SRRTEP - Western Committee
EKPC Supplemental Projects

Oct. 17, 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

EKPC Transmission Zone M-3 Process
Skaggs, KY

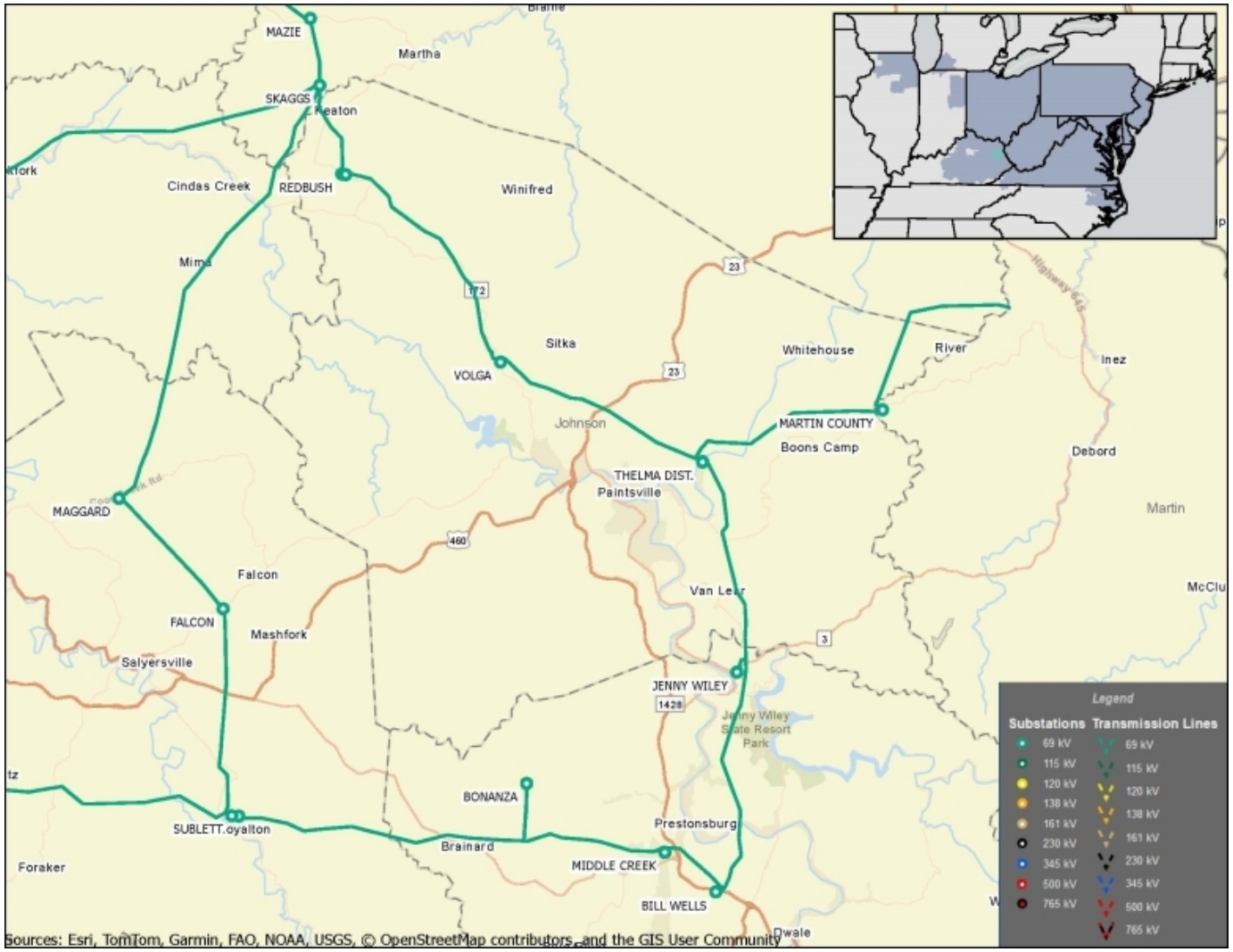
Need Number: EKPC-2025-005
Process Stage: Need Meeting 10/17/2025
Project Driver: Operational Flexibility and Efficiency
Specific Assumption References:
EKPC Assumptions Presentation Slide 14

