



SRRTEP Committee: Western DEOK Supplemental Projects

October 25, 2019



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-2019-007

Process Stage: Solutions Meeting 10-25-2019

Previously Presented: Needs Meeting 03-28-2019

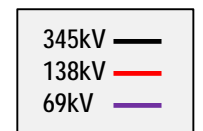
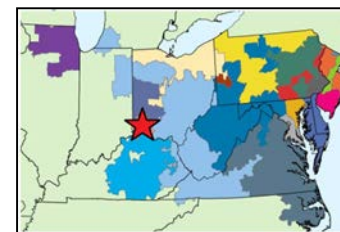
Supplemental Project Driver: Customer Service

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 10

Problem Statement:

Duke Energy Distribution has requested a new delivery point at Dry Ridge substation. Dry Ridge has one 69/13kV 10.5MVA transformer. Grant substation has two 69/13kV 10.5MVA transformers. Due to loading at Dry Ridge and Grant (60% at Dry Ridge, 33% and 36% at Grant), Grant can no longer be tied out to Dry Ridge.



Need Number: DEOK -2019-007

Process Stage: Solutions Meeting 10-25-2019

Proposed Solution: Expand Dry Ridge substation. Extend the 69kV bus. Install a switch connected 69/13kV 10.5MVA transformer, 13kV bus work and equipment for one feeder exit. Move one of the two 13kV feeders to the new bus to distribute the substation load.

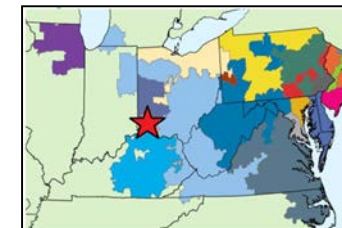
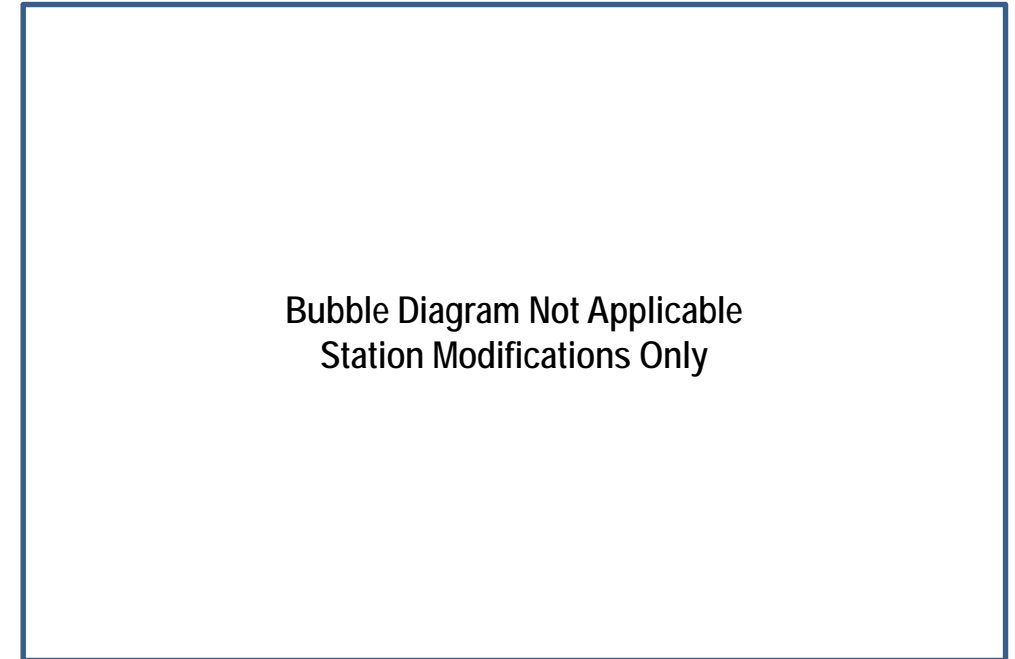
Estimated Transmission Cost: \$3.2M

Projected In-Service Date: 06-01-2021

Project Status: Scoping

Model: 2018 RTEP Summer

Ancillary Benefits: Operational options for switching, reduce recovery time for impacts to distribution system customers.



