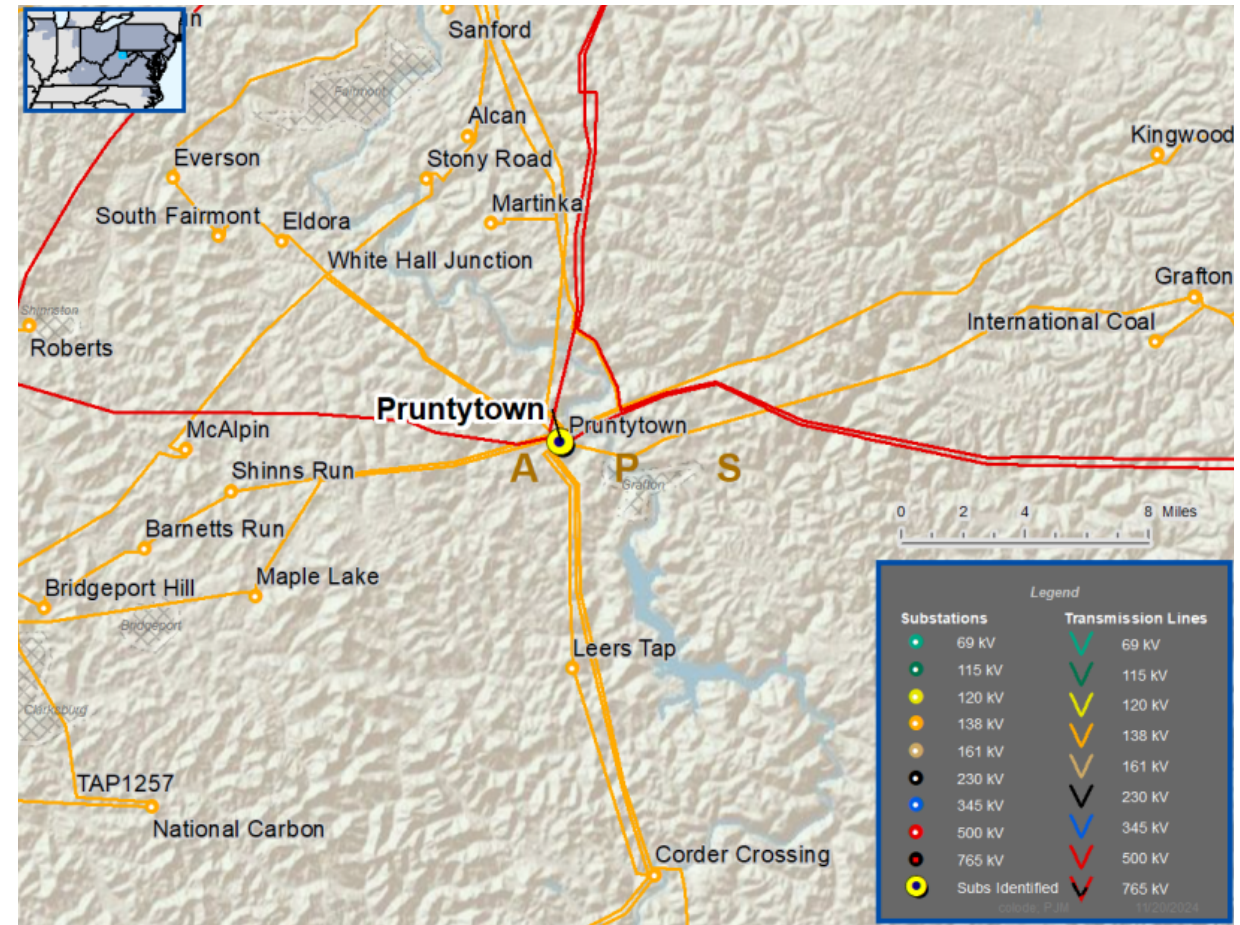
Add/Replace Transformers

Past System Reliability/Performance

Problem Statement:

- The Pruntytown No. 1 500/138 kV Transformer is approximately 54 years old and is approaching end of life.
- The transformer has increased moisture content which indicates presence of polar contaminants.
- Replacement components are difficult to source leading to non-standard repairs.
- Existing transformer ratings:
 - 467 / 484 MVA (SN/SSTE)
 - 549 / 565 MVA (WN/WSTE)

APS Transmission Zone M-3 Process Pruntytown No. 1 500/138 kV Transformer



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

11/22/2024– V1 – Original version posted to pjm.com