

Sub Regional RTEP Committee: Western DEOK Supplemental Projects

May 19, 2023

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

Need Number: DEOK-2019-005

Process Stage: Solutions Meeting 05-19-2023

Previously Presented: Needs Meeting 03-25-2019

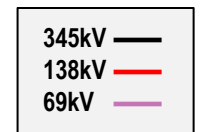
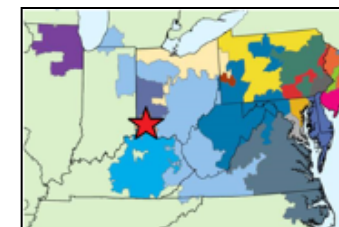
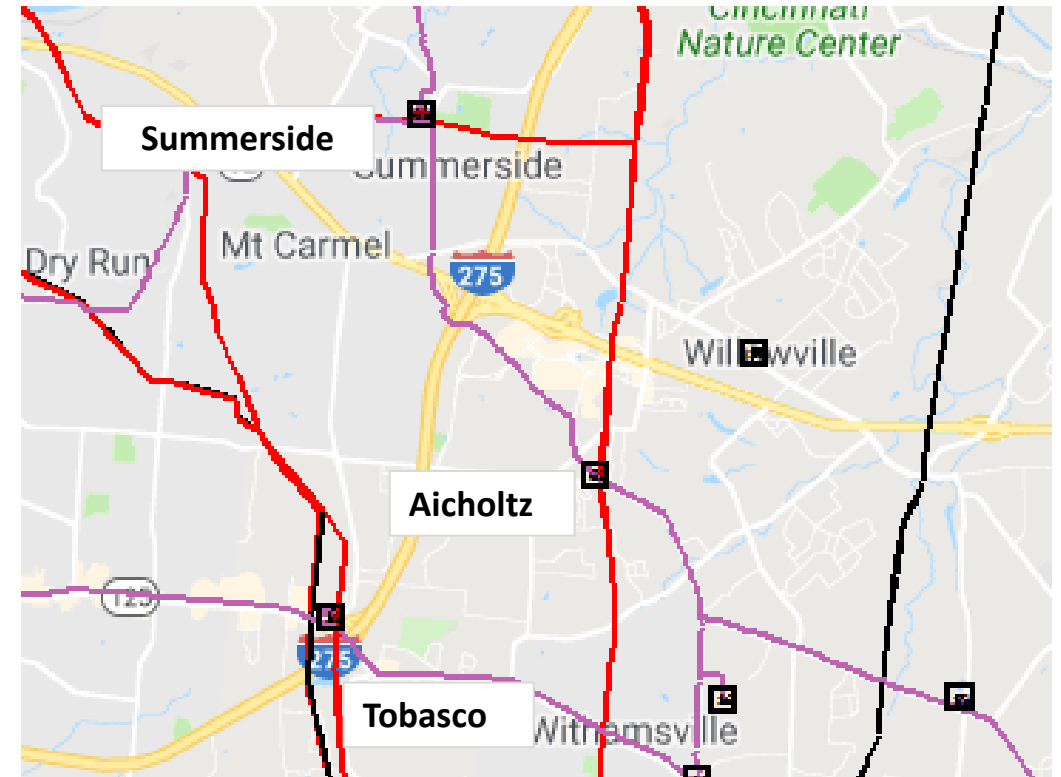
Project Driver: Customer Service

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 5

Problem Statement:

Duke Energy Distribution has requested a new delivery point at Aicholtz substation. The two 69/13kV 10.5MVA transformers at Aicholtz are currently loaded to 86%. There are plans for new subdivisions and a new Medical Center in this area. Distribution Planning projects predicts the transformers at Aicholtz will be loaded to 95% by 2020. Subsequent commercial development is expected.





DEOK Transmission Zone M-3 Process Aicholtz

Need Number: DEOK-2019-005

Process Stage: Solutions Meeting 05-19-2023

Previously Presented: Needs Meeting 03-25-2019

Project Driver: Customer Service

Specific Assumption Reference:

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Potential Solution:

Disconnect the 69 kV feeders from the substation. Remove 69 kV bus, switches and the 69/13 kV transformers. Refeed the substation with the immediately adjacent Beckjord – Summerside 138 kV circuit. Expand the substation and install bus work with two 2000A air-break switches to create positions for three transformers. Install two 2000A motor operated line disconnects with an automatic throw over (ATO) scheme. Install two 138/13 kV, 22 MVA transformers connected with circuit switchers to the 138 kV bus. Install 13 kV switchgear to connect the existing distribution feeders.

