

# Subregional RTEP Committee – Western FirstEnergy Supplemental Projects

June 15, 2021

# 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:** APS-2021-011

**Process Stage:** Need Meeting 6/15/2021

**Project Driver:** *Customer Service*

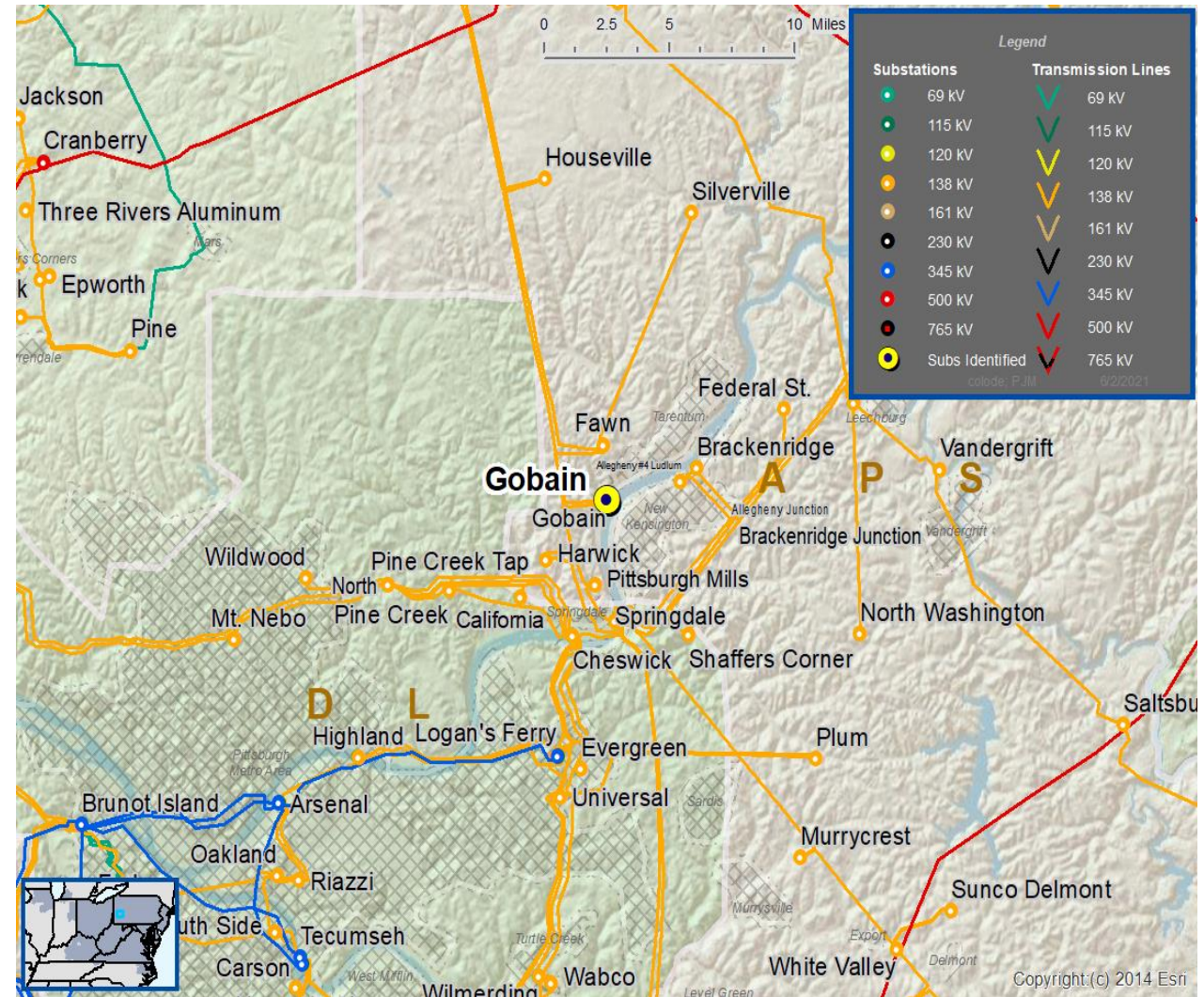
**Specific Assumption Reference:**

Customer request will be evaluated per FirstEnergy's "Requirements for Transmission Connected Facilities" document and "Transmission Planning Criteria" document.

**Problem Statement:**

New Customer Connection – A customer requested 138 kV service to support 10 MVA of additional load at a site near Gobain 138 kV substation (New Kensington, PA) in the West Penn Power service territory.

