Generation Deactivation Reinstatement Notification
Beaver Valley 1 & 2

Transmission Expansion Advisory Committee
May 12, 2020
03/28/2018: First Energy announces deactivation of Davis Besse 1, Perry 1, and Beaver Valley 1-2

08/29/2018 First Energy announces deactivation of Eastlake 6, Sammis 5-7, Sammis Diesel, and Mansfield 1-3

07/29/2019 First Energy announces reinstatement of Davis Besse 1, Perry 1, and Sammis 5-7
FirstEnergy Deactivation RTEP Upgrades Remaining after 7/29/19 Reinstatement

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Key: applicable to all slides
- **Required for remaining deactivations**
- **New required for remaining deactivations**
- **Complete due to progress**
- **Pending resolution**

All colored cells from the previous slide.
Beaver Valley 1&2 Reinstatement Required Upgrades

Beaver Valley 1&2 reinstatement analyses and updated status
03/28/2018: First Energy announces deactivation of Davis Besse 1, Perry 1, and Beaver Valley 1-2

08/29/2018: First Energy announces deactivation of Eastlake 6, Sammis 5-7, Sammis Diesel, and Mansfield 1-3

07/29/2019: First Energy announces reinstatement of Davis Besse 1, Perry 1, and Sammis 5-7

03/13/2020: First Energy announces reinstatement of Beaver Valley 1-2
"Pending resolution" baseline upgrades are not needed by deactivations, may not be needed as originally proposed, but may be required upon completion of baseline re-tools or may be relied on by applicable queue projects:

- AD2-168 → AE1-083 can gain benefits from listed baselines upgrades identified prior to 8/29/2018.
- AE1-084 → AF1-074 can gain benefits from listed baseline upgrades identified prior to 7/29/19.
- AF1-075 → AF2-150 can gain benefits from listed baseline upgrades identified above between 7/29/2019 to 3/13/20.
- ISA must be signed to lock "pending resolution" baseline upgrades into base case.
The estimated cost of required upgrades due to the 03/28/2018 and 08/29/2018 deactivations of the following units:

**FE nuclear deactivation**
- 05/31/2020: Davis Besse 1 (896 MW)
- 05/31/2021: Perry 1 (1247 MW) and Beaver Valley 1 (909 MW)
- 10/31/2021: Beaver Valley 2 (902 MW)

**FE Coal deactivation**
- 06/01/2021: Bruce Mansfield (2490 MW), Sammis Diesel (13 MW), Eastlake 6 (24MW)
- 06/01/2022: Sammis 5, 6, and 7 (1491 MW)

$414M

The estimated cost of required upgrades due to the 07/29/19 reinstatement of the following units:

**FE nuclear reinstatement**
- Davis Besse 1 (896 MW)
- Perry 1 (1247 MW)

**FE Coal deactivation**
- Sammis 5, 6, 7 (1491 MW)

$215.6M

The estimated cost of required upgrades due to the 03/13/20 reinstatement of the following units:

**FE nuclear reinstatement**
- Beaver Valley 1 (909 MW)
- Beaver Valley 2 (902 MW)

$123M
The impacts and required upgrades were re-evaluated due to the reinstatement for the following units:

**FE nuclear reinstatement**

- Beaver Valley 1 (909 MW)
- Beaver Valley 2 (902 MW)
The following 8 baseline projects remain due to work progression.

- B2965 – Reconductor the Charleroi - Allenport 138 kV line
- B3006 (APS) - Replace four Yukon 500/138 kV transformers with three transformers with higher rating and reconfigure 500 kV bus
- B3008 (PENELEC)- Upgrade Blairsville East 138/115 kV transformer terminals
- B3009 (PENELEC)- Upgrade Blairsville East 115 kV terminal equipment
- B3015.2 (DLCO) – Reconductor Elrama to Wilson 138 kV line
- B3217 (DLCO) formerly B3015.5
  - Assigned as a new baseline project (B3217) with a updated description for reconductoring Wilson to Mitchell 138 kV line
- B3016 (PENELEC) – Corry East 115 kV terminal equipment to Four Mile 115 kV line
- B3024 (PENELEC) – Corry East 115 kV terminal equipment to Warren 115 kV line
The remaining baseline projects remain required for the identified violations:

- **B3215 (APS) formerly B3011.3**
  - Assigned as a new baseline project (B3215) with updated description: Upgrade terminal equipment at Yukon to increase rating on Yukon – AA2-161 (Robbins) 138 kV line
  - Newly estimated cost: $0.4M

- **B3216 (APS) formerly B3011.4**
  - Assigned as a new baseline project (B3216) with updated description: Upgrade terminal equipment at Yukon to increase rating on Yukon – AA2-161 (Wycoff jct) 138 kV line
  - Newly Estimated cost: $0.5M

- **B3084 (DLCO)** - Reconductor the Oakland - Panther Hollow 138 kV line.
New upgrade required:

  - B2966 was cancelled by deactivation upgrades
  - Estimated Cost: $21.4M
  - Projected IS date: 06/01/2023
Summary

- Baseline projects highlighted in green or red on slide 5-6 remain required.
- Newly identified project is highlighted in yellow on slide 5-6.
- Baseline projects highlighted in white on slide 5-6 are pending.
- All pending baseline projects are on hold.
- Final decision on canceling baseline projects will occur after completion of all required RTEP analysis and execution of ISAs for affected generation queue projects.
- Key Schedule
  - Beaver Valley reinstatement was included in the 2025 RTEP model build.
  - AF1 System Impact Study results anticipated August 2020.
  - AF2 Feasibility Study results anticipated July 2020.
• V1-5/5/2020 – Original slides posted