Problem Statement:

From an operational perspective, the Rowan County-Skaggs 138 kV and Thelma-AEP Thelma 69 kV tie-line are the strongest sources in the area. With either of these out of service, there is a large voltage drop for loss of the other source. Maintenance outage scheduling in the area can become an issue if one 69 kV path is scheduled out for an extended period of time. Removing another 69 kV path for any work can lead to low voltage and thermal loading concerns for loss of the Skaggs 138/69 kV transformer. This area of EKPC's transmission system is also susceptible to foreign utility outages and EKPC has historically experienced manual load shed.

PJM has issued numerous Post Contingency Local Load Relief Warnings (PCLLRWs) to EKPC for potential operational violations in this area for a subsequent contingency.

EKPC Transmission Planning will be evaluating alternatives to address the operational concerns in this area.



EKPC Transmission Zone M-3 Process
Murphysville, KY

Need Number: EKPC-2025-006

Process Stage: Need Meeting 10/17/2025

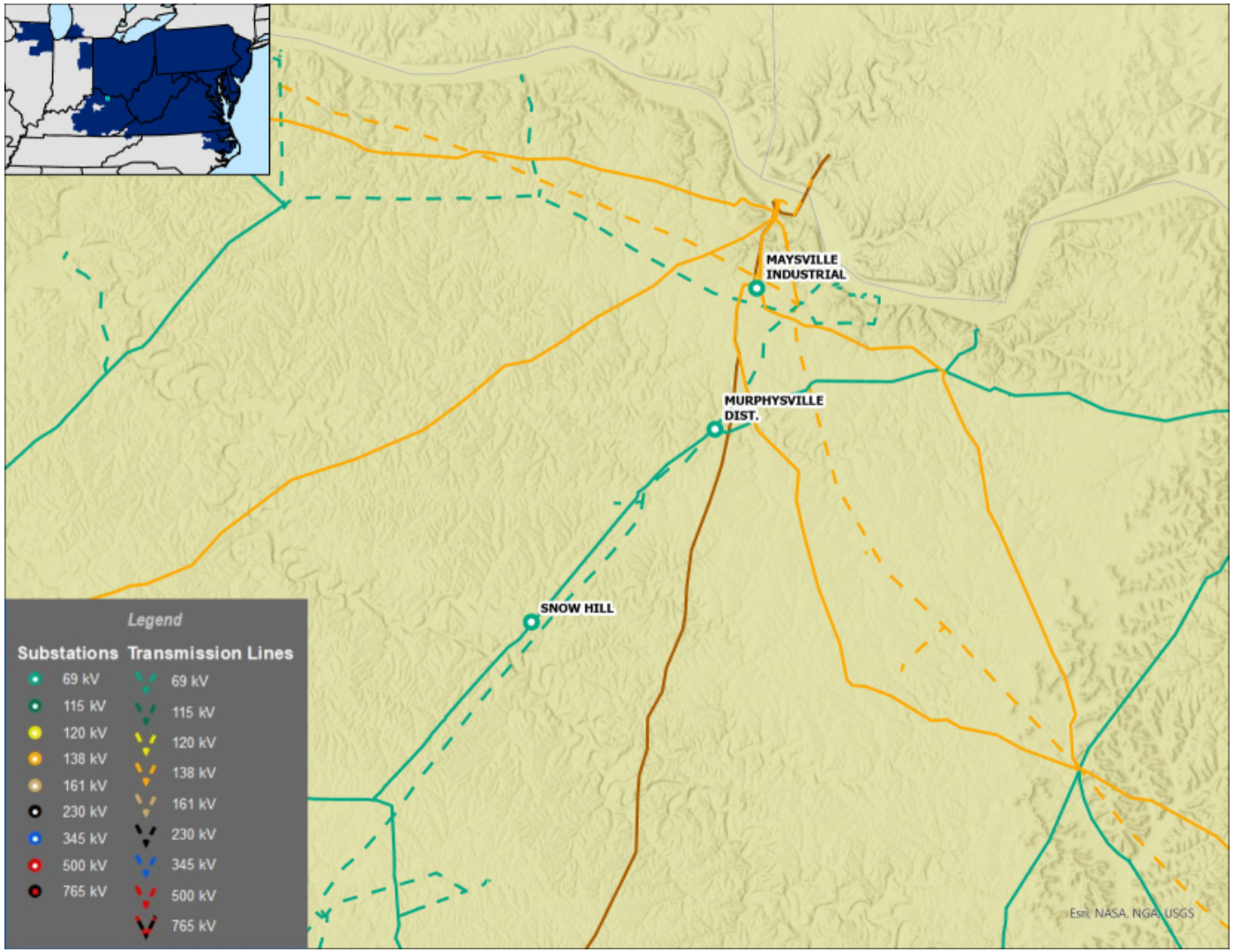
Project Driver: Customer Service

Specific Assumption References:

EKPC Assumptions Presentation Slide 15

Problem Statement:

The Murphysville substation distribution feeder currently serves ~1,800 customers and is roughly 221 miles in length. The feeder serves customers in southern Bracken County and