

Subregional RTEP Committee – Western FirstEnergy Supplemental Projects

May 16, 2025

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

Need Number: ATSI-2025-015
Process Stage: Need Meeting – 05/16/2025

Project Driver(s):
Equipment Condition/Performance/Risk

Specific Assumption Reference(s):

System Performance Projects Global Factors

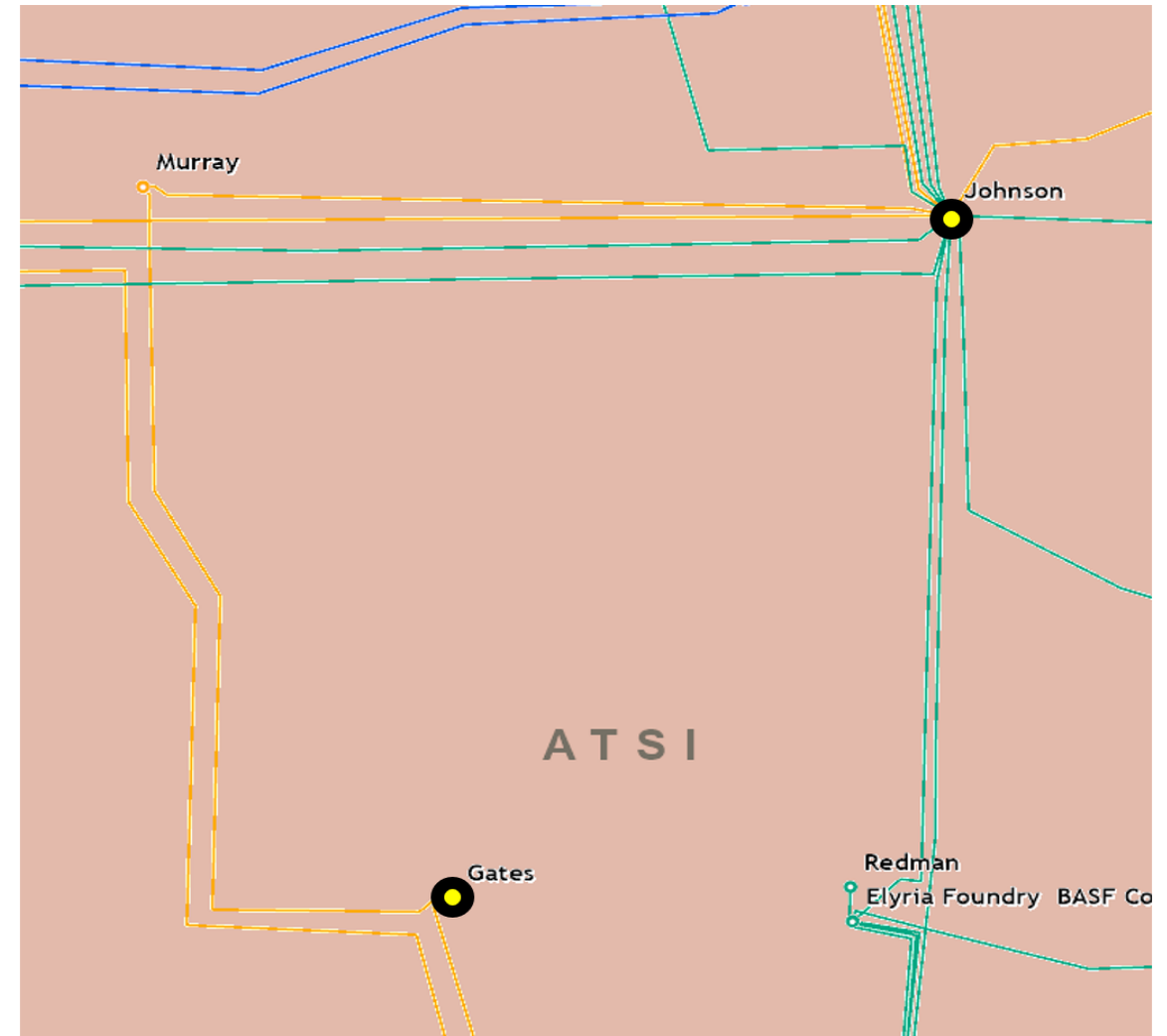
- Substation/Line equipment limits

Substation Condition Rebuild/Replacement

- Circuit breakers and other fault interrupting devices

Problem Statement:

- The 138 kV oil circuit breaker B-4 and associated disconnect switches at Gates Substation are aging with increasing maintenance concerns. The breaker B-4 is 60 years old and other equipment is approximately 35 years old.
- Communication equipment at Gates and Johnson substations have reliability issues.
- Transmission line ratings are limited by terminal equipment.
- Existing ratings for Gates - Johnson 138 kV Line (Gates - Murray section):
 - 195 / 209 / 217 / 229 MVA (SN/SE/WN/WE)
- Existing conductor ratings for Gates - Johnson 138 kV Line (Gates - Murray section):
 - 196 / 242 / 239 / 306 MVA (SN/SE/WN/WE)



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: ATSI-2019-089
Process Stage: Solution Meeting - 05/16/2025
Previously Presented: Need Meeting - 11/22/2019

Supplemental Project Driver(s):

Equipment Material Condition, Performance and Risk

Specific Assumption Reference(s):

