SRRTEP Committee: Western
EKPC Supplemental Projects

September 15, 2023

Needs

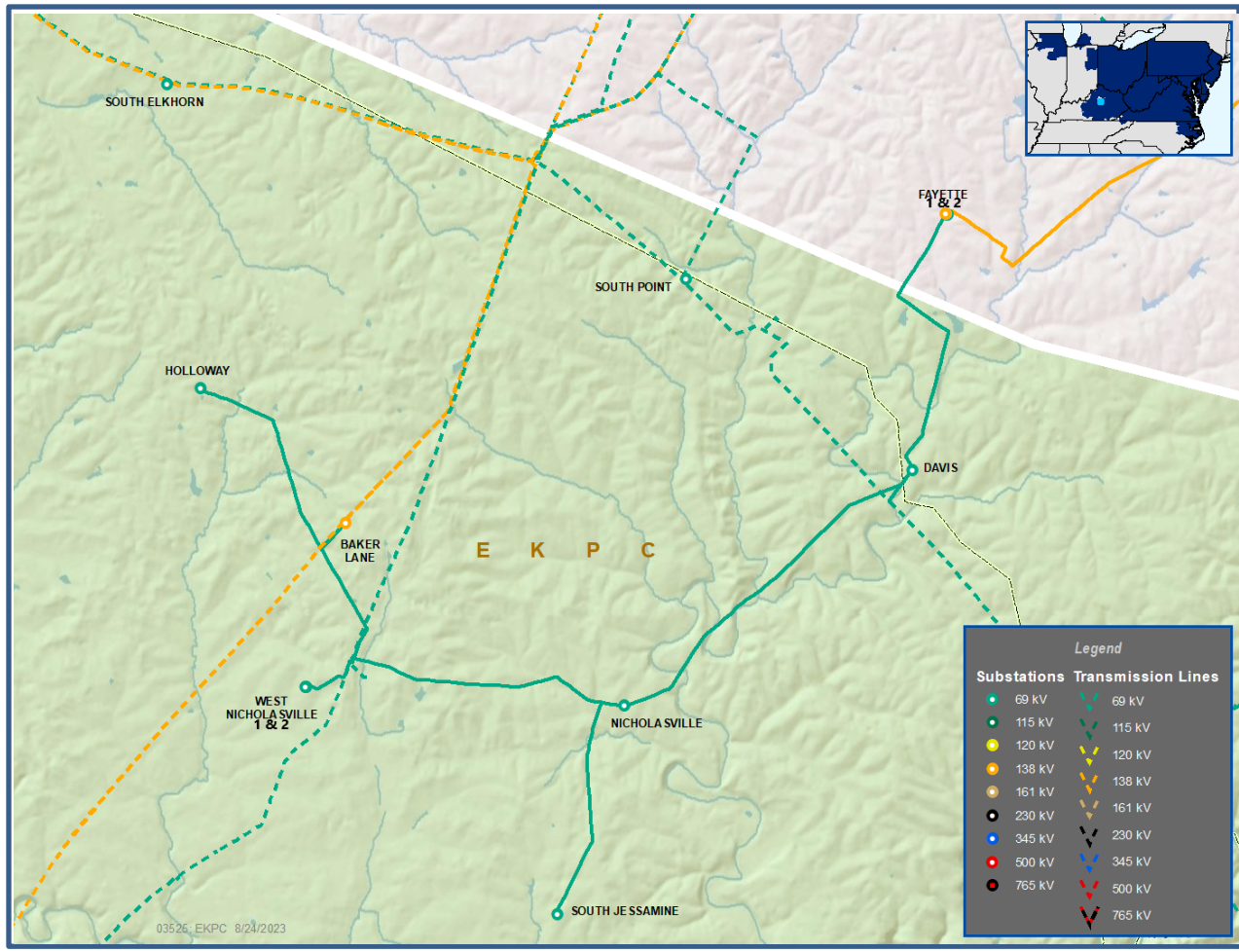
Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