is ~12 miles from the Murphysville substation. Approximately 50% of the feeders load is at the tail end of the circuit where load growth is expected to continue. During high loading customers near the end of the line are experiencing low voltage. Existing distribution infrastructure is not capable of addressing the issues in this area. EKPC will develop and evaluate alternatives to address all issues listed above.



EKPC Transmission Zone M-3 Process
Owen County, KY

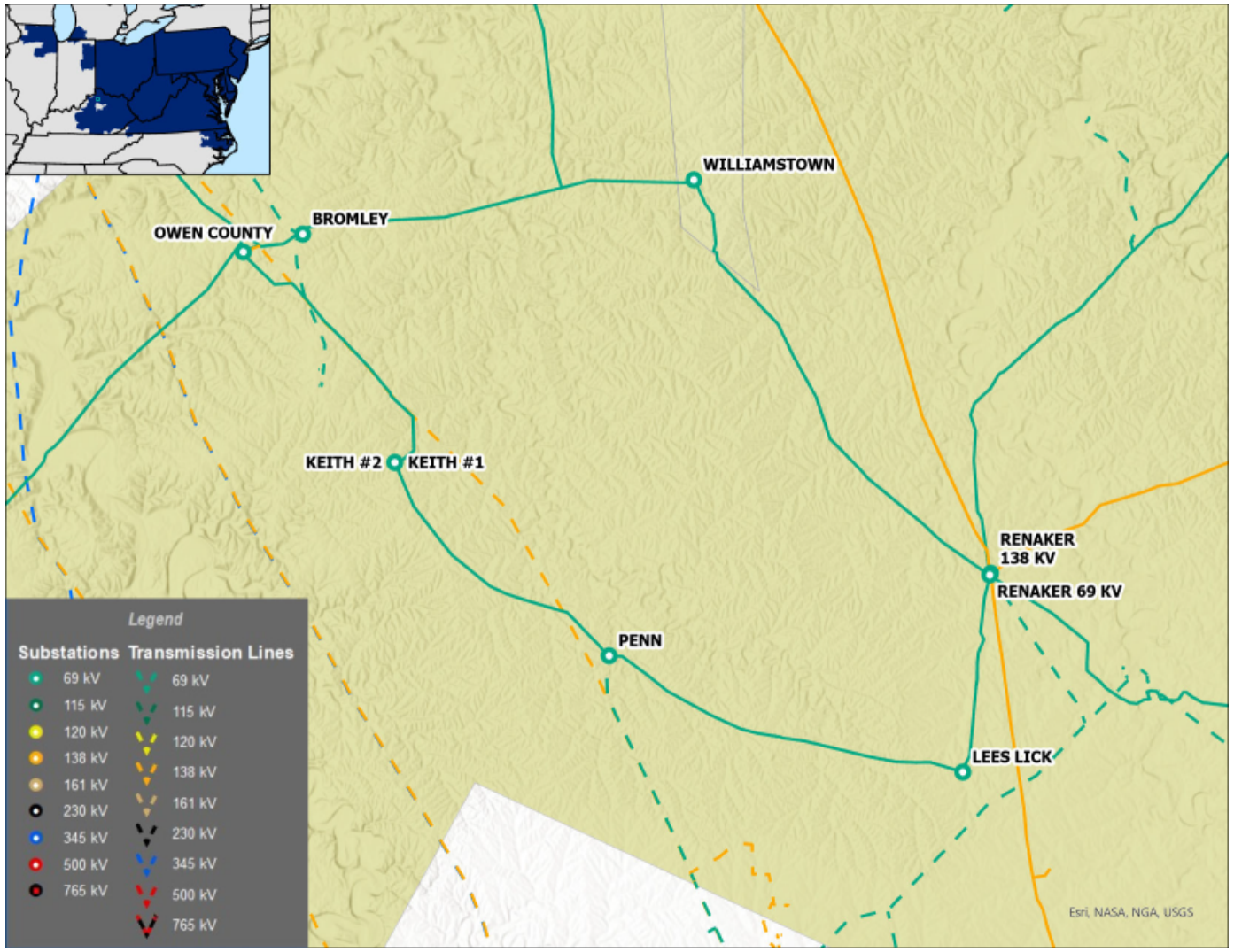
Need Number: EKPC-2025-007
Process Stage: Need Meeting 10/17/2025
Project Driver: Operational Flexibility and Efficiency
Specific Assumption References:
EKPC Assumptions Presentation Slide 14

