



Mitigation of FAC-008

October 26, 2022

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FAC-008 Mitigation Panel Discussion

Lorissa Cardoza, Customer Service Reliability Program Manager

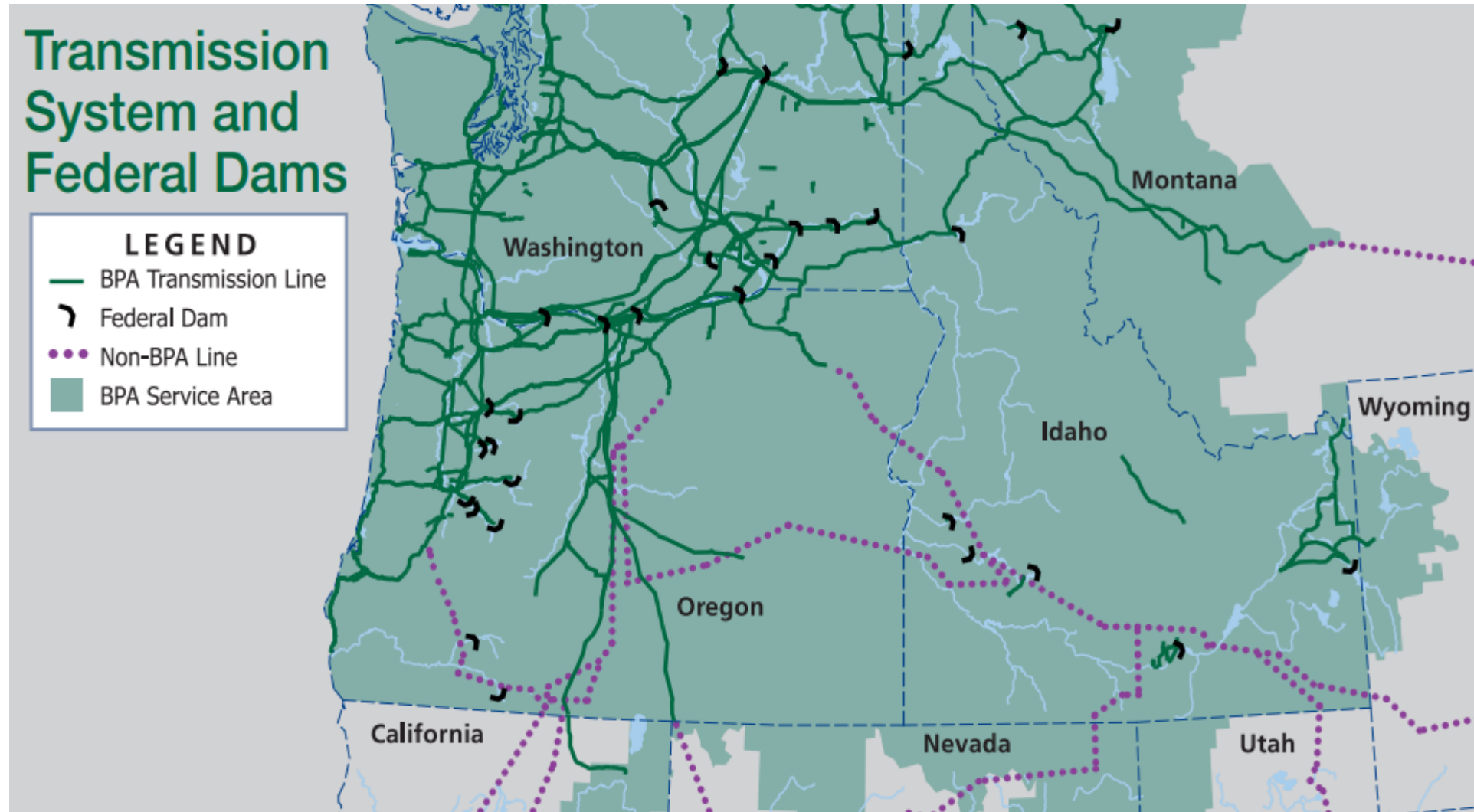
Brittany West, Reliability Compliance Lead

