Sub Regional RTEP Committee: Western
DEOK Supplemental Projects

April 16, 2021

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

DEOK Transmission Zone M-3 Process
Brown

Need Number: DEOK 2021-006

Process Stage: Needs Meeting 04-16-2021

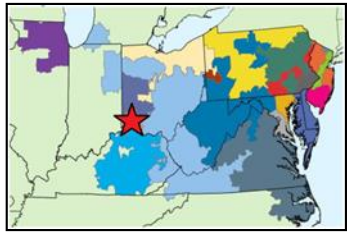
Project Driver: Infrastructure Resilience

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 8

Problem Statement:

Brown TB1 is a 138/69/34 kV 3-winding transformer. The tertiary winding is connected to a 34 kV distribution bus. This old design exposes the transmission transformer to faults from the distribution system.



345kV
138kV
69kV

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 2021-004

Process Stage: Needs Meeting 03-19-2021

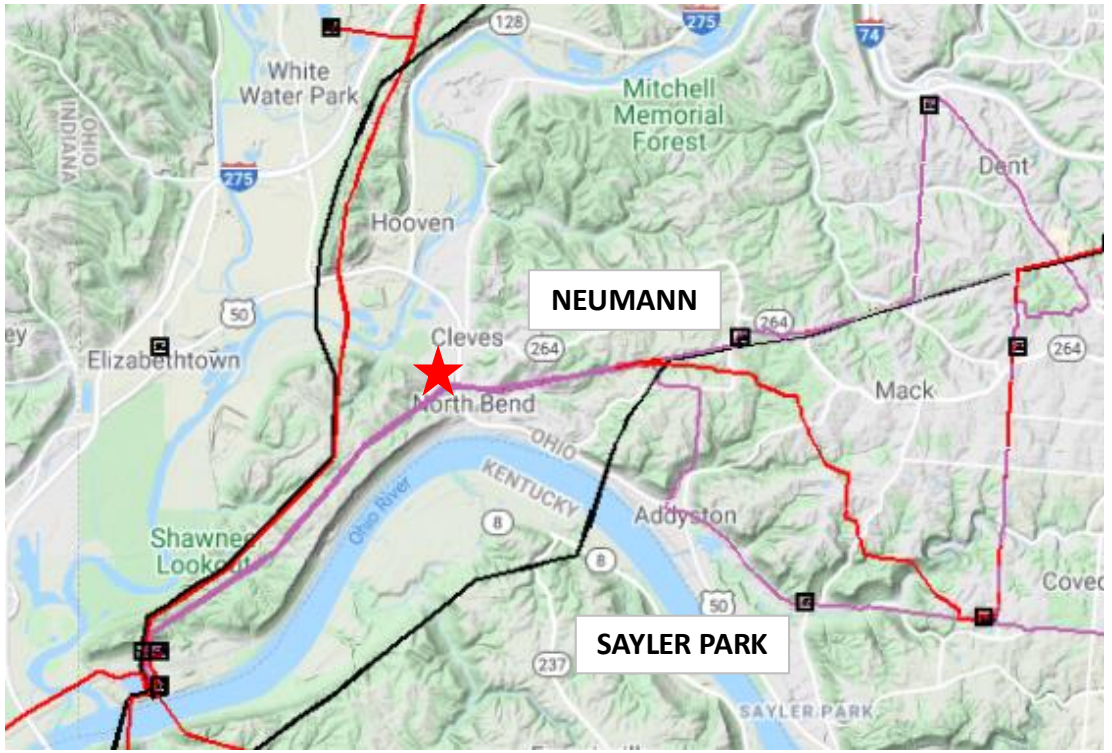
Project Driver: Customer Service

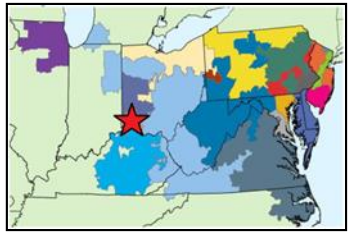
Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 9

Problem Statement:

Duke Energy Distribution has asked for a new delivery point in North Bend, OH. The distribution transformers that serve this area from Neumann and Sayler Park are peaking at 100% of rated capacity. Several large residential developments are planned or are currently under construction in this area.