Need Number: DEOK-2019-018

Process Stage: Solutions Meeting 10-25-2019

Previously Presented: Needs Meeting 05-20-2019

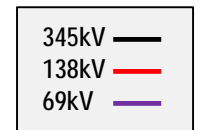
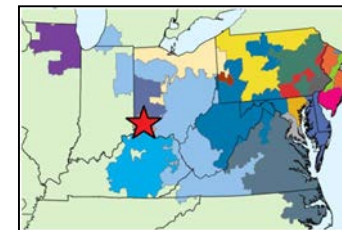
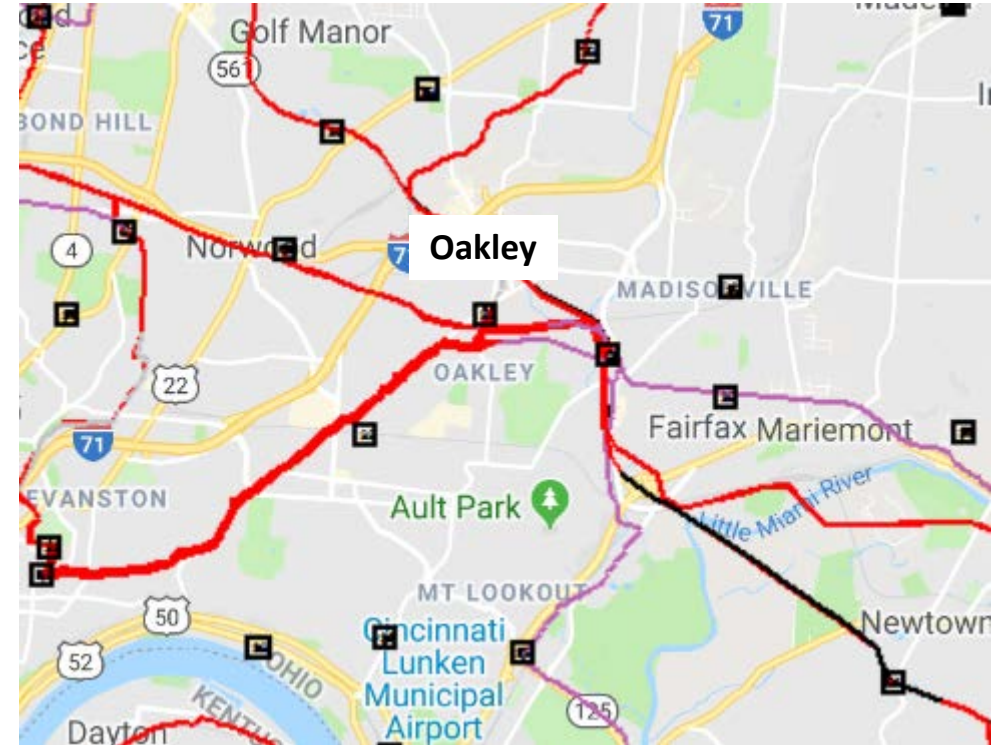
Supplemental Project Driver: Other

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slide 11

Problem Statement:

Line inspection found a clearance between a distribution feeder and a transmission tower. Duke Energy Distribution is moving loads to others feeders in the area, and retiring the feeder. This feeder was the only load on Oakley 69/34kV 27MVA TB5. Oakley TB5 is 69 years old, is one of the last few of it's design on the system.



