Transmission Expansion Advisory Committee - FirstEnergy Supplemental Projects

September 9, 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

APS Transmission Zone M-3 Process
Doubs to Lime Kiln 230 kV

Need Number: APS-2025-021

Process Stage: Need Meeting – 09/09/2025

Supplemental Project Driver(s):

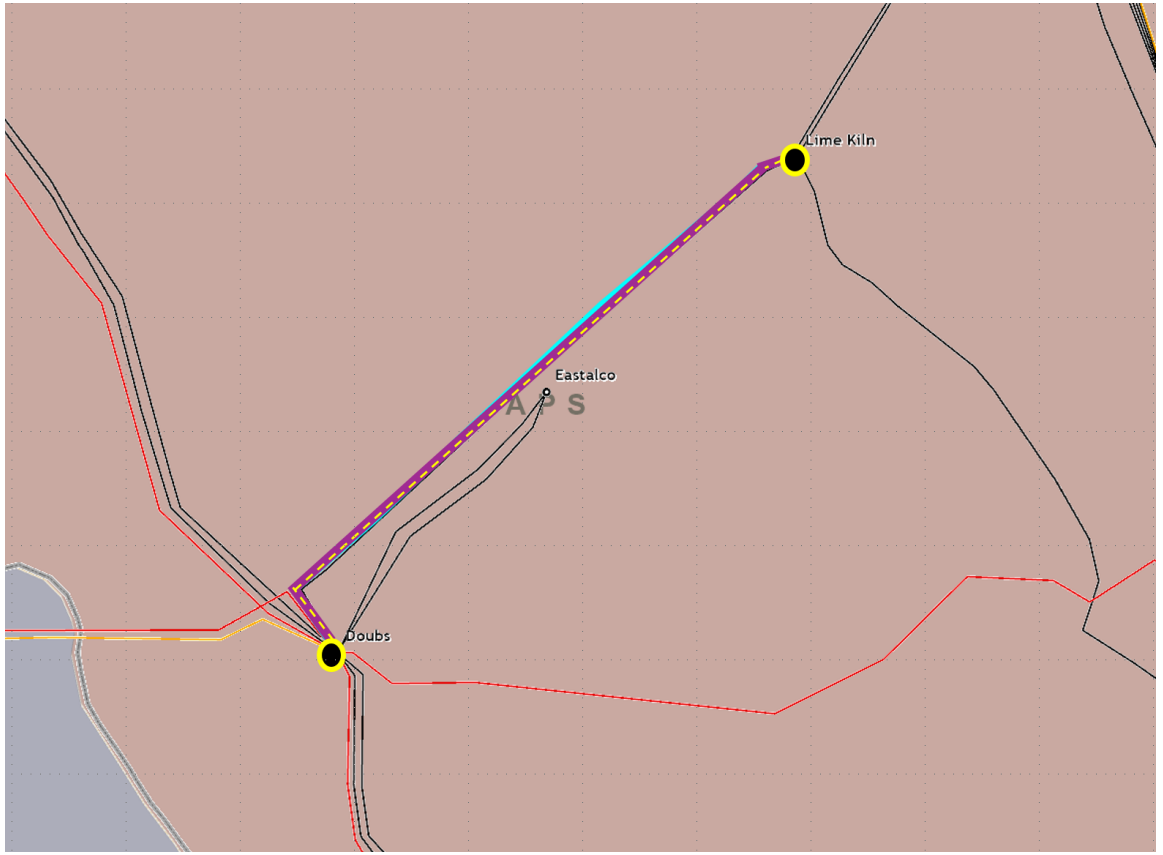
Customer Service

Specific Assumption Reference(s):

New customer connection request will be evaluated based on FirstEnergy's "Requirements for Transmission Connected Facilities" document and FirstEnergy's "Transmission Planning Criteria" document

Problem Statement

New Customer Connection – A customer requested a new 230 kV delivery point near the Doubs - Sage #207 and Doubs - Sage #205 230 kV Lines. The initial anticipated load of the new customer connection is 232 MVA. Future projected total load at site is anticipated at 600 MVA. The request is approximately 3.5 miles from Doubs Substation.