BPA Facts at a Glance

- Nonprofit federal Power Marketing Administration based in the Pacific Northwest
- Markets 31 Federal Hydros in the Columbia River Basin
- BA, PA/PC, RP, TO, TOP, TP, & TSP
- WECC is BPA's only Regional Entity/CEA
- ~15,179 miles at various BES voltages
- 7,658 MW 12 month average
 - 11,621 MW sustained 120-hour peak capacity
- Accounts for approximately 28% of the electric power consumed within the region and serves approximately 3 million people.
- 2 Control Centers and 262 Substations

BPA's Service Territory

BPA operates and maintains more than 15,000 circuit miles of high-voltage transmission in its service territory, which is 300,000 square miles and includes Idaho, Oregon, Washington, western Montana, and small parts of eastern Montana, California, Nevada, Utah, and Wyoming.



Identification of Gaps within FAC-008

- BPA received a broad Area of Concern on FAC-008 during our 2019 WECC Audit.
- BPA formed a cross-organizational team to perform a deep-dive review and assessment of our Facility Ratings program to identify areas of weakness or compliance gaps.
 - SMEs: Planning, Operations, Engineering, Field, Customers.
- These meetings were held weekly and spanned for almost a year.
- As issues presented themselves, BPA performed a Root Cause Analysis and Extent of Condition Review.



FAC-008 Mitigation

Speaker: Leland McMillan

WECC Reliability and Security Workshop



Background on NAES Corporation

- *Functional Registrations **GO, GOP**

- *Subject to Regional Entity(s) = **WECC & Registered in all regions. Successfully completed over 200 audits.**

- *Generation Capability = NAES operates **~190 plants in North America**

- *Control Centers = **Gridforce BA**

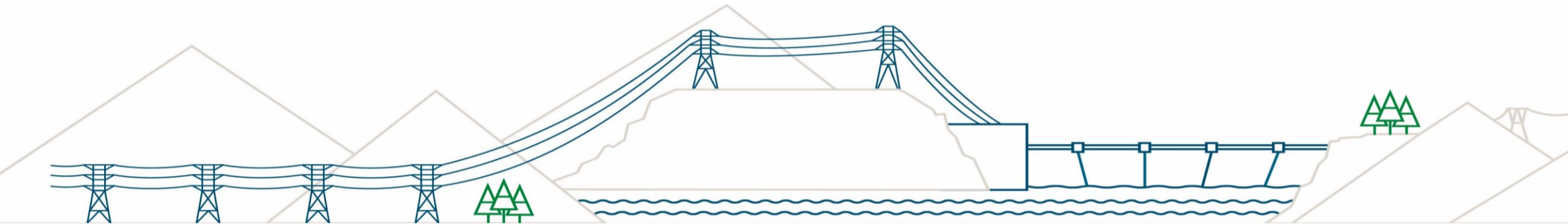
Currently supports approximately 140 NERC Registered Entities of which approximately 85 are plants currently under NAES O&M management

Currently registered as the GO and/or GOP at over 50 facilities (all six NERC regions).

Mitigation of FAC-008

BC Hydro Experience

Michael Guité
Manager, Transmission Asset Planning



October 26, 2022
Reliability & Security Workshop, Scottsdale, AZ

BC Hydro System



BC Hydro is a vertically-integrated crown corporation (publicly owned)

- 2.1 M Customer Accounts
- Serves 95% of the province's population
- 12,026 MW of installed hydroelectric capacity
- ~18,500 km (~11,500 miles) of transmission lines
- Over 300 substations
- 60kV – 500kV

Root Cause Analysis

What were some of the methods and tools used in your root cause analysis?

Root Cause Analysis

What were some of the causes you identified for your FAC-008 issues?

Extent of Condition Analysis

How does your entity define “extent of condition”?

Extent of Condition Analysis

- How did the root cause analysis process and results inform your extent of condition analysis?
- What were some of the methods and tools used to determine and manage the extent of condition for your FAC-008 issue?

Mitigation

- What were some of the methods and tools used in your mitigation?
- What steps did you take to prevent recurrence?



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