Need Number: DEOK-2019-018

Process Stage: Solutions Meeting 10-25-2019

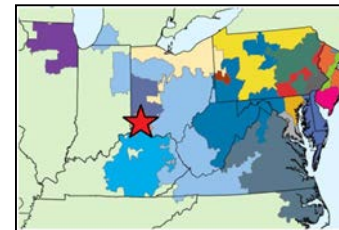
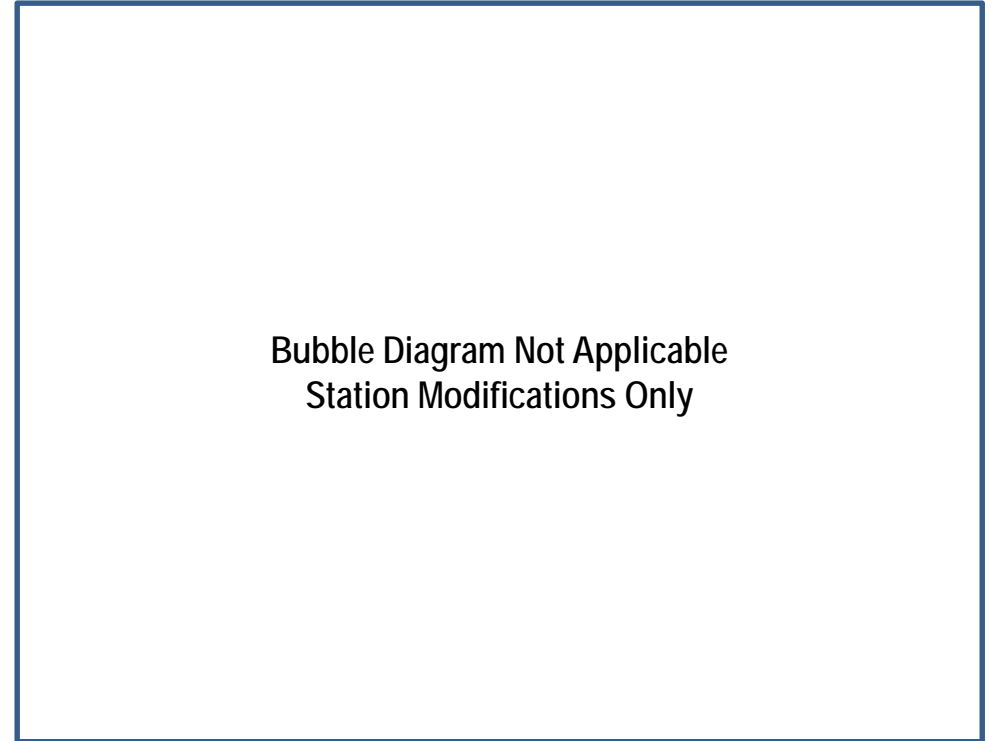
Proposed Solution : Retire and remove Oakley TB5. Remove low side distribution equipment that is no longer in service.