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

APS Transmission Zone M-3 Process
Kammer Substation

Need Number: APS-2025-020

Process Stage: Solution Meeting – 09/09/2025

Previously Presented: Need Meeting – 08/05/2025

Supplemental Project Driver(s):

Equipment Condition/Performance/Risk

Specific Assumption Reference(s):

System Performance Projects Global Factors

- System Reliability and Performance
- Substation/line equipment limits
- Substation Condition Rebuild/Replacement
- Age/condition of substation equipment
- Circuit breakers and other fault interrupting devices

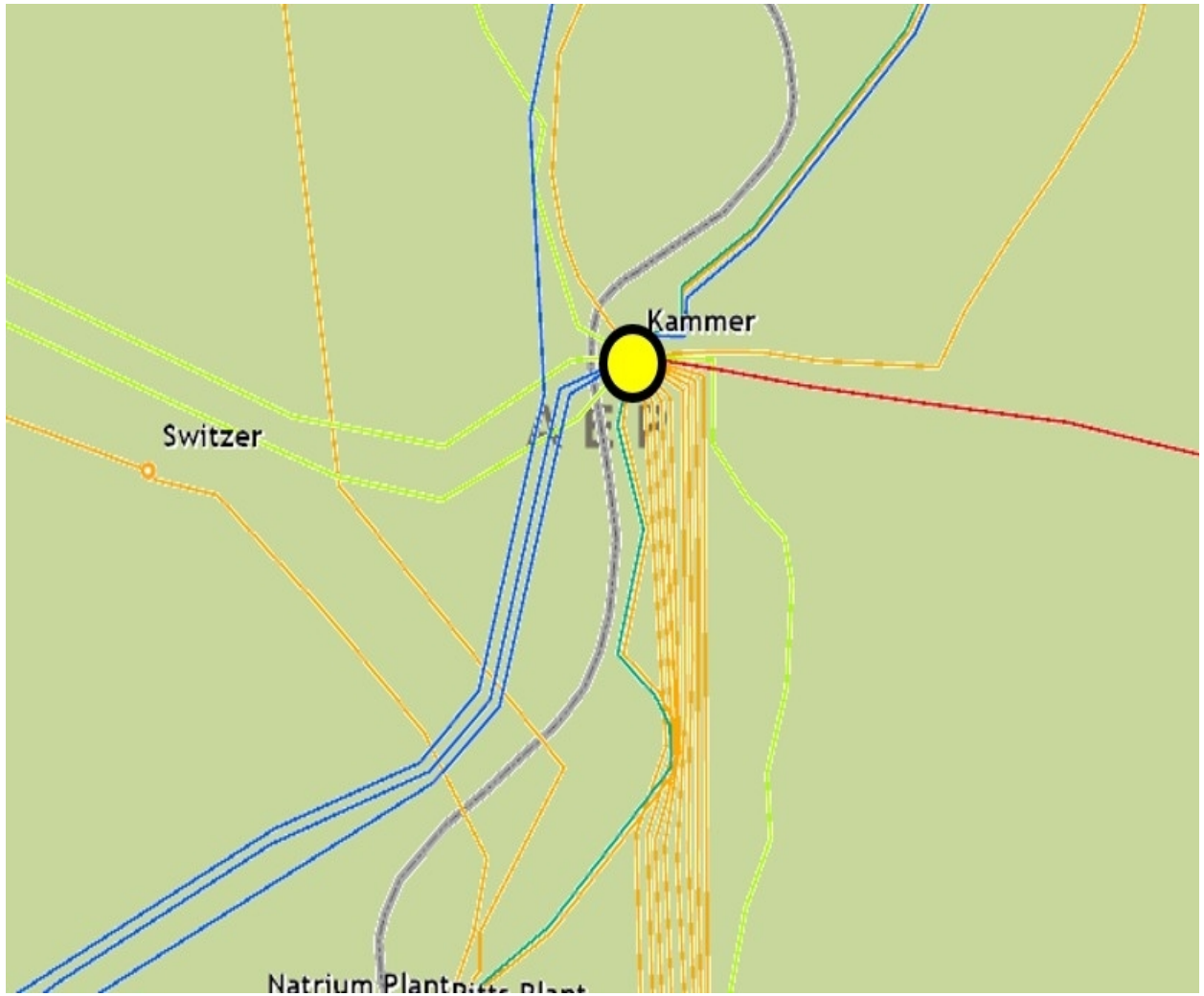
Problem Statement

The existing Kammer Substation is owned by AEP. FirstEnergy owns the Kammer No. 200 765/500 kV Transformer and its associated equipment.

Critical Infrastructure Protection (CIP) and PRC-005 compliance requires implementing and maintaining a physical security plan to protect Bulk Electric System (BES) cyber systems and associated electronic equipment. Additionally, the low side of the Kammer No. 200 765/500 kV Transformer is connected to the Kammer – 502 Junction 500 kV Line through a disconnect switch, resulting in the need to direct transfer trip breakers at 502 Junction Substation upon various fault scenarios.

