BPA Transmission

OR Data Center Advisory Committee

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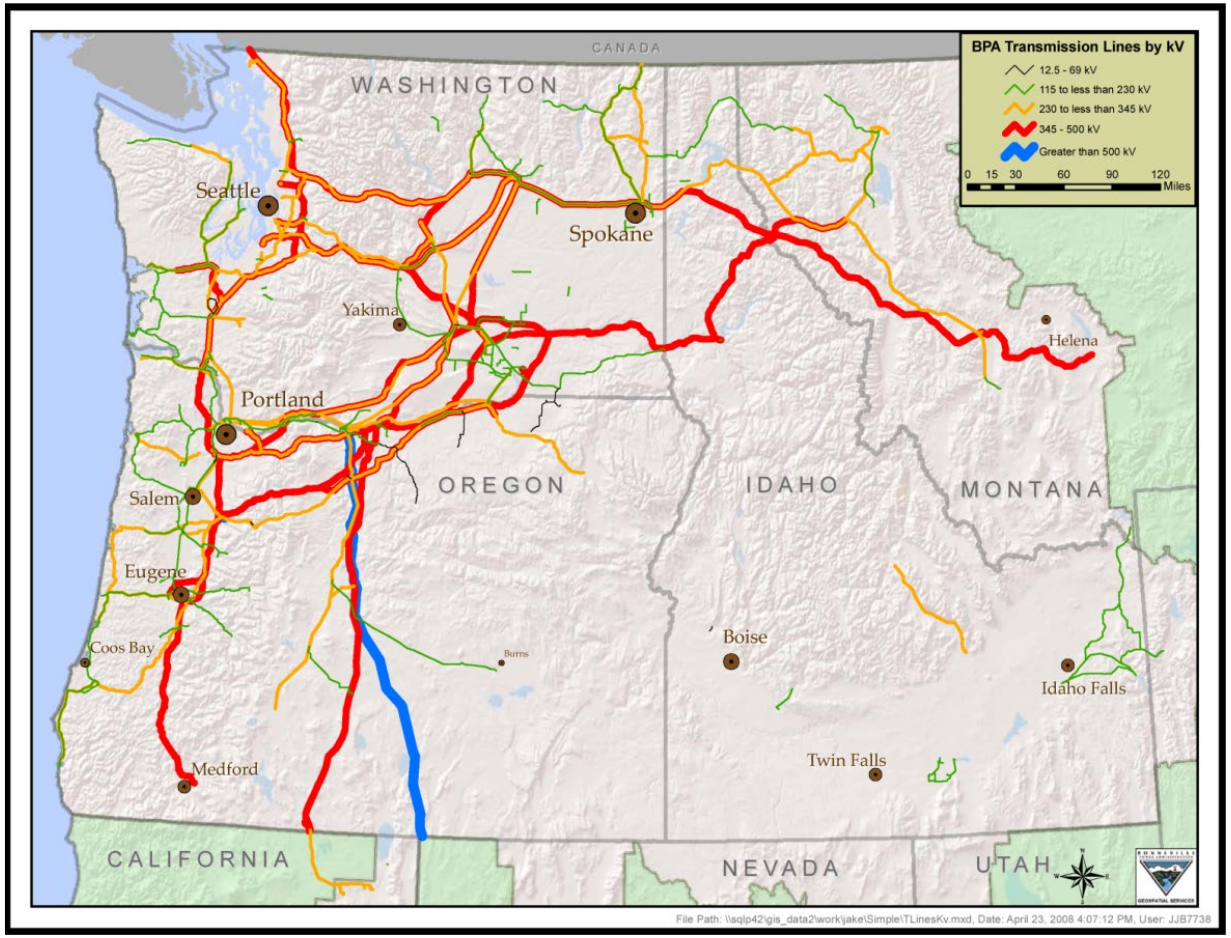
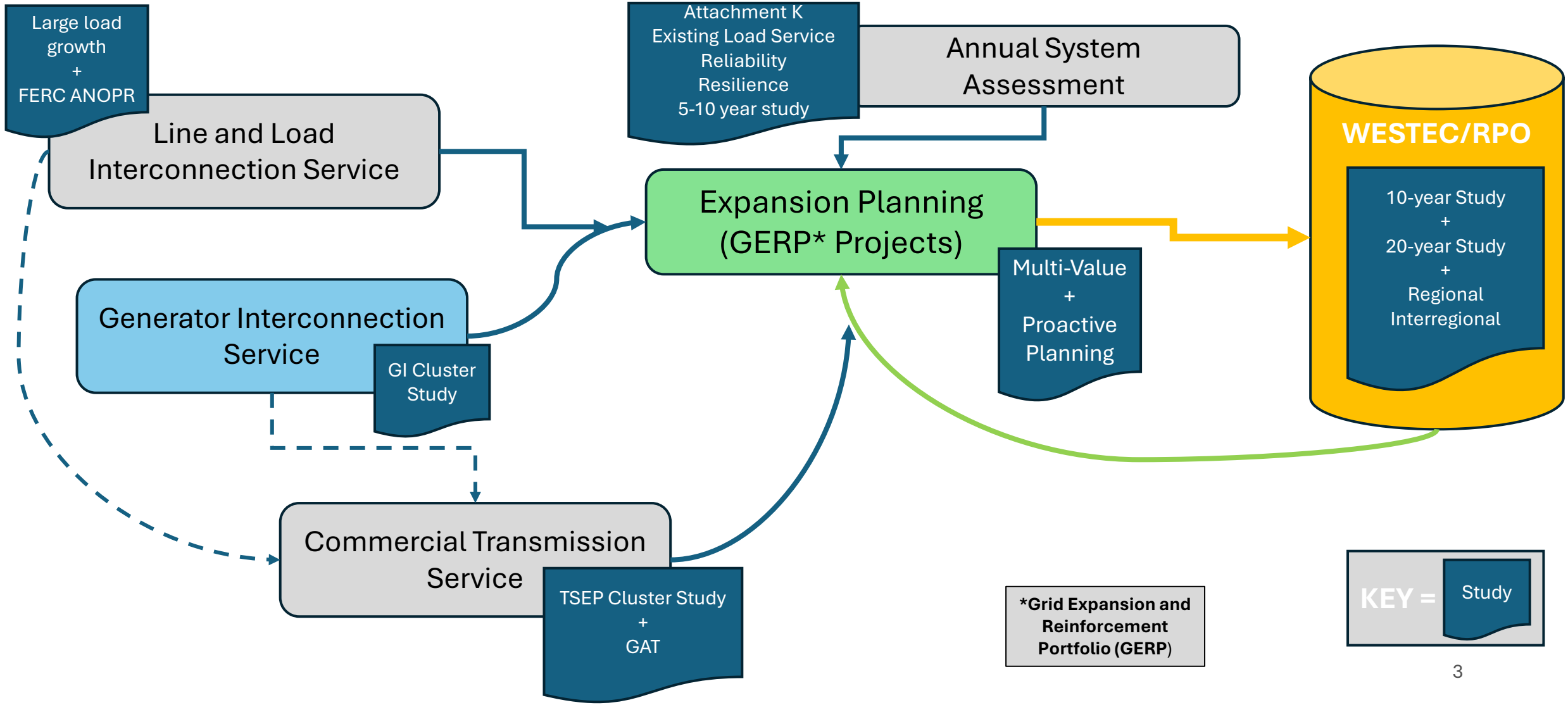
Introduction to BPA and FCRTS