Estimated Transmission Cost: \$832,000

Projected In-Service Date : 12-31-2022

Project Status: Scoping

Model: 2018 RTEP Summer





DEOK Transmission Zone M-3 Process Beckjord

Need Number: DEOK-2019-021

Process Stage: Solutions Meeting 10-25-2019

Previously Presented: Needs Meeting 08-29-2019

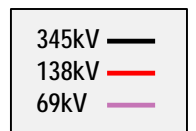
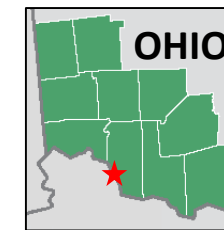
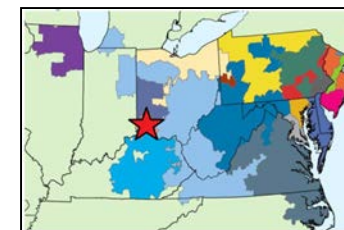
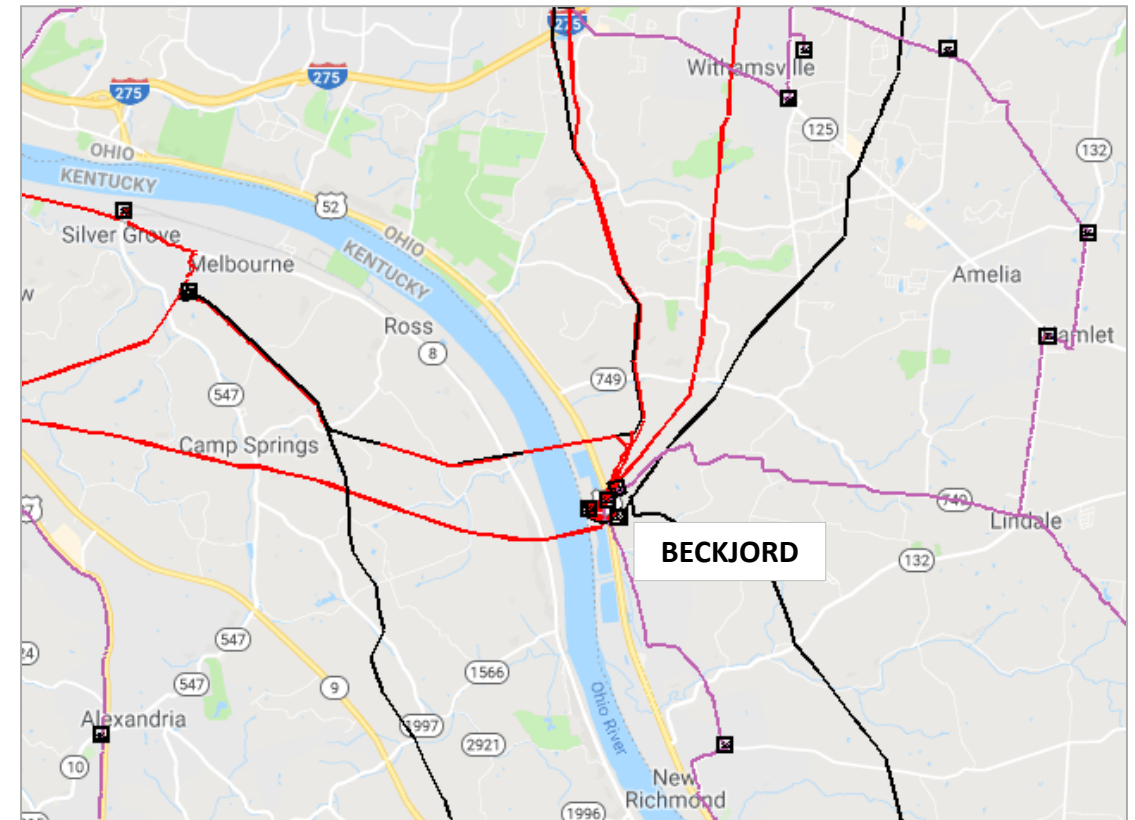
Supplemental Project Driver: Equipment Condition, Performance and Risk

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slides 6 - 7

Problem Statement:

Beckjord 138kV buses 5 and 6 are in deteriorating condition. Constructed with copper bus and with cap and pin insulators, they were put in service in 1962. Structural steel is rusting. Rebar is showing through the structural and equipment foundations. Three breakers are connect to each bus. These breakers are oil filled and obsolete. The installation dates for these breakers are: 1975, 1991, 1973, 1991, 1969, and 1973.



Need Number: DEOK-2019-021

Process Stage: Solutions Meeting 10-25-2019

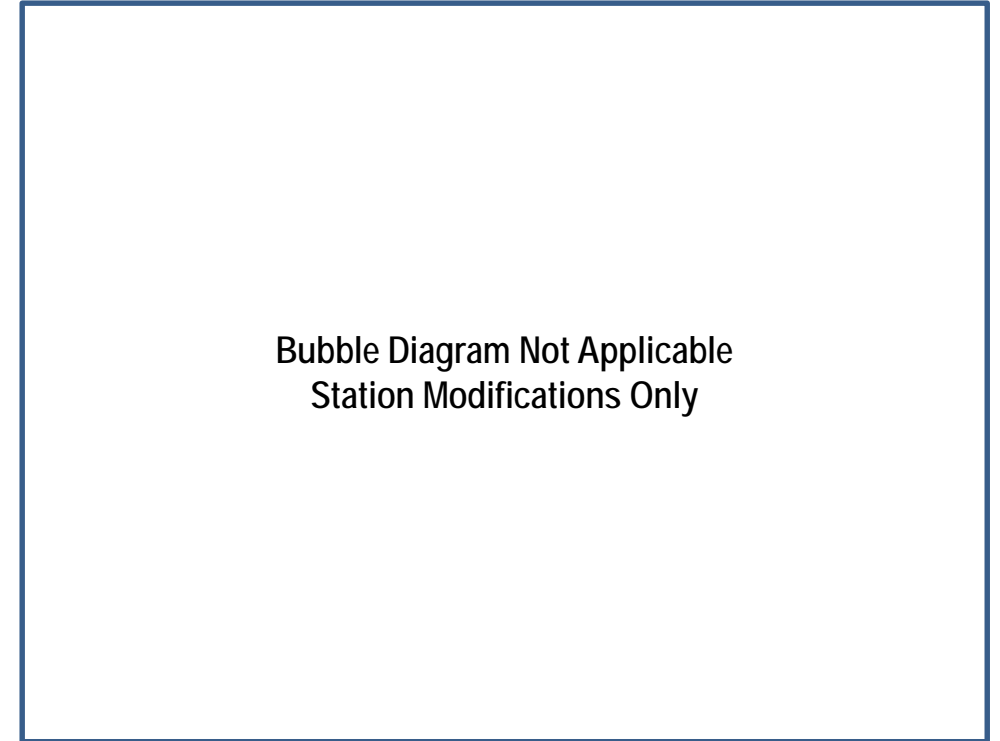
Proposed Solution : Remove and replace foundations. Rebuild 138kV buses 5 and 6. Replace six breakers, twelve associated breaker disconnect switches, three wave traps and other ancillary equipment.

