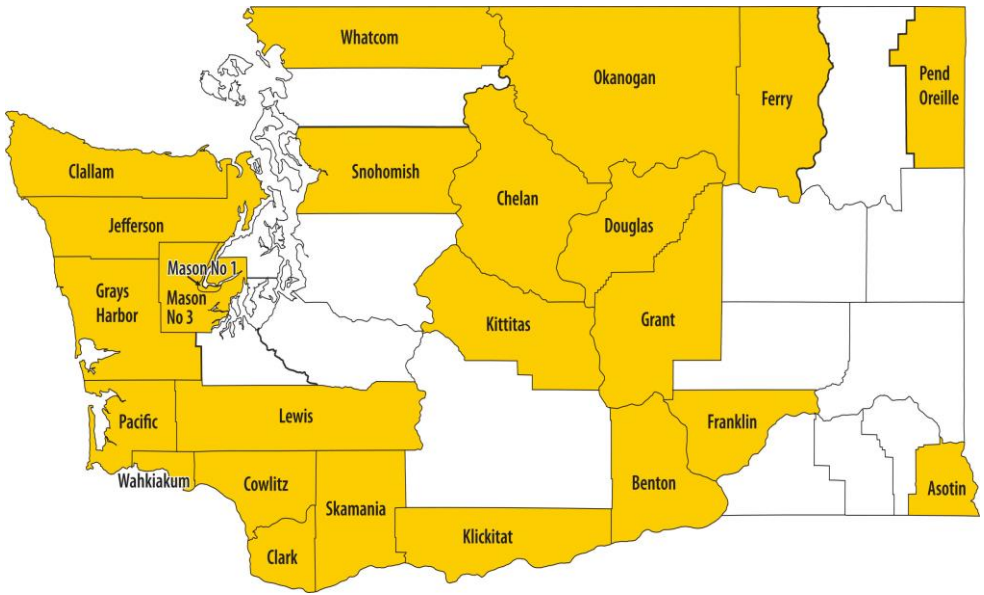
WPUDA: Electric Service

2025 New Legislator Briefing

Nicolas Garcia, WPUDA Policy Director

Retail Electric Service in Washington

Electric PUDs in WA State

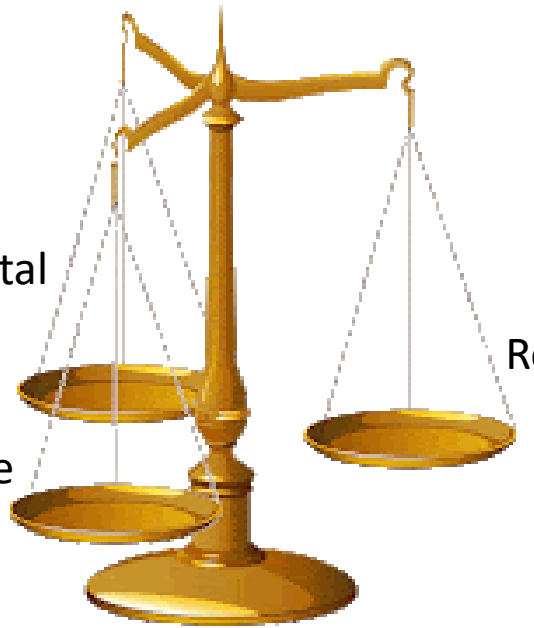


Electric Service Statistics

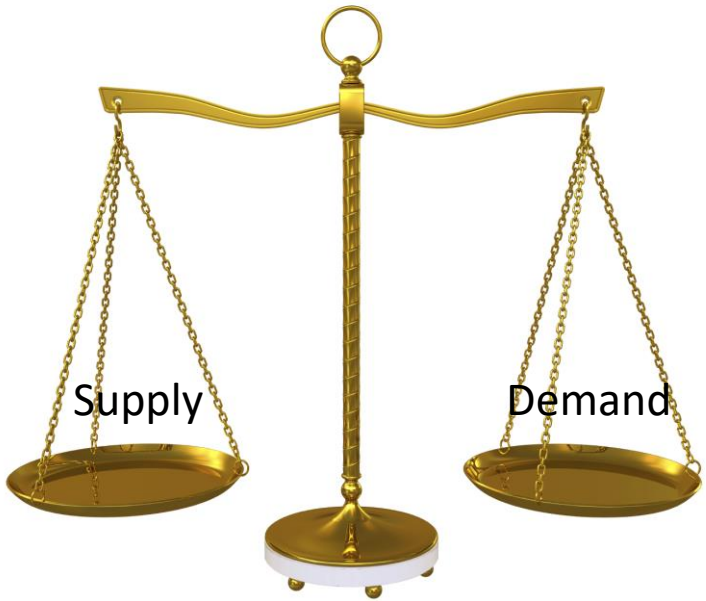
	Number	Customers	Sales Percent/GWhs	
PUDs	24	30%	39%	34,230
Investor-Owned	3	43%	35%	30,755
Municipal	16	21%	18%	16,181
Cooperative	18	5%	6%	4,874