- BPA is a self-funded Power Marketing Administration under the US Department of Energy.
- BPA recovers all costs from selling power and transmission services.
- BPA markets power from 31 Federal hydro plants, the Columbia Generating Station Nuclear Plant, and several small non-Federal power plants.
  - BPA owns no power generators.
  - About 80% of the power BPA sells is hydroelectric.
- BPA accounts for about 1/3rd of the electric power consumed within the PNW and about 28% of power consumed in OR.
- BPA owns and operates 15,000+ circuit miles of transmission lines, including 4,735 miles of 500-kV lines.



Transmission Planning Processes



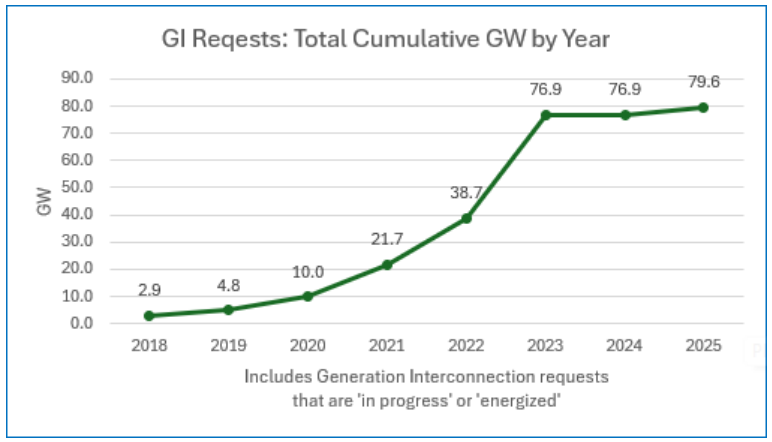
Transmission Queues

BPA identifies transmission upgrades in response to customer needs in three general areas:

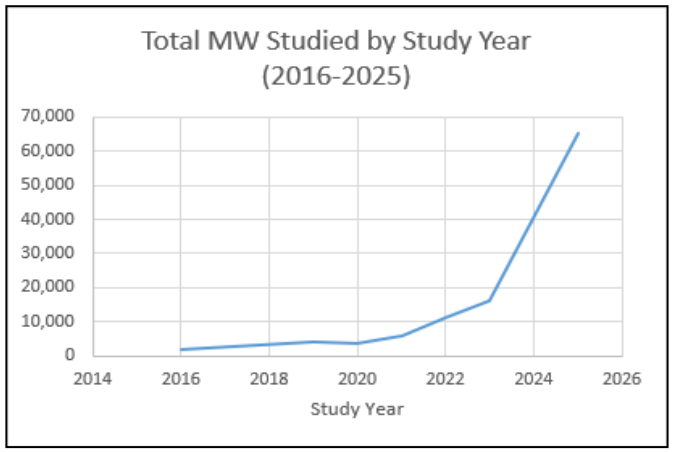
Point of Receipt

Point of Delivery

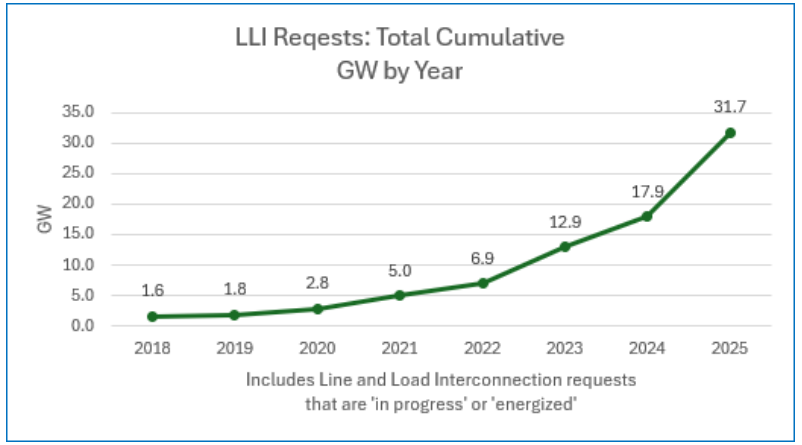
1. Generator Interconnection



2. Transmission Service



3. Line/Load Interconnection

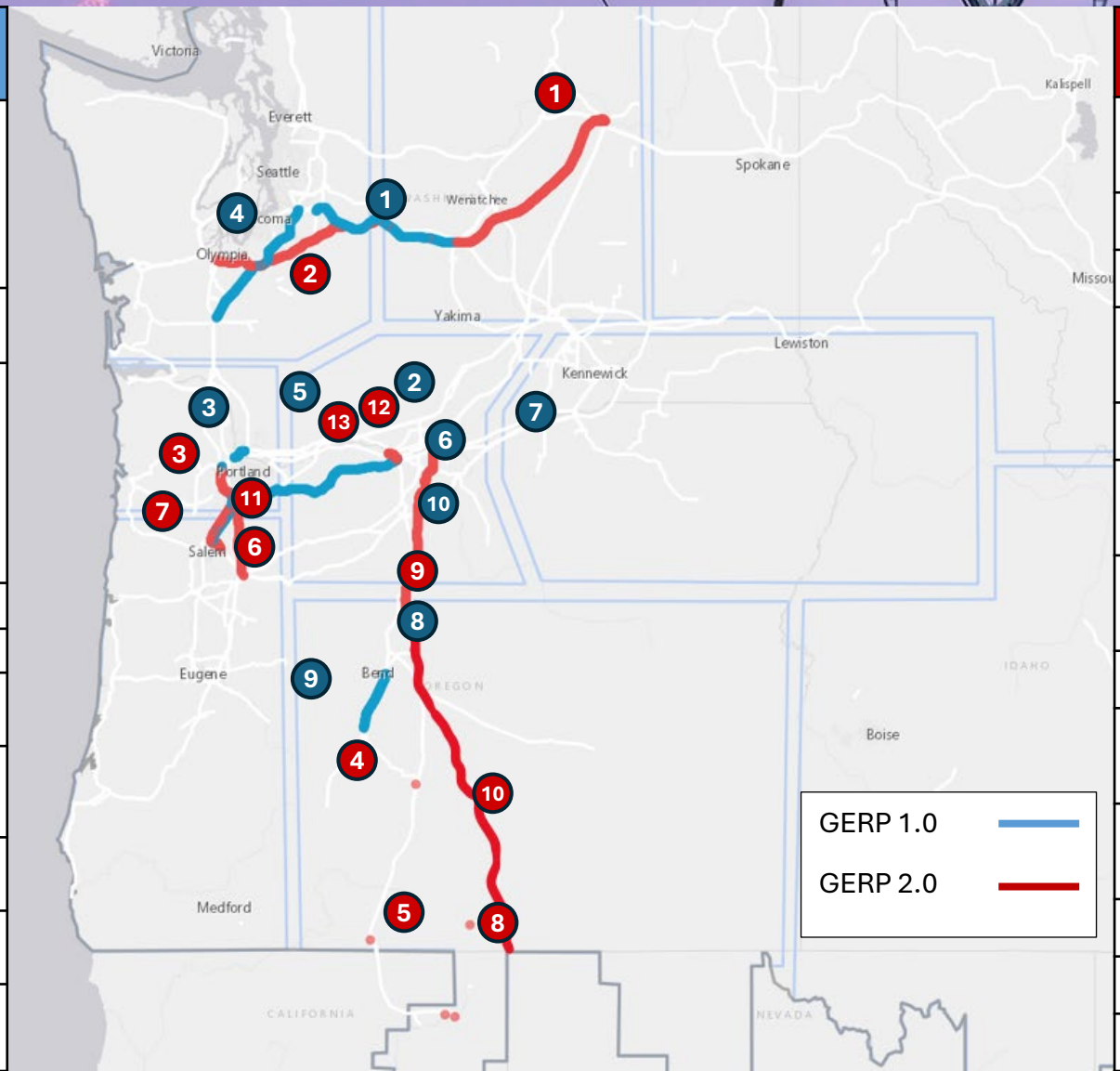


Grid Access Transformation Structure

BONNEVILLE POWER ADMINISTRATION

GERP 1.0 & 2.0 Map

GERP 1.0	
1	Cross Cascades North Upgrades • Schultz-Raver 500 kV Line Upgrade • Paul 500 kV Substation Upgrade • Olympia 230 kV Substation Upgrade
2	Big Eddy-Chemawa 230/500 kV Line Upgrade
3	Portland Area Upgrades • Pearl-Sherwood McLoughlin 230 kV Line Upgrade • Keeler-Horizon 230 kV Line • Keeler 230/500 kV Transformer Addition
4	Chehalis-Covington 230 kV Line Upgrade
5	Ross-Rivergate 230 kV Line Upgrade
6	Rock Creek-John Day 500 kV Line Upgrade
7	Six Mile Canyon 230/500 kV Substation (New Construction)
8	Bonanza 230/500 kV Substation (New Construction)
9	La Pine-Bonanza 230 kV Line (New Construction)
10	Buckley 500 kV Substation Rebuild



GERP 2.0	
1	Grand Coulee-Columbia-Schultz 500 kV Line Upgrade
2	Schultz-Olympia 500 kV Line Upgrade
3	North of Pearl Upgrades
4	Central Oregon 500 kV Dynamic Reactive Upgrades
5	RATS: Reno-Alturas Reactive Addition