EKPC Transmission Zone M-3 Process
Fayette-Baker Lane

Need Number: EKPC-2023-004
Process Stage: Need Meeting –September 15, 2023
Supplemental Project Driver:
Equipment Material Condition, Performance and Risk
Operational Flexibility and Efficiency & Infrastructure Resilience
Specific Assumption Reference:
EKPC Assumptions Presentation Slides 13, 14 & 16

Problem Statement:
The 12 mile, Fayette-Baker Lane 69 KV transmission line is 1966 to 1989 vintage wood pole construction with sections of 266.8 and 556.5 conductor. This line currently serves 8 distribution substation with 15,864 customers, which is the highest number of customers of any circuit on EKPC's system. This line section exhibits wood deterioration and overloaded structures. This combination creates a high risk for structure failures. Additionally, the makeup of this 12 mile circuit with the long tap lines for South Jessamine and Holloway substations, this creates system protection issues with the 69 KV relays reaching into the 138 KV system during certain outages. The EKPC Reliability team is evaluating alternatives to address these aging infrastructure and structure overload issues, system protection issues and to reduce the number of distribution substations between breakers.

Model: N/A



EKPC Transmission Zone M-3 Process
North Lebanon

Need Number: EKPC-2023-005

Process Stage: Need Meeting – September 15, 2023

Supplemental Project Driver:

Customer Service

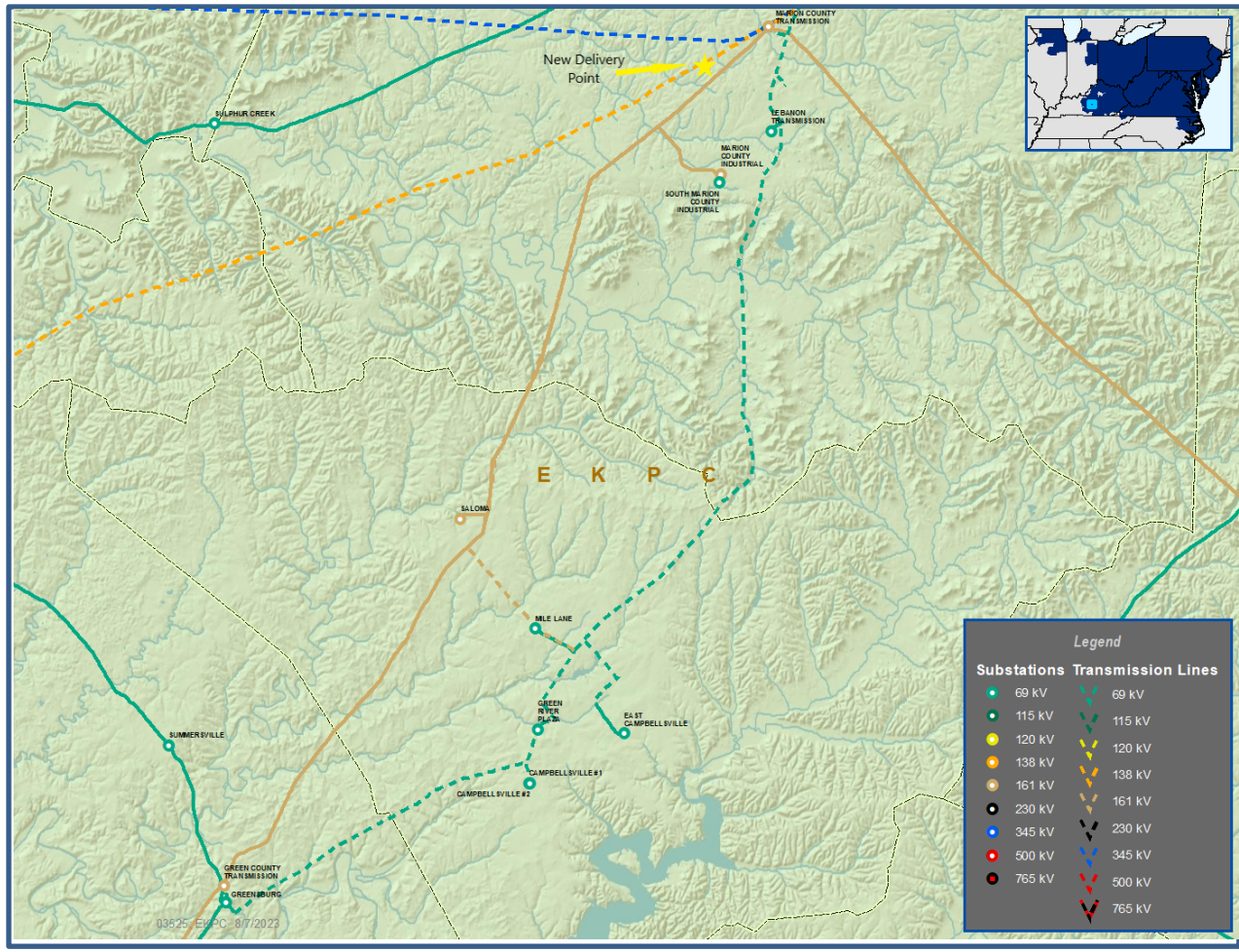
Specific Assumption Reference:

EKPC Assumptions Presentation Slide 15

Problem Statement:

A new customer has requested a delivery point for a peak demand of 18 MW by 4/1/2024. The new delivery point is located in Lebanon, KY approximately 2 mile southwest of the EKPC's Marion County substation. The existing distribution infrastructure is not capable of serving this request.

Model: N/A



EKPC Transmission Zone M-3 Process
Gordon Lane

Need Number: EKPC-2023-006

Process Stage: Need Meeting – September 15, 2023

Supplemental Project Driver:

Customer Service

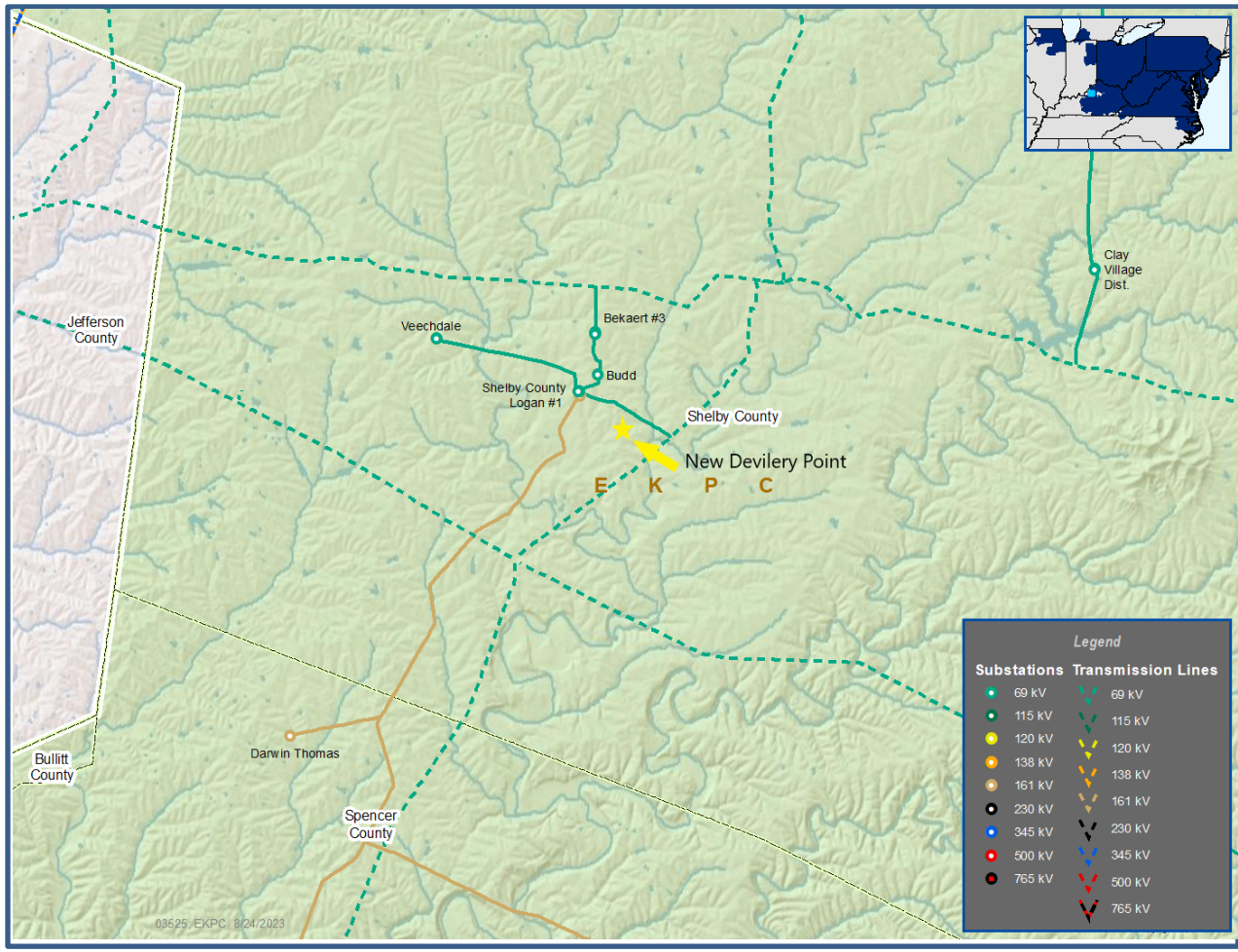
Specific Assumption Reference:

EKPC Assumptions Presentation Slide 15

Problem Statement:

A new customer has requested a delivery point for a peak demand of 9 MW by 9/1/2024. The new delivery point is located in Shelbyville, KY approximately 1.5 mile southeast of the EKPC's Shelby County substation. The existing distribution infrastructure is not capable of serving this request.

Model: N/A



EKPC Transmission Zone M-3 Process
Williamstown

Need Number: EKPC-2023-007

Process Stage: Need Meeting – September 15, 2023

Supplemental Project Driver:

Operational Flexibility and Efficiency

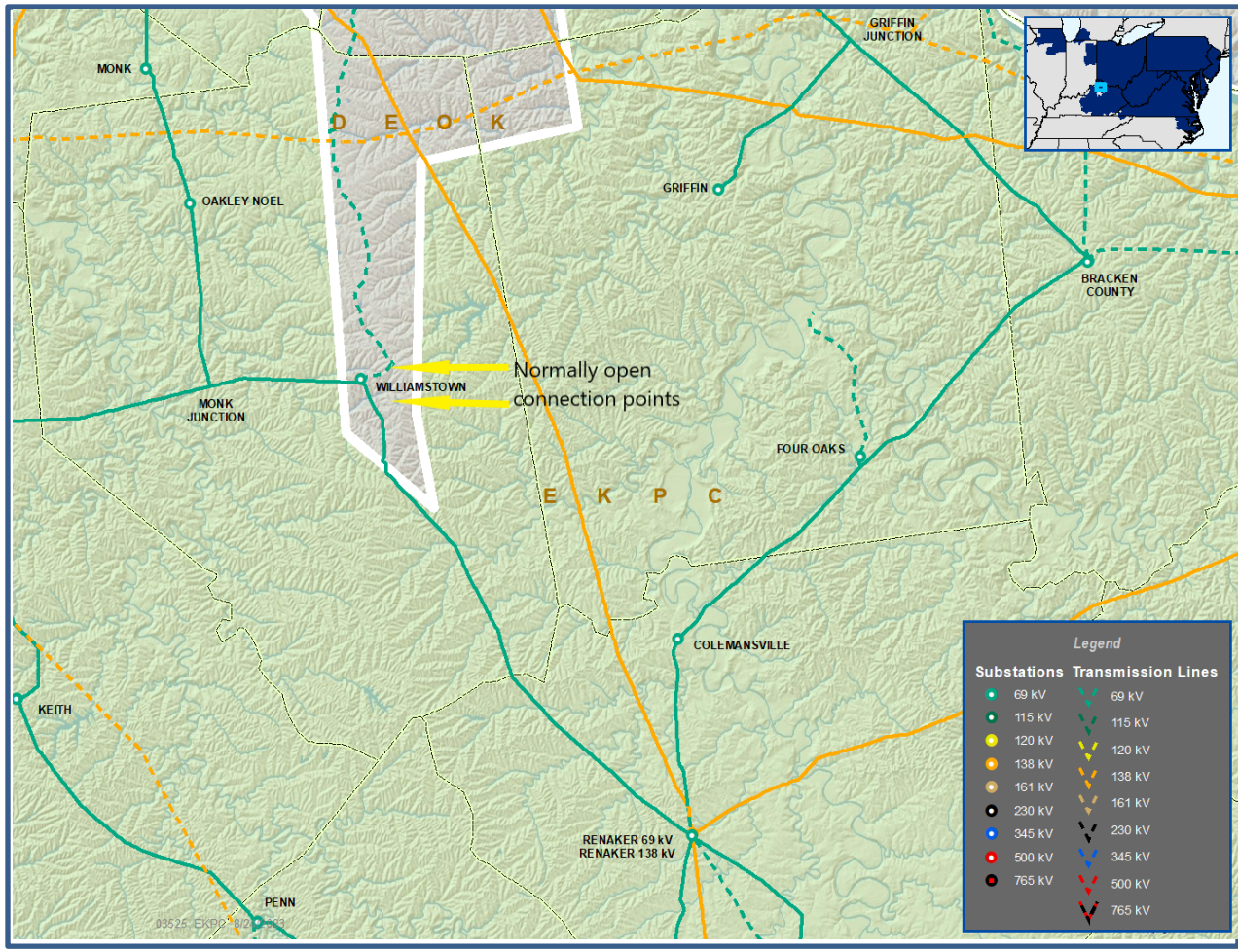
Specific Assumption Reference:

EKPC Assumptions Presentation Slide 14

Problem Statement:

EKPC's System Operations department has requested to reduce reliance on normally open connections during planned/unplanned outages in the area near the EKPC Williamstown distribution substation. EKPC Planning will evaluate options to address this request.

Model: N/A



EKPC Transmission Zone M-3 Process
Clay Village-New Castle

Need Number: EKPC-2023-008

Process Stage: Need Meeting – September 15, 2023

Supplemental Project Driver:

Equipment Material Condition, Performance and Risk

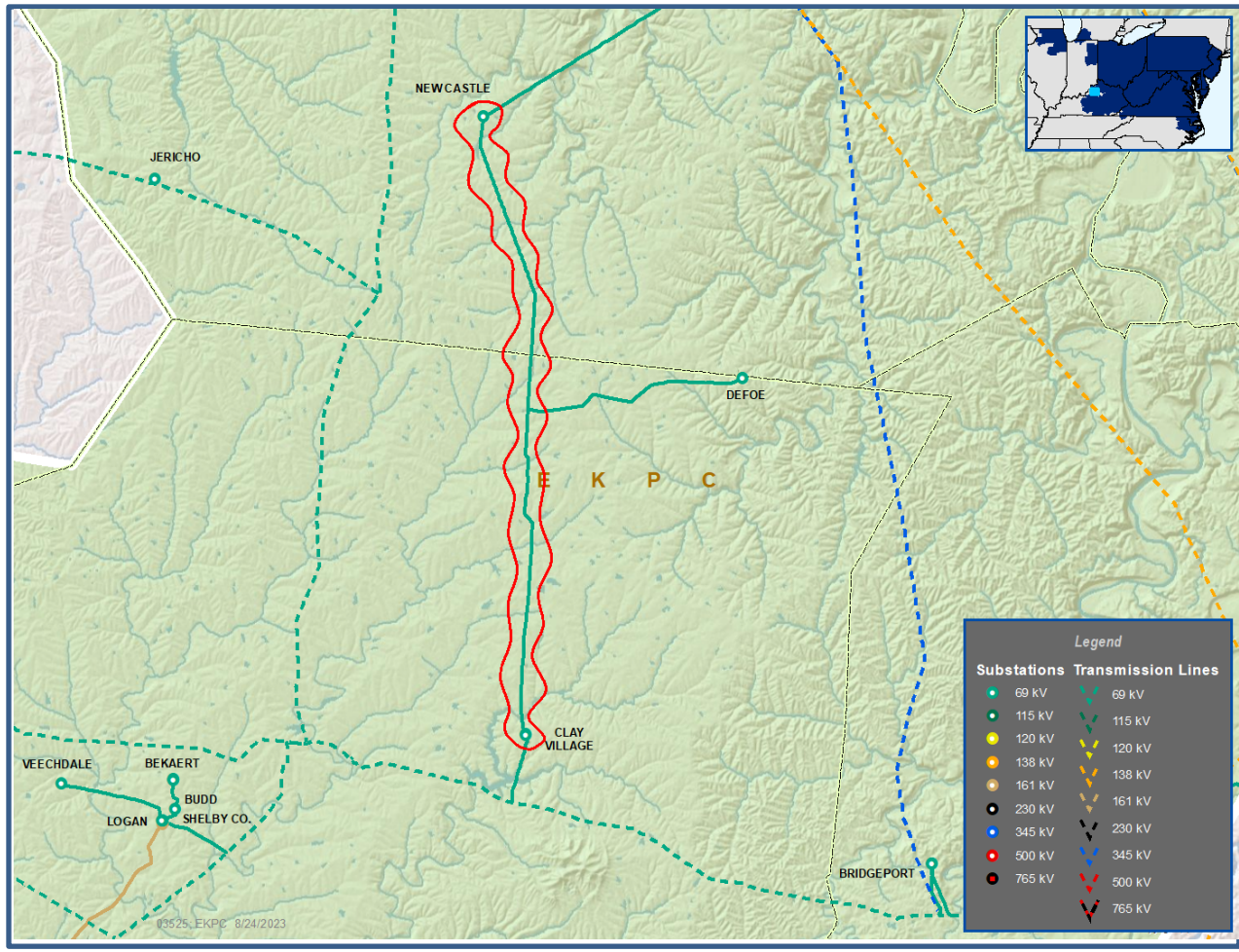
Specific Assumption Reference:

EKPC Assumptions Presentation Slide 13

Problem Statement:

The 14.29 mile, Clay Village-New Castle 69 KV is 1954 vintage wood pole construction with 1/0 conductor. This line section is expected to have condition issues such as conductor steel core and static wire deterioration, rust, pitting and possible broken strands. These condition issues have been exhibited by other 1/0 lines with similar age and environmental conditions. There are currently 36 open work orders with 17 being structure issues such as degraded poles, or cross arm issues. Based on this information, the EKPC Reliability team has concluded that this line is at or near end of life and should be addressed due to the condition.

Model: N/A



EKPC Transmission Zone M-3 Process
Clay Village

Need Number: EKPC-2023-009

Process Stage: Need Meeting – September 15, 2023

Supplemental Project Driver:

Customer Service

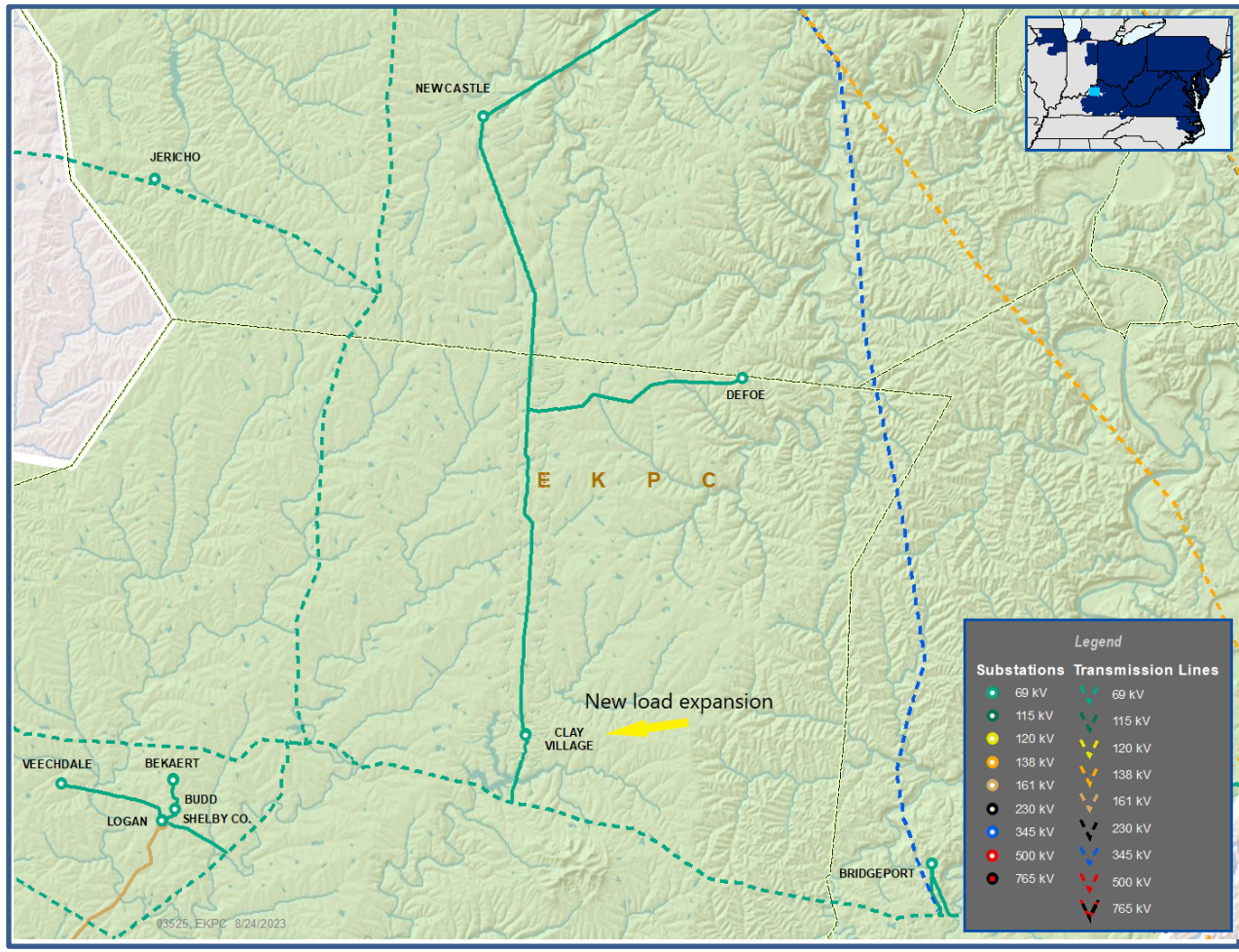
Specific Assumption Reference:

EKPC Assumptions Presentation Slide 15

Problem Statement:

An existing customer has announced an expansion to their facility that will increase the peak demand by 12 MW by 9/2024. This delivery point is currently served from the Clay Village distribution substation located in Shelby County, KY. The existing distribution infrastructure is not capable of serving this request.

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

9/1/2023 – V1 – Original version posted to pjm.com

9/5/2023 – V2 – Additional detail added to problem statement for EKPC-2023-004