Problem Statement:
The Owen County load pockets is served by four sources:

- Penn - Owen County 69kV line
- Clay Village - Owen County 69kV line
- Boone County - Owen 69kV line
- Owen 138/69kV transformer

With one of the 69kV sources out, the loss of the Owen County transformer can cause low voltage in the area. This scenario also, can cause thermal loading issues on the Clay Village 69kV tie line with neighboring TO. EKPC system operations routinely performs pre-contingent switching (for voltage support) or coordinates with neighboring TO to open the Clay Village-West Frankfort 69kV line (to mitigate thermal loading on the Clay Village tie line).

PJM has issues numerous Post Contingency Local Load Relief Warnings (PCLLRWs) to EKPC for potential operational violations in this area for a subsequent contingency.



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

EKPC Transmission Zone M-3 Process
Shelby County, KY

Need Number: EKPC-2025-004

Process Stage: Solution Meeting SRRTEP-W - 10/17/2025

Previously Presented: Need Meeting 06/13/2025

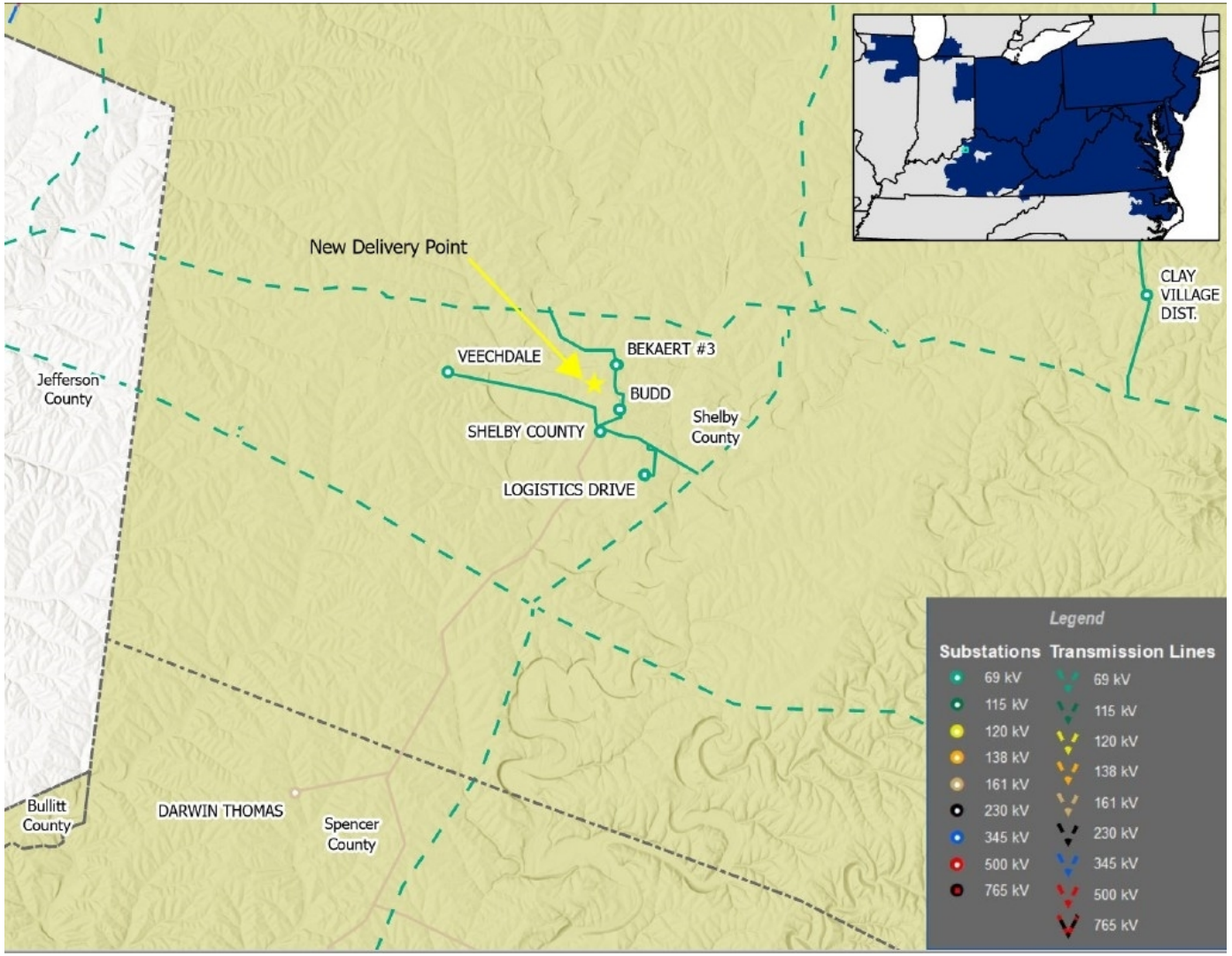
Project Driver: Customer Service

Specific Assumption References:

EKPC Assumptions Presentation Slide 15

Problem Statement:

A new customer has requested a delivery point for a peak demand of 48 MW by 1/31/2031. The new delivery point is located in Shelbyville, KY approximately 1.0 mile northwest of EKPC's Shelby Co substation. The existing distribution infrastructure is not capable of serving this request.