2023 Figures from DOE EIA Report

Twin Electric Utility Balancing Acts

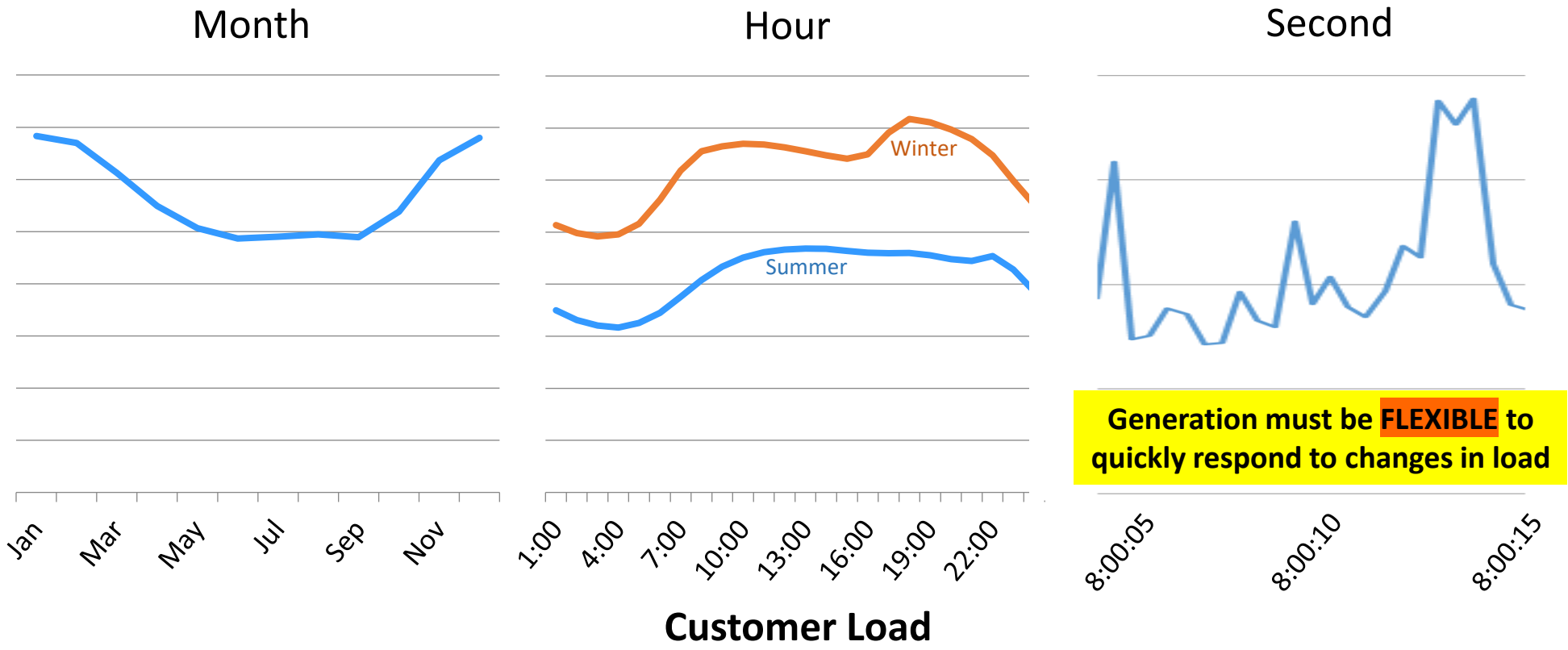


Policy



Operations

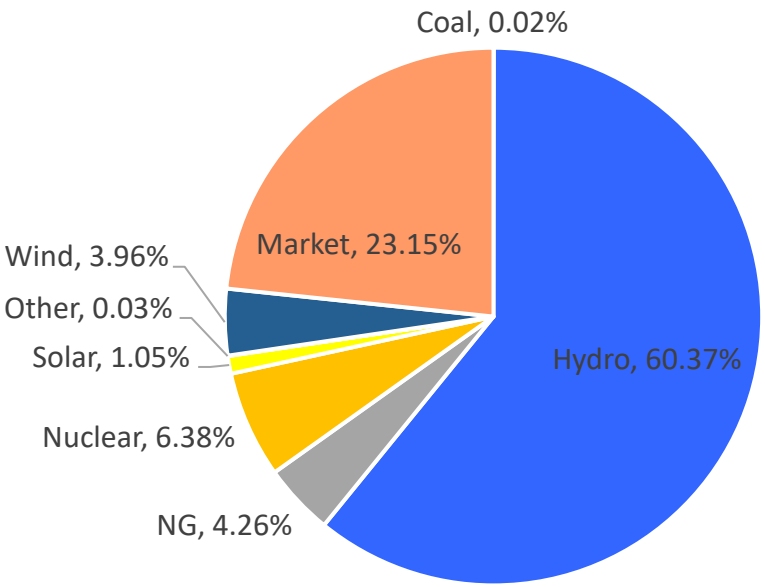