6	Salem Area Upgrades #1 (North of Marion)
7	Salem Area Upgrades #2 (North of Marion)
8	NOB Substation (New Construction)
9	Lower Columbia-Bonanza 500 kV Line (New Construction)
10	Bonanza to NOB 500 kV Line (New Construction)
11	Ostrander-Pearl 500 kV Line Upgrade
12	Big Eddy-Quenett Creek Upgrade
13	Big Eddy-The Dalles Line Rebuild

Transmission Challenges

- A robust transmission system is essential for economic, energy and national security
- Currently, the industry faces significant challenges in the following categories:
  - Aging Infrastructure and Replacement
  - Rapid Load Growth and Resource Adequacy
  - Insufficient Transmission Capacity
  - Accelerated Expansion for High Opportunity Transmission
  - Paying/Funding structures
  - Permitting and Supply Chain Challenges
  - **Data Centers**

Resources

- TC-27 Tariff Proceeding: https://www.bpa.gov/energy-and-services/rate-and-tariff-proceedings/tc-27-tariff-proceeding
- Grid Access Transformation: https://www.bpa.gov/energy-and-services/transmission/grid-access-transformation-project
- Grid Expansion & Reinforcement Portfolio: https://www.bpa.gov/energy-and-services/transmission/grid-expansion-and-reinforcement-portfolio