345kV
138kV
69kV

DEOK Transmission Zone M-3 Process
North Bend

Need Number: DEOK 2021-004

Process Stage: Solutions Meeting 04-16-2021

Previously Presented: Needs Meeting 03-19-2021

Project Driver: Customer Service

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 9

Potential Solution:

Install a new substation, North Bend. Loop the nearby Miami Fort – Midway 138 kV feeder through North Bend switch connecting the feeder to the bus. Install a 138 kV circuit switcher, a 138/13 kV 22 MVA transformer, a 13 kV circuit breaker for the low side of the transformer, and 13 kV bus work with circuit breakers for two distribution line exits. Reconfigure distribution lines in the area to include the new capacity available from North Bend substation.

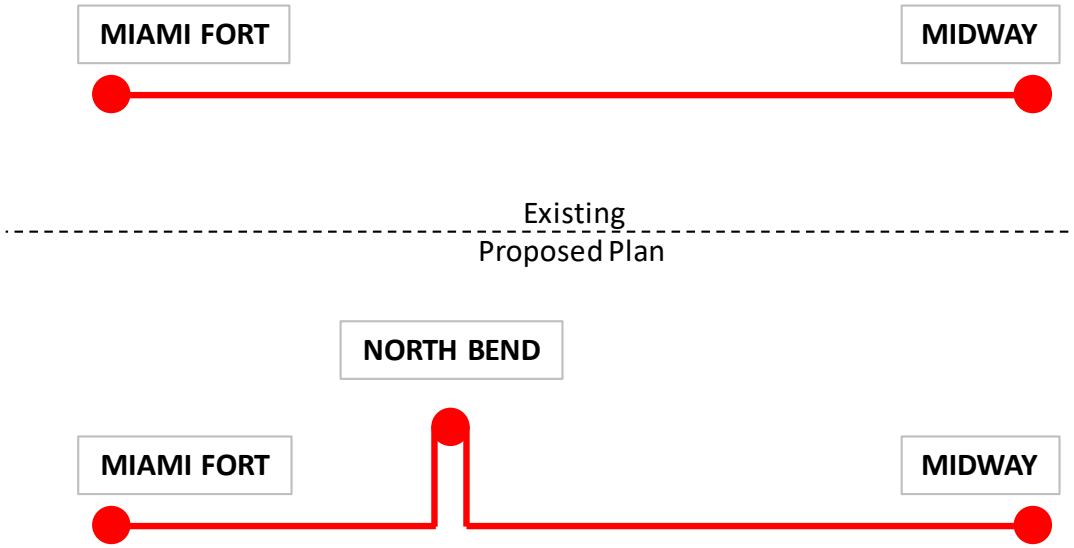
Alternatives: none

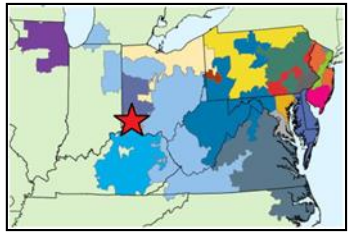
Transmission Cost Estimate: $7.2M

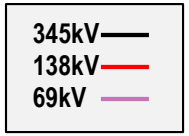
Proposed In-Service Date: 12-01-2023

Project Status: Scoping

Model: 2020 RTEP







DEOK Transmission Zone M-3 Process
Newtown

Need Number: DEOK 2021-005

Process Stage: Needs Meeting 03-19-2021

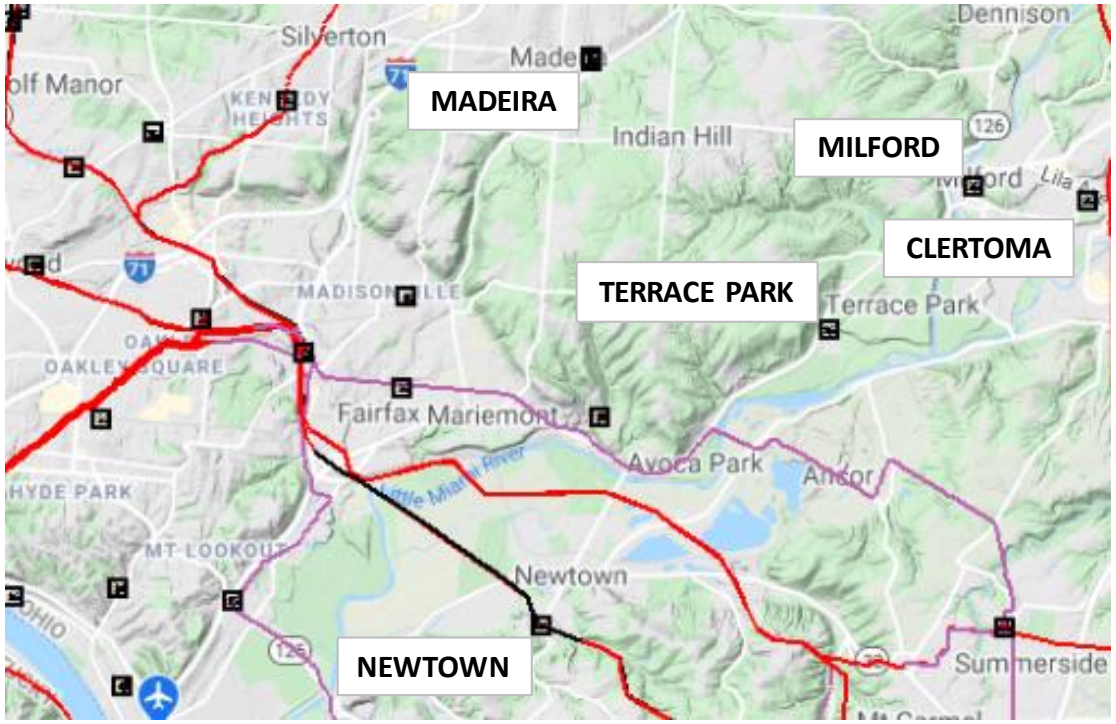
Project Driver: Customer Service

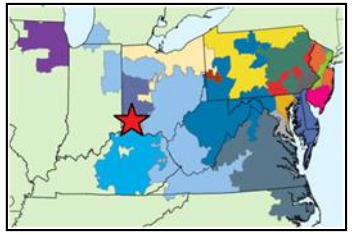
Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 9