Alternatives: Keeping the station fed by 69 kV was considered. However, the current substation is not configured for additional transformers. It's 61 years old, has cap and pin insulators with copper bus, and has had problems with the manual line switches dropping open. Seeing the substation would need to be rebuilt to reconfigure, the amount of land in the area available for development, and the area growth rapidly restarting after COVID, it was decided to refeed the station with 138 kV.

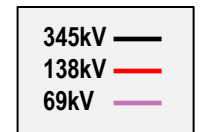
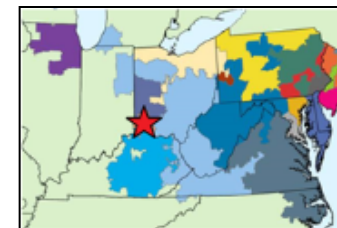
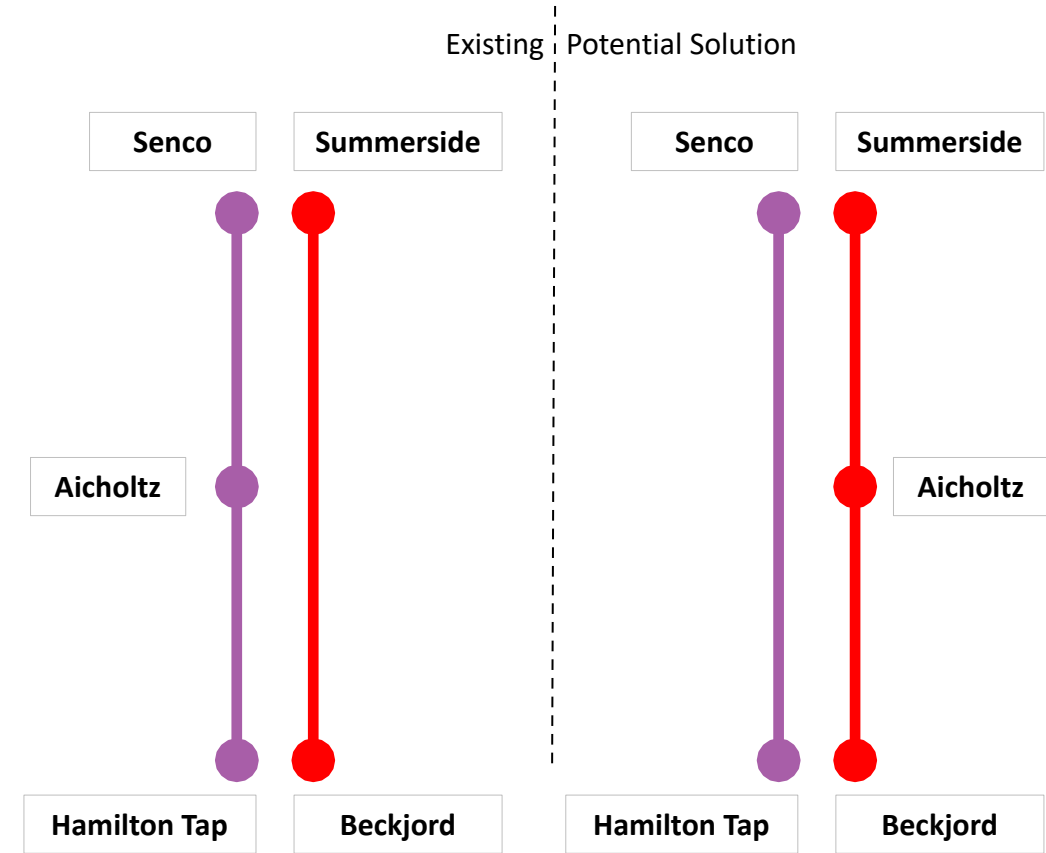
Ancillary Benefits: Connecting to the 138 kV circuit and creating a third transformer position allows for future capacity delivery to this area. The throw over scheme reduces outage recovery time.

Estimated Transmission Cost: \$6.7MM

Proposed In-Service Date: 03-06-2026

Project Status: Engineering

Model: 2022 RTEP



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

5/9/2023 – V1 – Original version posted to pjm.com