Estimated Transmission Cost: \$4.7M

Projected In-Service Date: 06-01-2021

Project Status: Scoping

Model: 2018 RTEP Summer





DEOK Transmission Zone M-3 Process Beckjord

Need Number: DEOK-2019-022

Process Stage: Solutions Meeting 10-25-2019

Previously Presented: Needs Meeting 08-29-2019

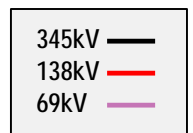
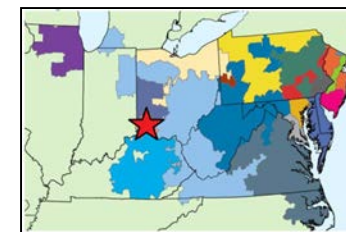
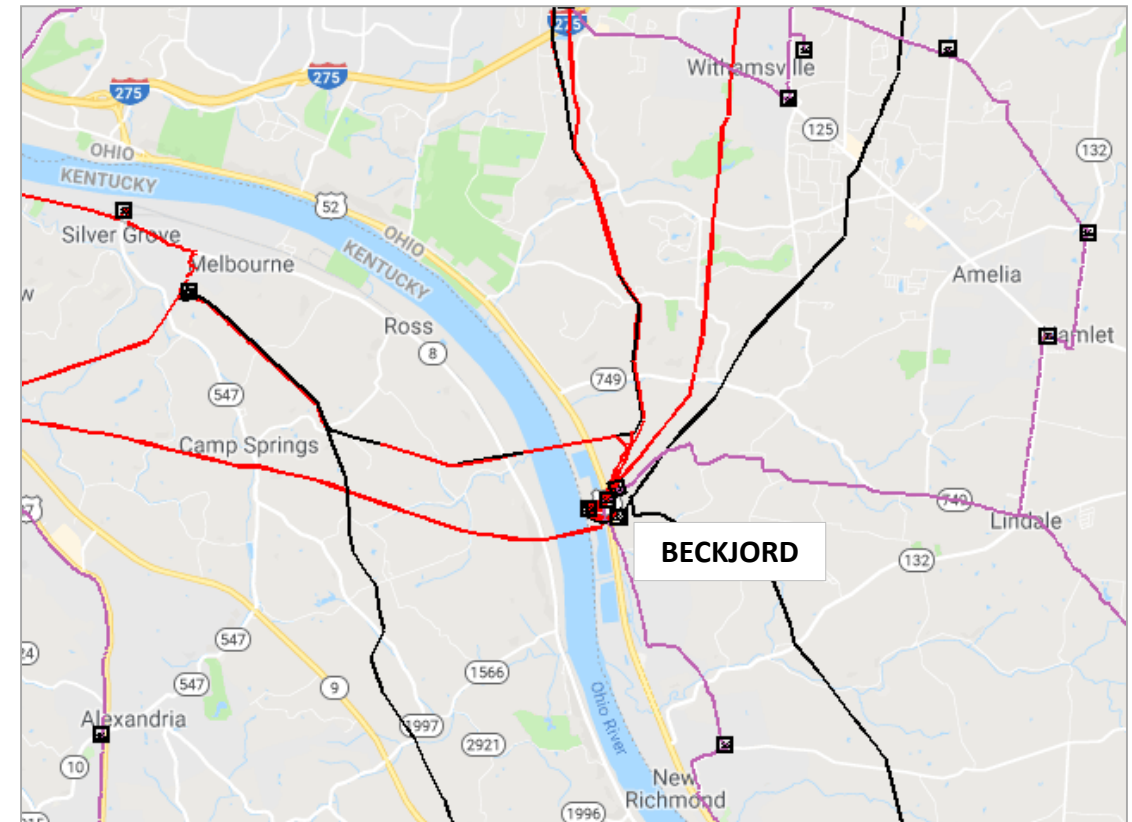
Supplemental Project Driver: Equipment Condition, Performance and Risk