Problem Statement:

Duke Energy Distribution has asked for additional capacity at Newtown substation. Obsolete 4 kV distribution facilities at Madeira, Milford, Clertoma and Terrace Park are being retired. 10 MVA of 13 kV capacity is required.





345kV
138kV
69kV

DEOK Transmission Zone M-3 Process
Newtown

Need Number: DEOK 2021-005

Process Stage: Solutions Meeting 04-16-2021

Previously Presented: Needs Meeting 03-19-2021

Project Driver: Customer Service

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 9

Potential Solution:

Expand Newtown substation. Move the Beckjord - Newtown 138 kV feeder by removing the existing line switch, take-off tower and foundations, and installing a new line switch and take-off tower with new foundations. Install new 138 kV bus work, two bus switches and a motor operated air break switch to feed a new 138/13 kV 22 MVA transformer. Install 13 kV switchgear. Reconfigure distribution lines in the area to be fed by the new transformer and switchgear.

Alternatives: none

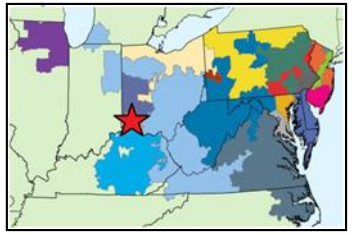
Transmission Cost Estimate: $1.7M

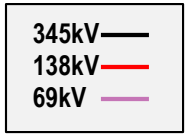
Proposed In-Service Date: 12-01-2023

Project Status: Scoping

Model: 2020 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

4/2/2021 – V1 – Original version posted to pjm.com