



Reliability Analysis Update

Sub Regional RTEP Committee - PJM West

May 21, 2021

Changes for Existing Projects

Baseline Reliability Projects



EKPC Transmission Zone Baseline Reliability

B2907 Cancellation

Criteria: EKPC FERC 715 Criteria

Previously Presented: 5/31/2017 & 6/30/2017 SRRTPEP-W

Problem Statement:

Overload of Clay Village-KU Clay Village 69 kV Tap during an N-1 outage.

Recommended Solution:

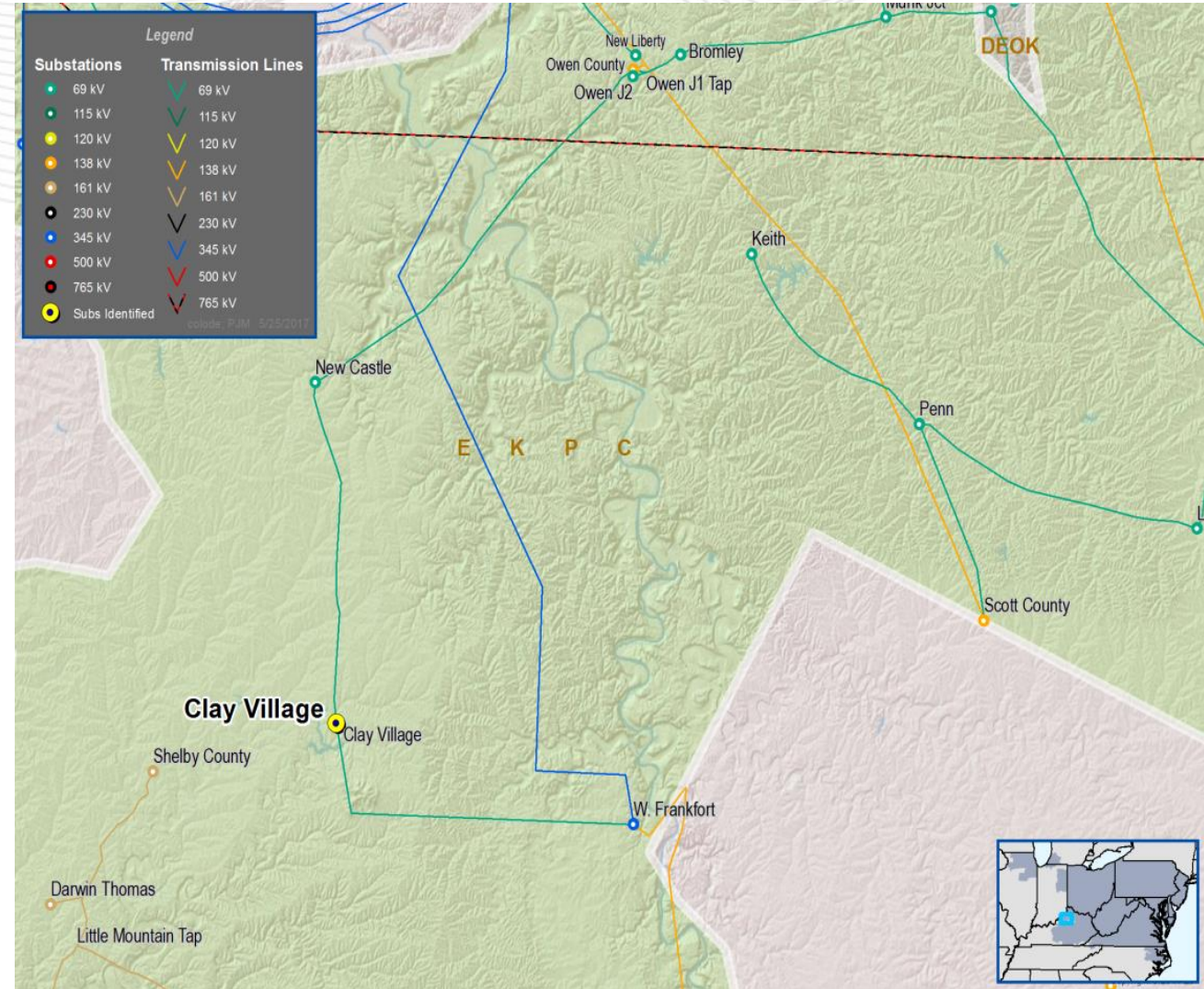
Upgrade the metering CT associated with the Clay Village-KU Clay Village 69 kV Tap line section to 600 A; at least 64 MVA Winter LTE; Upgrade the distance relay associated with the Clay Village-KU Clay Village 69 kV Tap line section to at least 64 MVA Winter LTE. **(b2907)**

Estimated Cost: \$0.125M

Required In-Service: 12/1/2024

Reason for cancellation:

The upgrade was not modeled in the 2020 RTEP case, and the same issue was identified in 2020 window. This resulted in the recommendation of baseline project b3266 (required in-service date of 12/1/2021) which has the same scope. This is an administrative update to remove the duplicate project from the RTEP.



