



# Reliability Analysis Update PJM West

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West

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# Changes to Existing Projects

## Baseline Reliability Projects

# AEP Transmission Zone: Baseline B3333 Cancellation

## B3333: Presented in 8/10/2021, 8/31/2021

**Original Driver:** AEP Buchanan units 1 and 2 Deactivation

### Original Scope:

- Rebuild Skeggs Branch substation in the clear as Coronado substation Establish New 138kV and 69kV Buses. Install 138/69kV 130 MVA transformer, 138kV Circuit Switcher, 69kV breaker. Retire Existing Skeggs Branch substation (B3333.1) \$ 6.315 M
- New ~1.2 mi 138kV extension to new Skeggs Branch substation location. (B3333.2) \$ 4.62 M
- Install 46.1 MVAR Cap bank at Whitewood substation along with a 138kV breaker. (B3333.3) \$ 1.05 M
- Rebuild ~9 mi 69kV line from new Skeggs branch station to Coal Creek 69kV line. 6-wire the short double circuit section between Whetstone Branch and Str. 340-28 to convert the line to single circuit. Retire Garden Creek to Whetstone Branch 69kV line section. (B3333.4) \$ 26.25 M
- Retire Knox Creek SS. (B3333.5) \$ 0.06 M • Retire Horn Mountain SS. This will be served directly from 69kV bus at New Skeggs branch Substation. (B3333.6) \$ 0.05 M
- At Clell SS, Replace (2) 600A POP Switches and Poles with single 2 Way 1200A POP Switch and Pole. (B3333.7) \$ 0.34 M
- At Permac, Replace 600A Switch and structure with 2 Way 1200A POP Pole Switch and pole. (B3333.8) \$ 0.31 M
- At Marvin SS, Replace 600A Switch and structure with 2 Way 1200A POP Pole Switch and pole. (B3333.9) \$ 0.31 M
- At Whetstone Branch substation, Replace 69KV 600A 2 Way POP Switch with 69KV 1200A 2 Way POP Switch. Remove 69KV to Skeggs Branch (Switch "22" POP). (B3333.10) \$ 0.568 M



# AEP Transmission Zone: Baseline B3333 Cancellation

- At Garden Creek substation, Remove 69KV Richlands (via Coal Creek) line (Circuit Breaker F and disconnect switches) and update relay settings. (B3333.11) \$ 0.138 M
- Remote End work at Clinch River substation. (B3333.12) \$0.08 M
- Remote End work at Clinchfield substation. (B3333.13) \$0.08 M

**Total Estimated Cost:** \$40.171 M

**Required IS Date:** 6/1/2023

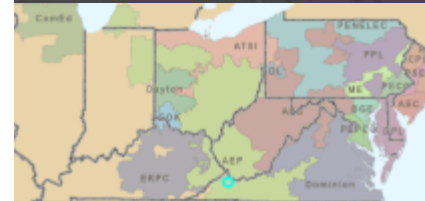
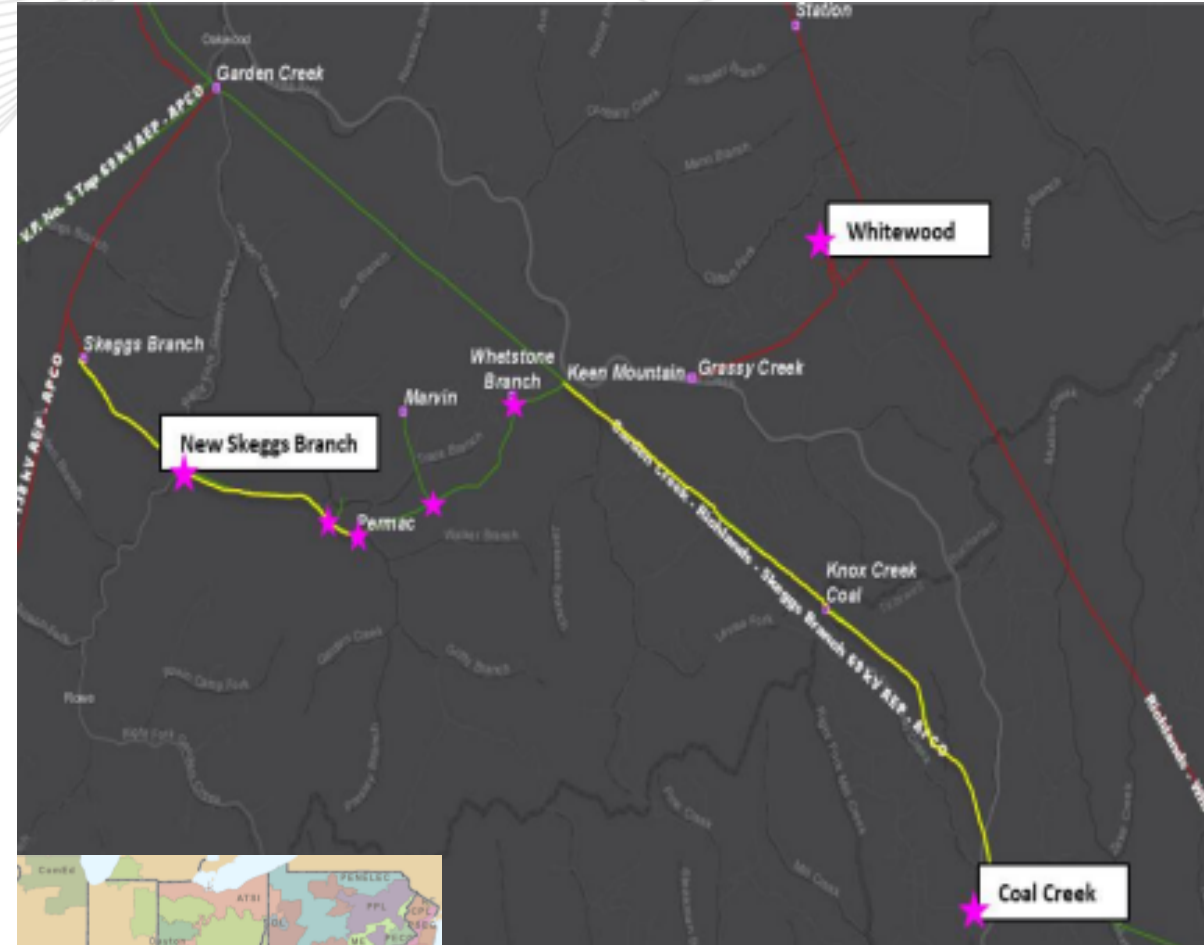
## Ancillary benefit:

Supplemental needs Addressed:

- AEP-2021-AP013: Skeggs Branch substation needs.
- Part of AEP-2021-AP014
  - N.O. at Permac station.
  - Improved sectionalizing capability for multiple substations (Twin Valley SS, Marvin, Clell) being hard tapped to 69kV Line or operated radially.
  - Three – terminals at Whetstone Branch.
  - Garden Creek-Coal Creek line condition
- Part of AEP-2021-AP003: Accommodates New Salmon substation load addition.

## Reason for Cancellation:

- AEP Buchanan units 1 and 2 deactivation is withdrawn
- No reliability issue identified in PJM's DNH study with the cancellation
- Supplemental needs will be addressed through supplemental process



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## Reliability Analysis Update



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1	March 11, 2025	<ul style="list-style-type: none"><li>• Original slides posted</li></ul>



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