

Subregional RTEP Committee - Western FirstEnergy Supplemental Projects

April 20, 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

Need Number: APS-2019-012

Process Stage: Need Meeting 04/20/2020

Project Driver:

Customer Service

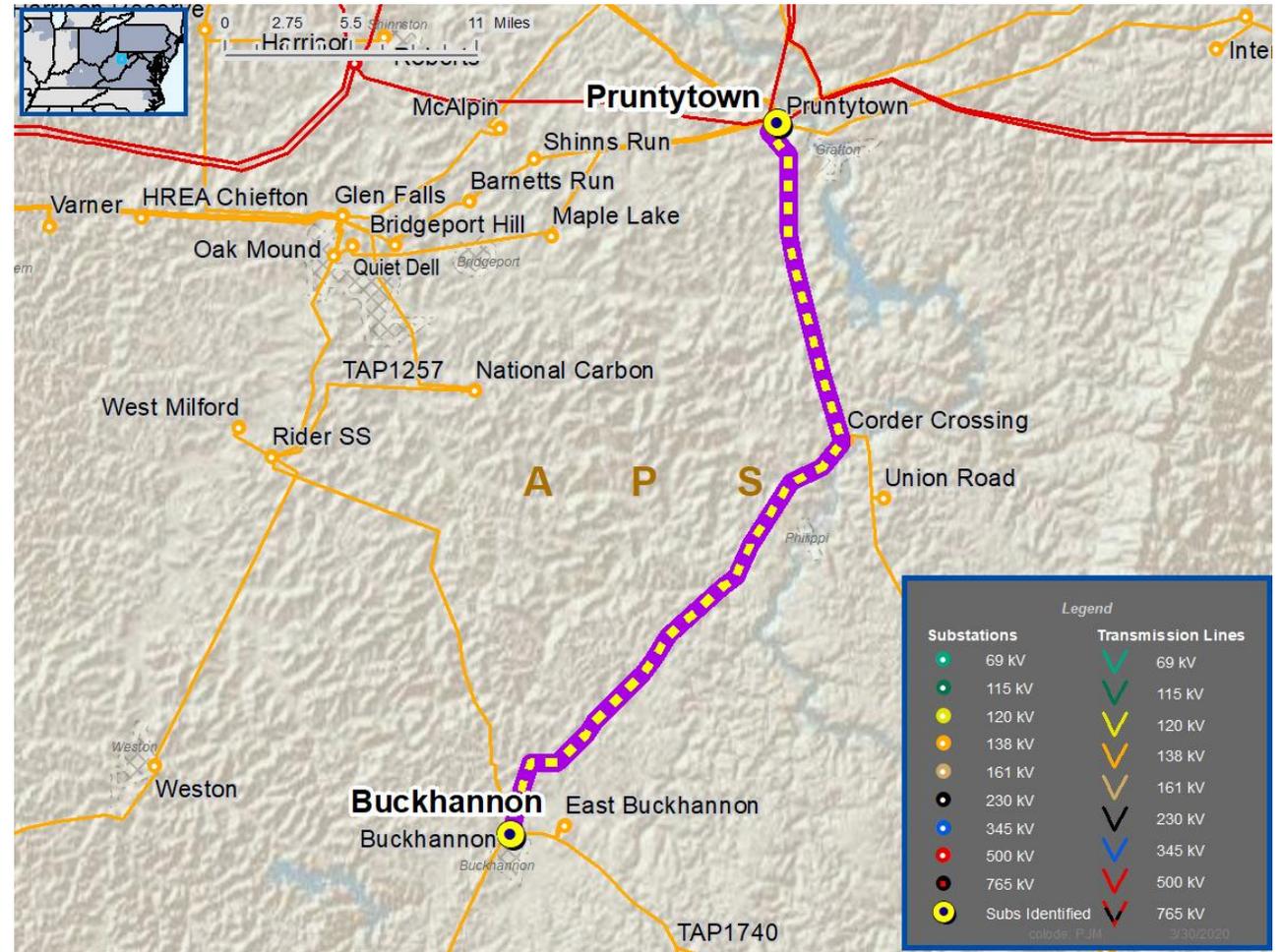
Specific Assumption Reference:

New customer connection 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, anticipated load is 25 MW, location is near the Buckhannon – Pruntytown 138 kV line.

Requested in-service date is December 2020.