System Performance Global Factors

- System reliability and performance

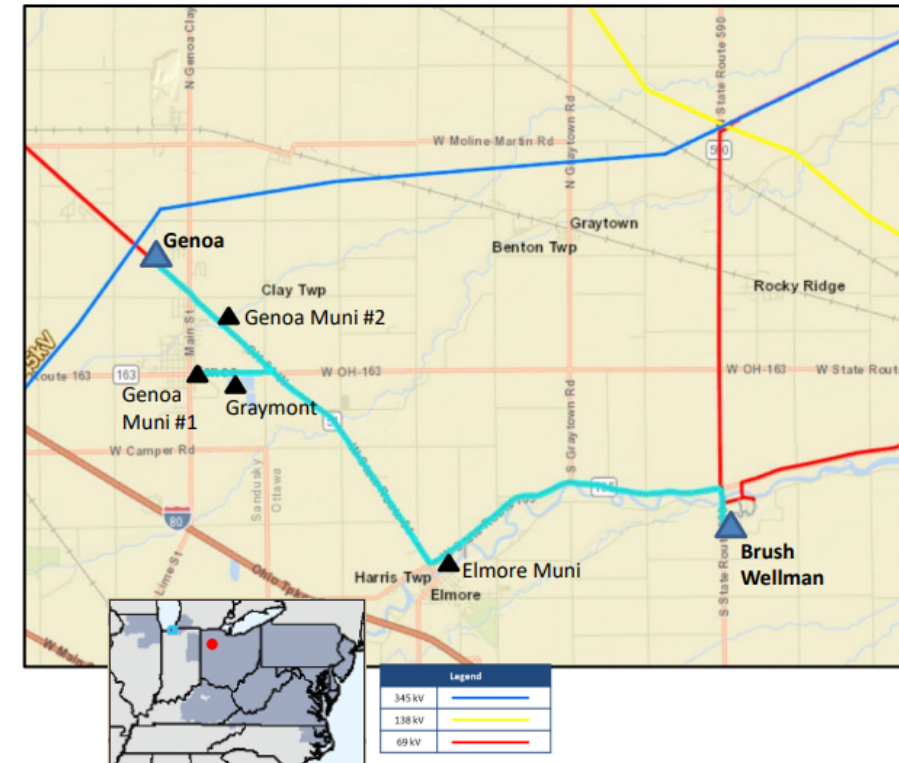
Line condition rebuild / replacement

- Age/condition of wood pole transmission line structures
- Age/condition of transmission line conductors

Problem Statement:

The existing Brush Wellman – Genoa 69 kV Line is approximately 11.4 miles long with approximately 20 MWs of load and 2,592 customers at risk. It has four transmission service connection points

- 83% of the wood poles failed recent line inspection
- Typical age of the line components is 59 years
- Six obsolete line switches
- System performance over the past five years: 1 momentary / 0 sustained





ATSI Transmission Zone M-3 Process Brush Wellman – Genoa 69 kV Line

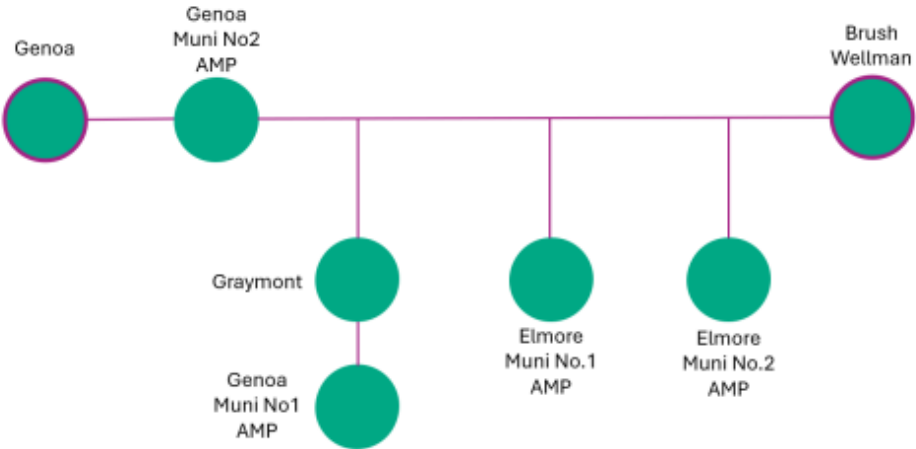
Need Number: ATSI-2019-089
Process Stage: Solution Meeting - 05/16/2025

- Proposed Solution:**
Brush Wellman – Genoa 69 kV Line
- Rebuild 11.4 miles of 69 kV line, replacing deteriorated wood pole construction
- Brush Wellman Substation:
- Replace circuit breakers B7226 and B7227
- Genoa Substation:
- Replace circuit breaker 6873
 - Replace associated disconnect switches

- Transmission Line Ratings:**
Brush Wellman – Genoa 69 kV Line
- Existing Line Rating 79 / 95 / 89 / 113 MVA (SN/SE/WN/SE)
 - New Line Rating 139 / 169 / 158 / 201 MVA (SN/SE/WN/SE)

Alternatives Considered:
Maintain line in existing condition with deteriorating wood pole structures and increasing risk to reliability.

Estimated Project Cost: \$32.27M
Projected In-Service: 6/1/2027
Project Status: Conceptual
Model: 2024 RTEP model for 2029 Summer (50/50)



Legend	
500 kV	
345 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
34.5 kV	
23 kV	
New	

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

05/06/2025– V1 – Original version posted to pjm.com