Requested in-service date is 7/1/2022



**Need Number:** APS-2021-005

**Process Stage:** Need Meeting 06/15/2021

**Project Driver:**

*Equipment Material Condition, Performance and Risk*

**Specific Assumption Reference:**

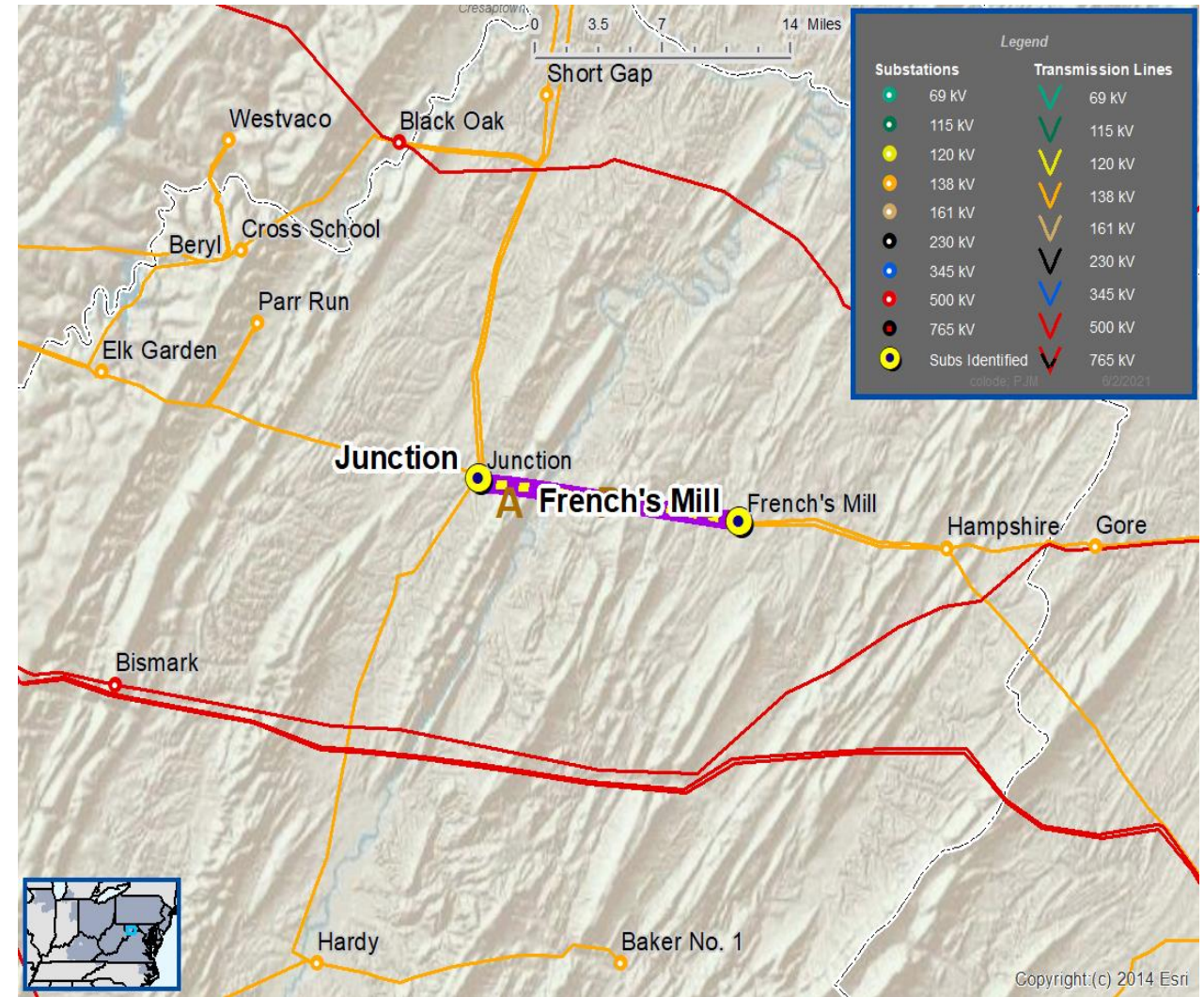
*Global Factors*

- System reliability and performance
- Substation and line equipment limits
- Upgrade Relay Schemes
  - Relay schemes that have a history of misoperation
  - Obsolete and difficult to repair communication equipment (DTT, Blocking, etc.)
  - Communication technology upgrades
  - Bus protection schemes

**Problem Statement:**

- FirstEnergy has identified protection schemes using a certain vintage of relays and communication equipment that have a history of misoperation
- Proper operation of the protection scheme requires all the separate components perform properly together during a fault

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- The identified protection equipment cannot be effectively repaired for reasons such as lack of replacement parts and available expertise in the outdated technology
- Newer equipment provides better monitoring, enhances capability of system event analysis, and performs more reliably

