Sub Regional RTEP Committee: Western
DEOK Supplemental Projects

October 14, 2022

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

DEOK Transmission Zone M-3 Process
Elmwood

Need Number: DEOK-2019-027

Process Stage: Solutions Meeting 10-14-2022

Previously Presented: Needs Meeting 11-22-2019

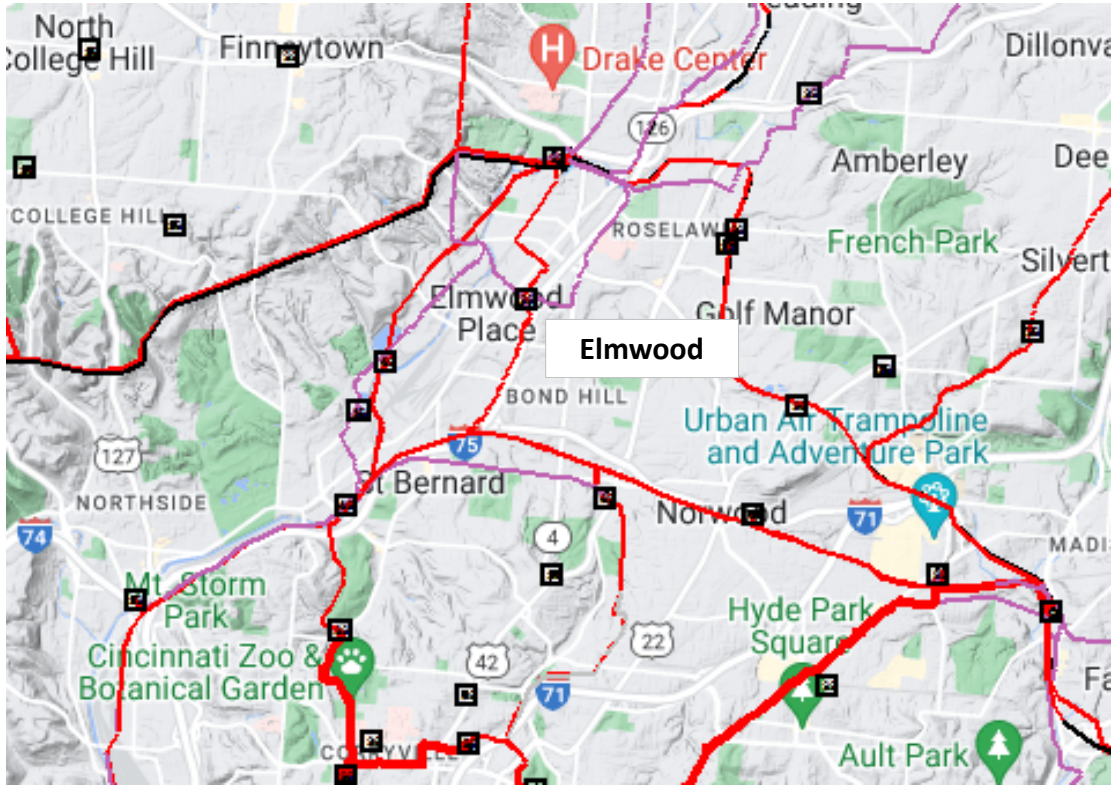
Project Driver: Costumer Service

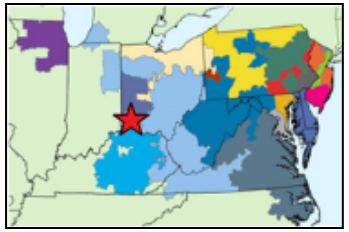
Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 9

Problem Statement:

At Elmwood substation Duke Distribution is replacing switchgear on 13 kV Bus 1 and 13 kV Bus 2 with open air breakers. Buses 1 and 2 presently have a single feed, the tertiary winding of 138/69/13 kV, 55 MVA TB6. The transmission system is exposed to faults from five distribution feeders through this tertiary winding.





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Potential Solution:

Remove the 13 kV switchgear. Demolish the switchgear building. Install new 13 kV bus with breakers for five feeder exits. Install a control building to house control and communications equipment. Demolish the existing 69 kV single bay tower. Install a 4-bay, 69 kV box structure with four 69 kV breakers to create a ring bus. Install two 138 kV breakers into an existing box structure to create a ring bus. Remove the 13 kV tertiary connection on TB6. Install one 138/13 kV and two 69/13 kV, 22 MVA transformers.

Alternatives: none

Ancillary Benefits: Operational options for switching, provides more options to deal with non-standard operating conditions, improves the system's ability to absorb and recover from an interruption, and reconfigures infrastructure to limit load loss.

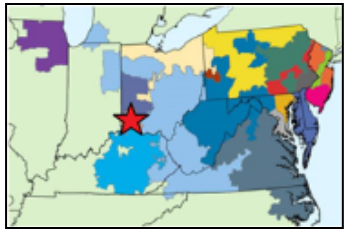
Estimated Transmission Cost: $14,523,259

Proposed In-Service Date: 06-10-2026

Project Status: Scoping

Model: 2022 RTEP

Bubble Diagram Not Applicable
Station Modifications Only



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

10/4/2022 – V1 – Original version posted to pjm.com