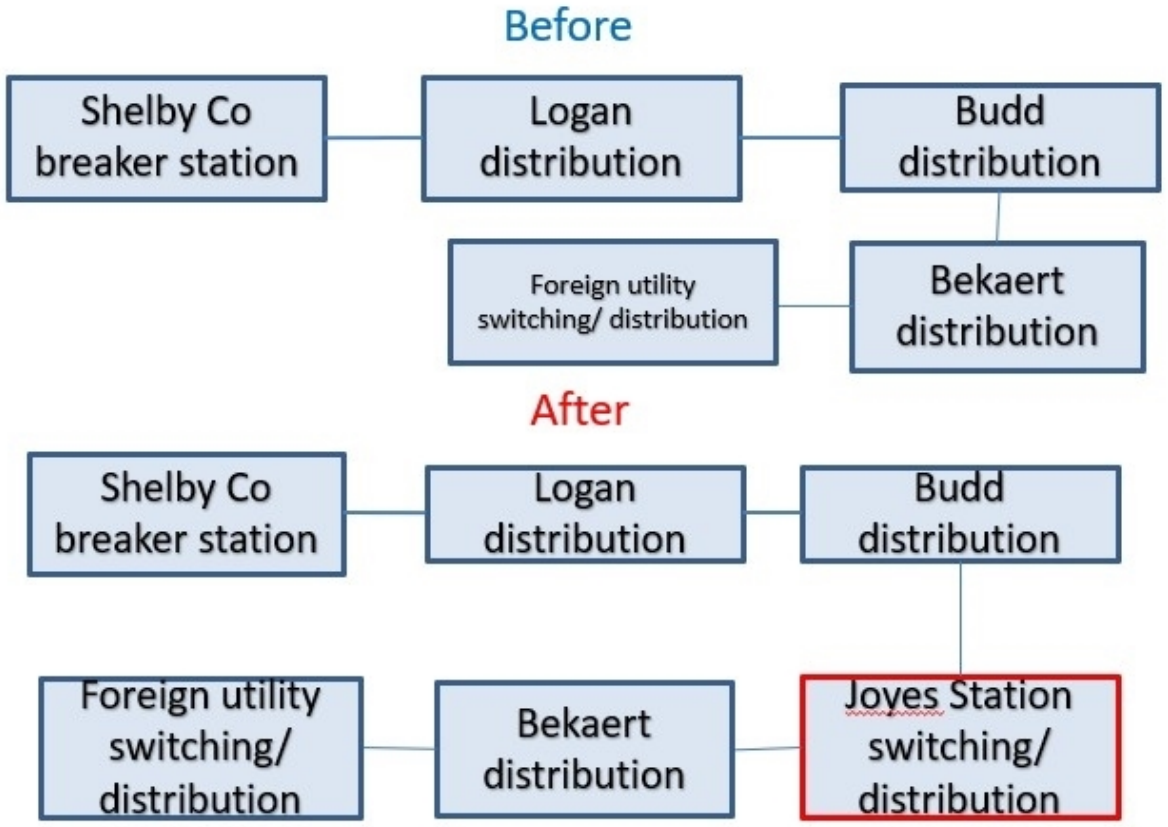


EKPC Transmission Zone M-3 Process
Shelby County, KY

Need number(s): EKPC-2025-004
Process Stage: Solution Meeting SRRTEP-W - 10/17/2025
Proposed Solution:
Joyes Station #1 distribution station: Due to new delivery point of Joyes Station, new 69-26.4 kV 18/24/30 MVA Joyes Station #1 distribution station will be built.
Joyes Station #2 distribution station: Due to increased loading on Joyes Station #1, new 69-26.4 kV 18/24/30 MVA Joyes Station #2 distribution station will be built.
Joyes Station 69 kV switching station: New 69 kV switching station located at the new Joyes Station delivery point, looping in existing Shelby Co-KU West Shelby 69 kV circuit. Estimated Cost: $4.5 M
New 69 kV 795 ACSR double-circuit transmission line: Build new ~1.3 mile 69 kV 795 ACSR double-circuit line to loop in existing Budd-Bekaert 69 kV line to Joyes Station 69 kV switching station. Estimated Cost: $1.95 M
Bekaert 69 kV line rebuild: Rebuilding small spans (~0.03 miles) in Bekaert 69 kV substation to 795 ACSR. Estimated Cost: $0.14 M
Joyes Station-Logan T 69 kV rebuild: Rebuild the existing 266 portion of Joyes Station-Logan T as 795 ACSR (~0.95 miles). Estimated Cost: $3.25 M

Transmission Cost Estimate: $9.84 M
Alternatives Considered:
N/A

Projected In-Service: 05/01/2030
Project Status: Engineering
Model: N/A



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

10/7/2025 – V1 – Original version posted to pjm.com