Transmission line ratings are limited by terminal equipment  
French's Mill – Junction 138 kV Line (substation conductor)

- Existing line rating: 164 / 206 MVA (SN / SE)
- Existing conductor rating: 221 / 268 MVA (SN / SE)



**Need Number:** APS-2021-006

**Process Stage:** Need Meeting 06/15/2021

**Project Driver:**

*Equipment Material Condition, Performance and Risk*

**Specific Assumption Reference:**

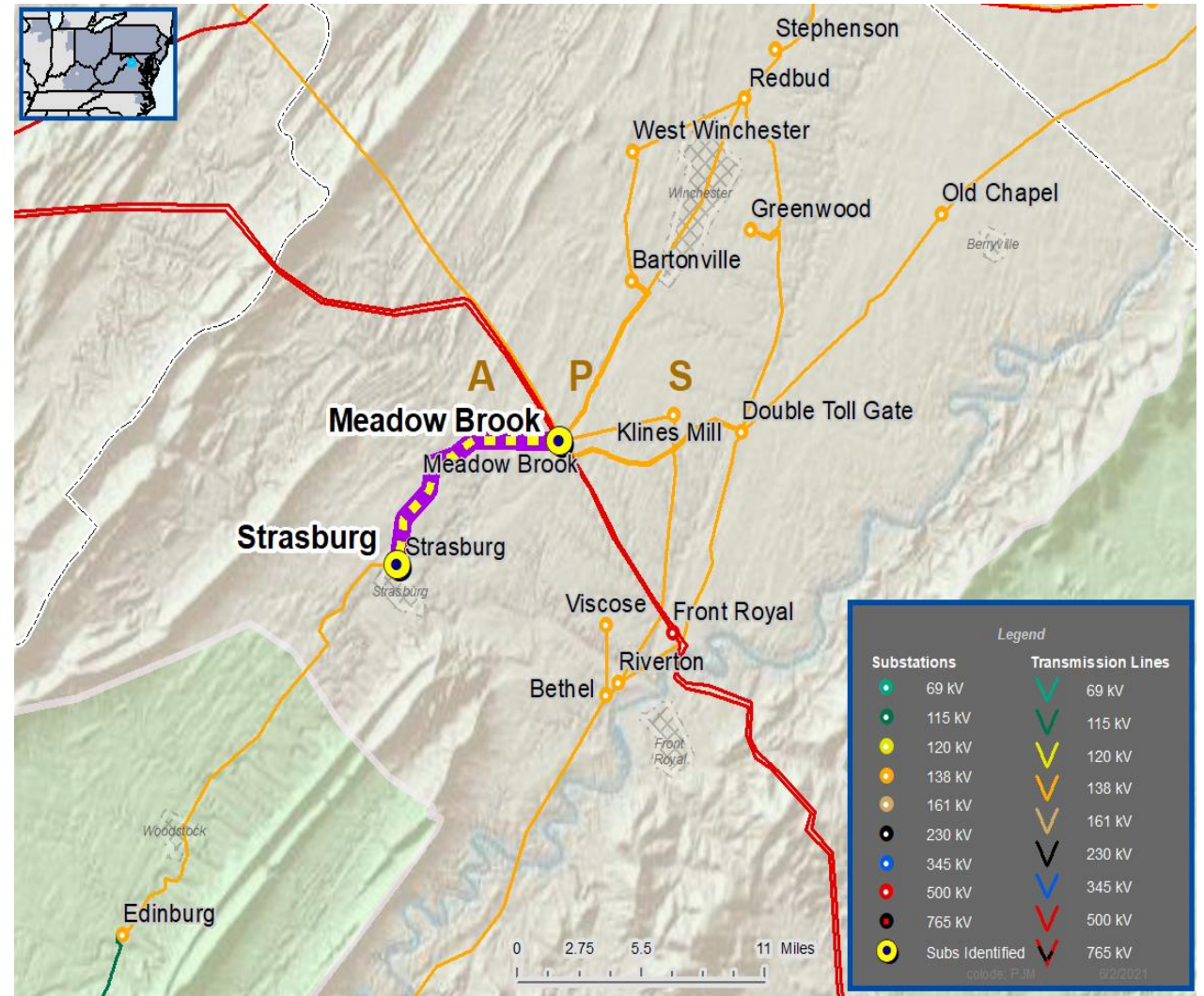
*Global Factors*

- System reliability and performance
- Substation and line equipment limits
- Upgrade Relay Schemes
  - Relay schemes that have a history of misoperation
  - Obsolete and difficult to repair communication equipment (DTT, Blocking, etc.)
  - Communication technology upgrades
  - Bus protection schemes