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slides 6 - 7

Problem Statement:

Beckjord 138kV buses 1 and 2 are in deteriorating condition. Constructed with copper bus and with cap and pin insulators, they were put in service in 1952. Structural steel is rusting. Rebar is showing though the deteriorating structural and equipment foundations. Three breakers are connected at each bus. One, installed in 2004, uses SF6 gas. The five others are oil filled, obsolete and were installed in 1973.



Need Number: DEOK-2019-022

Process Stage: Solutions Meeting 10-25-2019

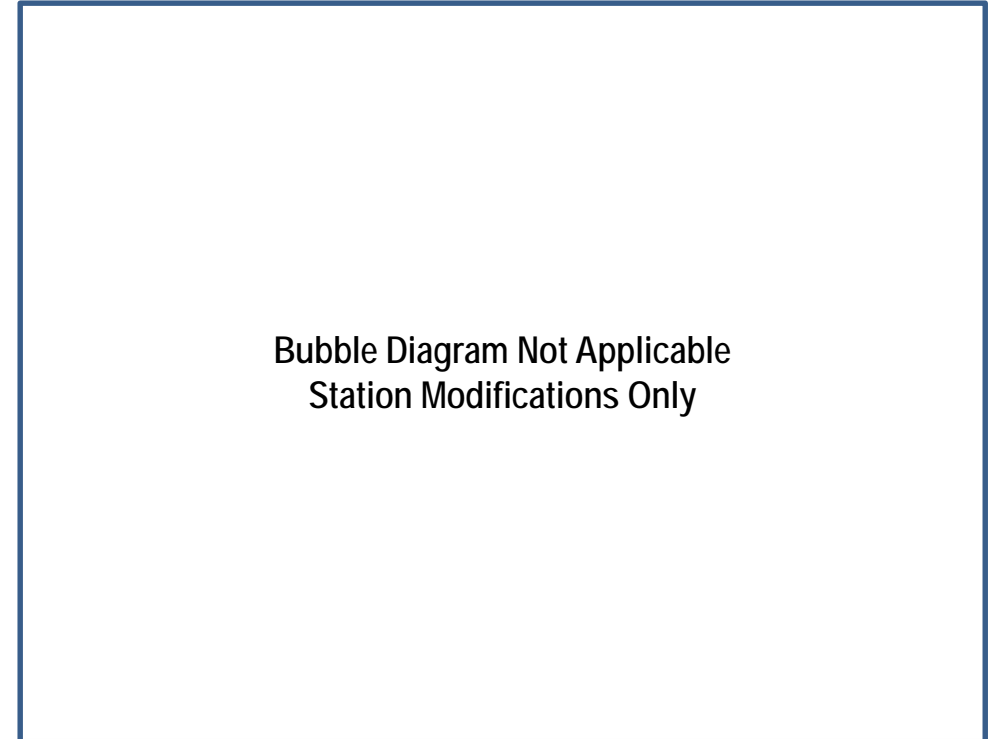
Proposed Solution : Remove and replace foundations. Rebuild 138kV buses 1 and 2. Reuse one breaker. Replace five 138kV breakers, 10 associated breaker disconnect switches, 3 wave traps and other ancillary equipment.

Estimated Transmission Cost: \$4.2M

Projected In-Service Date: 12-31-2021

Project Status: Scoping

Model: 2018 RTEP Summer



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

10/15/2019 – V1 – Original version posted to pjm.com