Need Number: APS-2020-001, APS-2020-002, APS-2020-003, and PN-2020-004

Process State: Need Meeting 4/20/2020

Project Driver:

*Equipment Material Condition, Performance and Risk
Operational Flexibility and Efficiency*

Specific Assumption Reference:

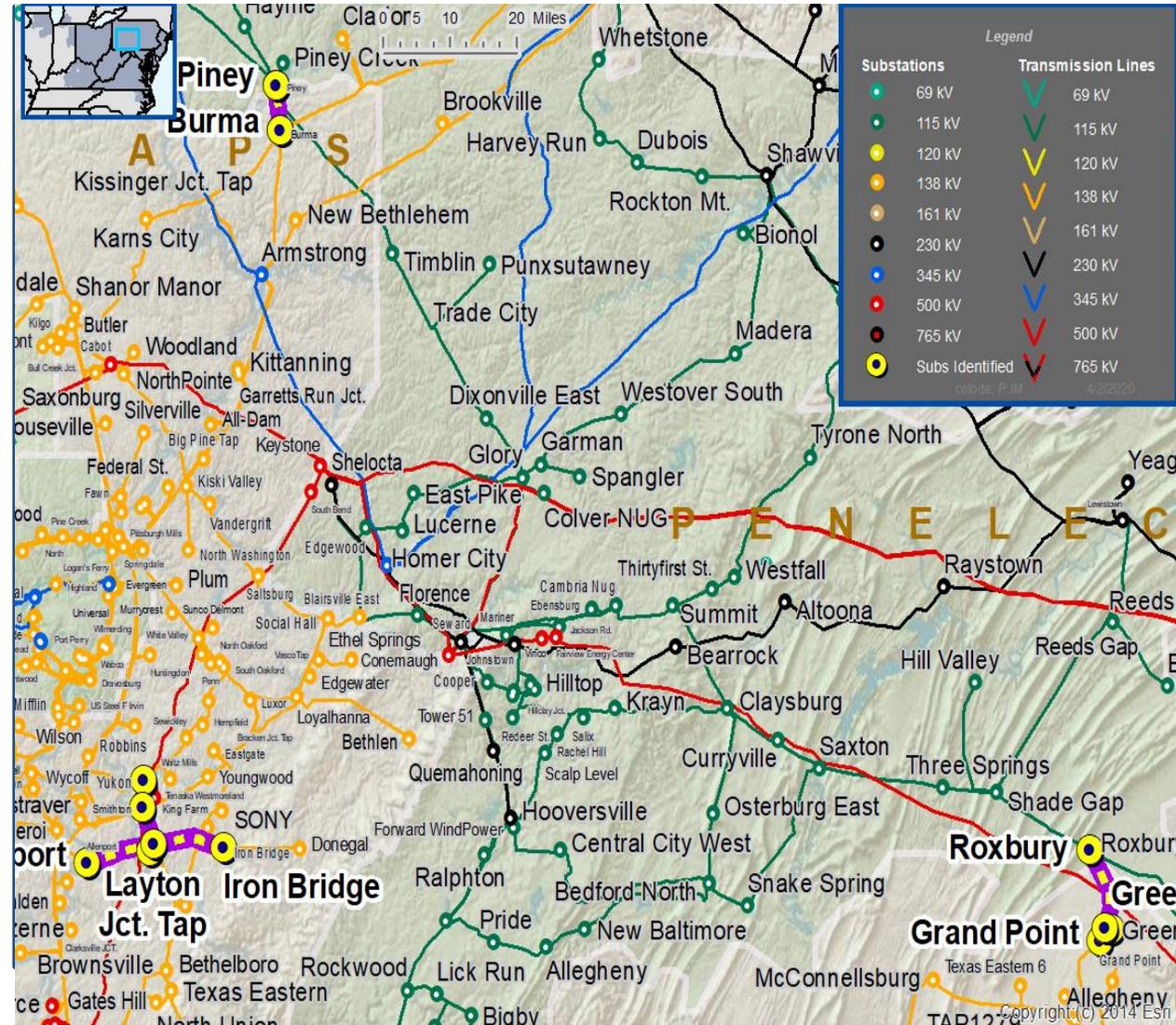
System Performance Projects Global Factors

- System reliability and performance
- Substation/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

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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 adequately during a fault.
- In many cases the protection equipment cannot be repaired due to a lack of replacement parts and available expertise in the outdated technology.
- Transmission line ratings are limited by terminal equipment.

Need Number	Transmission Line / Substation Locations	Existing Line Rating (SN / SE)	Existing Conductor Rating (SN / SE)	Limiting Terminal Equipment
APS-2020-001	Allenport – Frazier 138 kV Line	225/295	283/349	Substation Conductor, Line Trap
	Frazier – Layton Junction 138 kV Line	283/349	283/349	N/A
	Yukon – Smithton Tap 138 kV Line	234/287	234/297	Line Relaying, Line Trap
	Smithton Tap – Layton Junction 138 kV Line	234/297	234/297	N/A
	Iron Bridge – Layton Junction 138 kV Line	225/287	258/323	Line Relaying, Substation Conductor, Line Trap, CTs
APS-2020-002	Roxbury – Greene 138 kV Line	164 / 206	221 / 268	Disconnect Switch
	Greene – Letterkenny 138 kV Line	221 / 268	221 / 268	N/A
	Letterkenny – Grand Point 138 kV Line	196 / 228	221 / 268	Line Trap
APS-2020-003 PN-2020-004	Burma – Piney 115 kV Line	244/277	257/313	Line Trap, Substation Conductor, Circuit Breaker

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

4/1/2020 – V1 – Original version posted to pjm.com

4/6/2020 – V2 – Added needs slides #4 and #5.