**Problem Statement:**

- FirstEnergy has identified protection schemes using a certain vintage of relays and communication equipment that have a history of misoperation
- Proper operation of the protection scheme requires all the separate components perform properly together during a fault

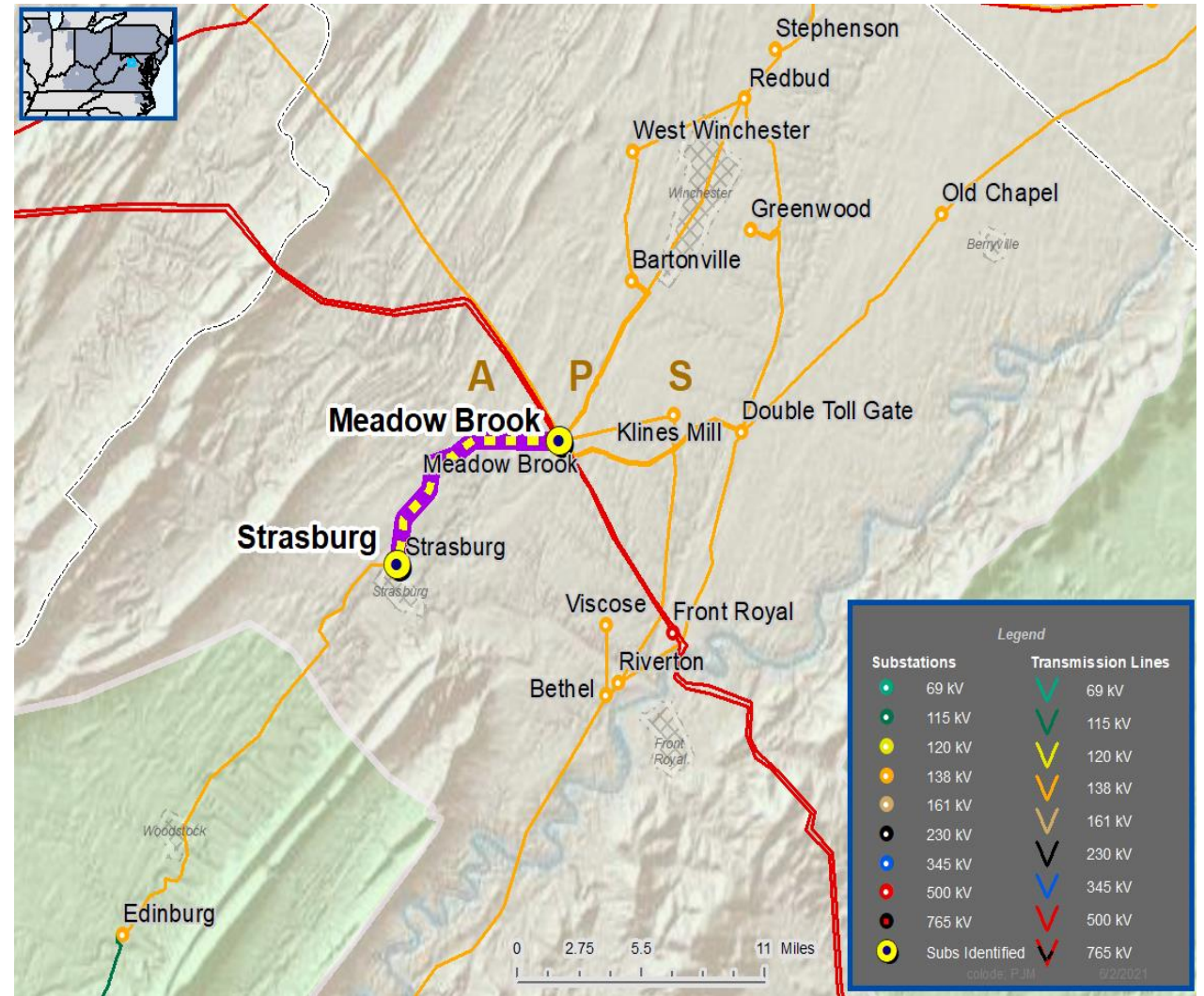
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- The identified protection equipment cannot be effectively repaired for reasons such as lack of replacement parts and available expertise in the outdated technology
- Newer equipment provides better monitoring, enhances capability of system event analysis, and performs more reliably

Transmission line ratings are limited by terminal equipment  
Meadow Brook – Strasburg 138 kV Line (substation conductor)

- Existing line rating: 229 / 229 MVA (SN / SE)
- Existing conductor rating: 275 / 333 MVA (SN / SE)



# 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

06/04/2021 – V1 – Original version posted to pjm.com