First Read

Baseline Reliability Projects

Recommended Solution

Baseline Reliability Projects



ComEd Transmission Zone: Baseline Waukegan 138kV Substation

Process Stage: Recommended Solution

Criteria: ComEd FERC 715 Stability Criteria 4.3.2

Additional Benefits: N/A

Assumption Reference: 2023 RTEP assumption

Model Used for Analysis: 2023 RTEP cases

Proposal Window Exclusion: Below 200 kV

Problem Statement:

Waukegan 138kV Substation:

Mitigate existing instabilities at 138kV STA16 Waukegan for close-in three-phase faults with breaker failure. ComEd has been using out-step-relay as a temporary solution. A permanent solution is needed.

Recommended Solution:

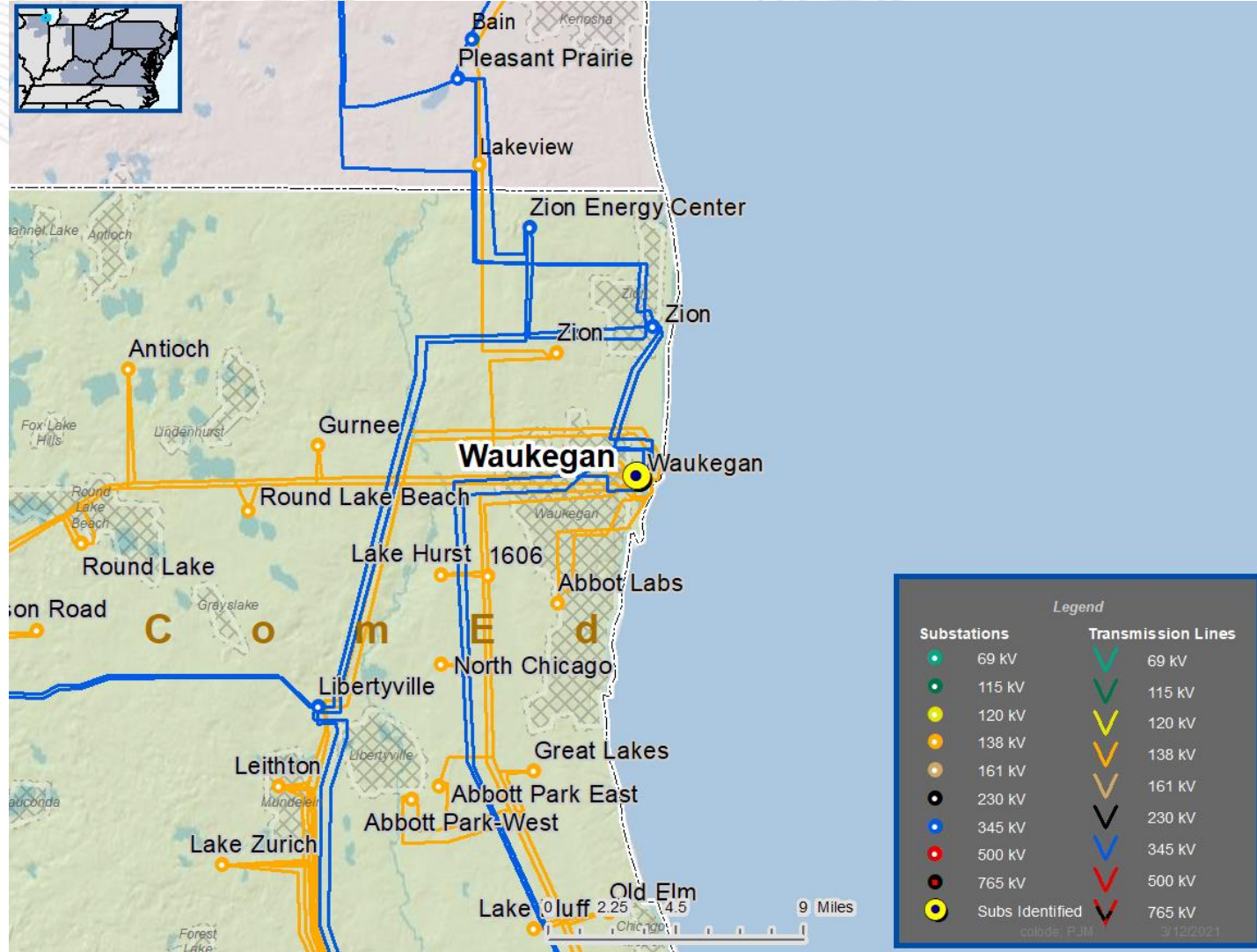
Modify backup relay clearing times at the 138kV STA16 Waukegan station. (B3317)