Existing Kammer No. 200 765/500 kV Transformer circuit ratings:

- 2987 / 3792 / 3604 / 4140 MVA (SN/SE/WN/WE)



APS Transmission Zone M-3 Process
Kammer Substation

Need Number: APS-2025-020

Process Stage: Solution Meeting 9/9/2025

Proposed Solution:

Construct a new FirstEnergy owned control building at Kammer Substation to house all relaying for FirstEnergy assets.

- Install prefabricated control enclosure with new relaying
- Replace 765 kV disconnect switch on the high side of the Kammer No. 200 765/500 kV transformer with a 765 kV SCADA controlled switch.
- Replace 500 kV disconnect switch on the low side of the Kammer No. 200 765/500 kV transformer with a 500 kV circuit breaker

Kammer No. 200 765/500 kV Transformer Ratings:

- No change in ratings

Alternatives Considered:

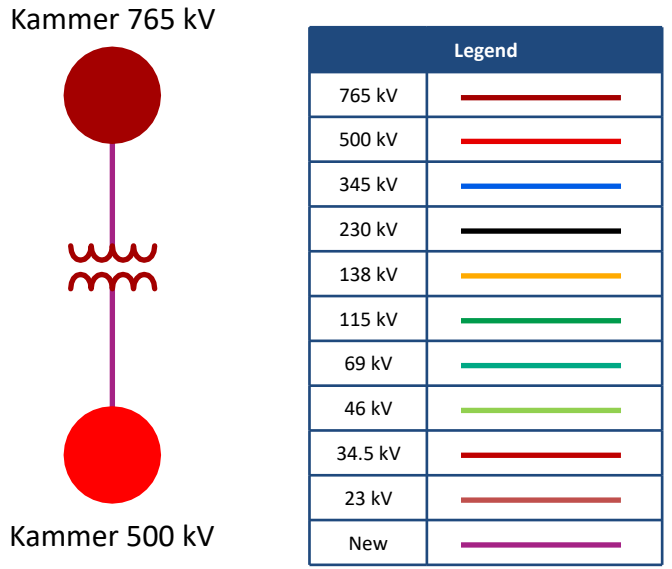
- Relocate FirstEnergy assets to a separate enclosure within AEP control building, however access will still need to be coordinated with AEP.
- Relocate FirstEnergy assets to a site owned by FirstEnergy.

Estimated Project Cost: $9.25 M

Projected In-Service: 8/15/2030

Project Status: Conceptual

Model: 2024 RTEP model for 2029 Summer (50/50)



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

8/29/2025– V1 – Original version posted to pjm.com