Estimated Cost: \$0.255 M

Required In-Service: 6/1/2023

Projected In-Service: 6/1/2023

Previously Presented: 4/16/2021





Dayton Transmission Zone: Baseline Greene 138kV Breaker "GJ-138C" Replacement

Process Stage: Recommended Solution

Criteria: Over Duty Breaker

Assumption Reference: 2025 RTEP assumption

Model Used for Analysis: 2025 short circuit model

Proposal Window Exclusion: Below 200kV

Problem Statement:

In 2025 RTEP short circuit model, One (1) Greene 138kV breaker is over duty: "GJ-138C"

Existing Facility Rating: 40kA interrupting rating

Recommended Solution:

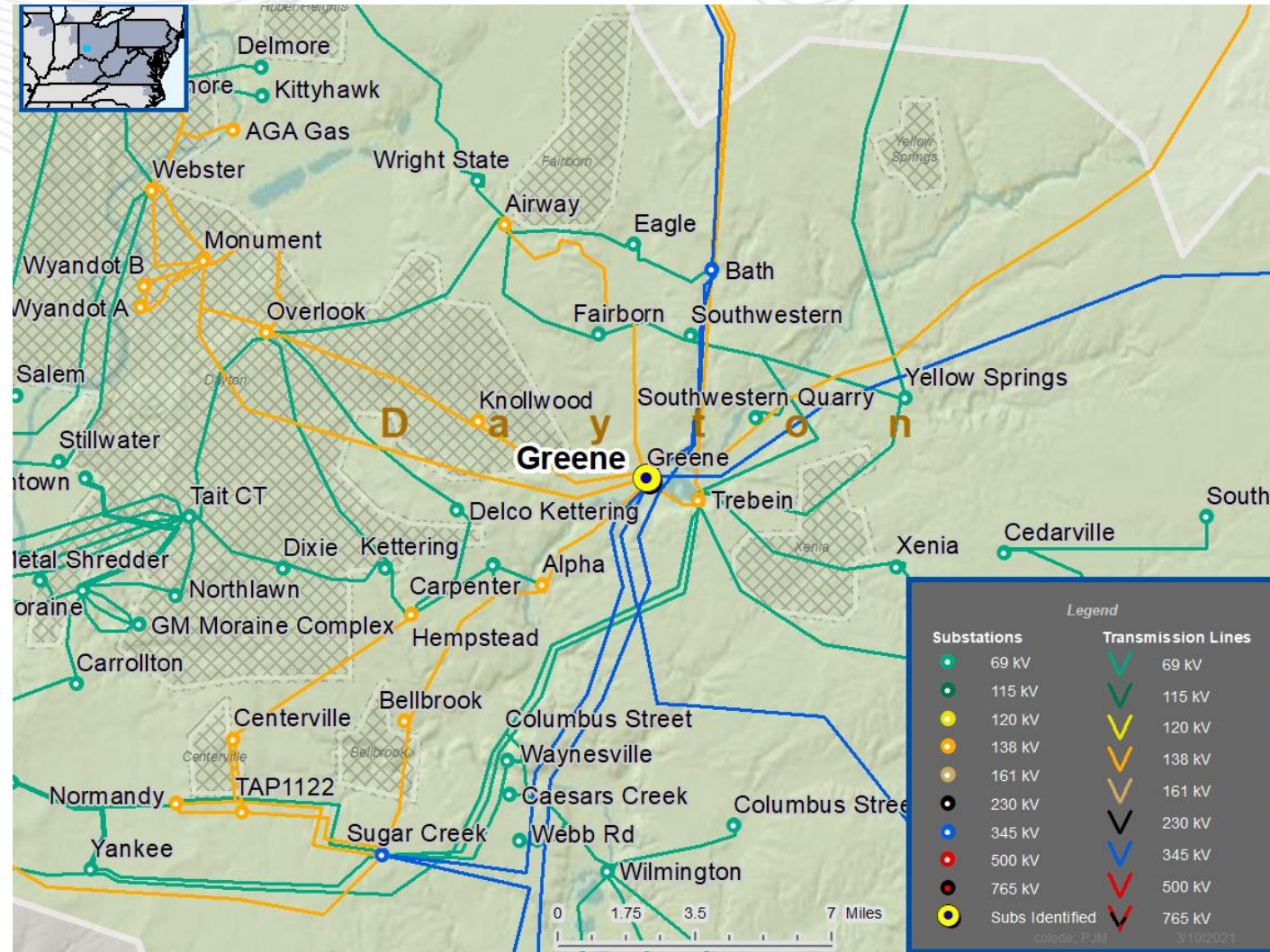
Replace the one (1) Greene 138kV breaker with 63kA breaker: "GJ-138C" (B3316)

Estimated Cost: \$0.28M

Required In-Service: 6/1/2025

Projected In-Service: 6/1/2022

Previously Presented: 4/16/2021



Questions?



- V1 – 5/17/2021 – Original slides posted
- V2 – 5/21/2021 – Slide #6 and #7, added previously presented date