Generation Must EXACTLY Equal Load, Every…



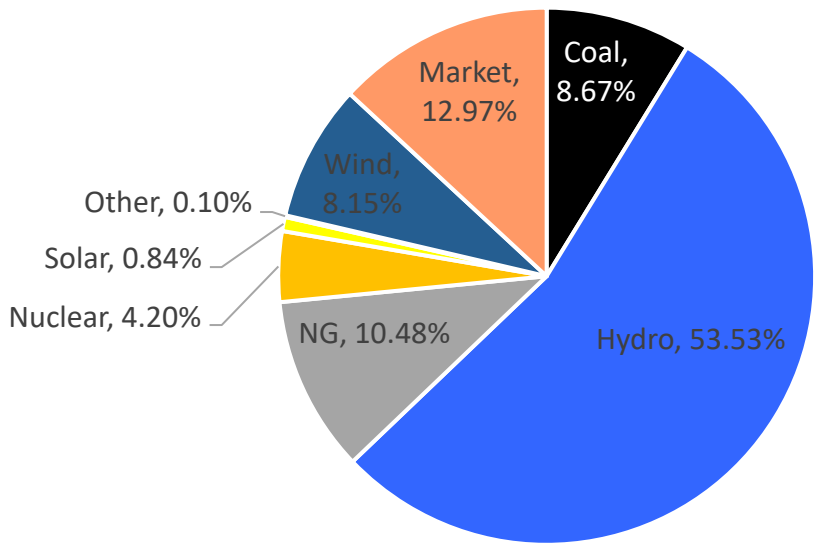
Generation must be FLEXIBLE to quickly respond to changes in load

Utility Resources

PUDs

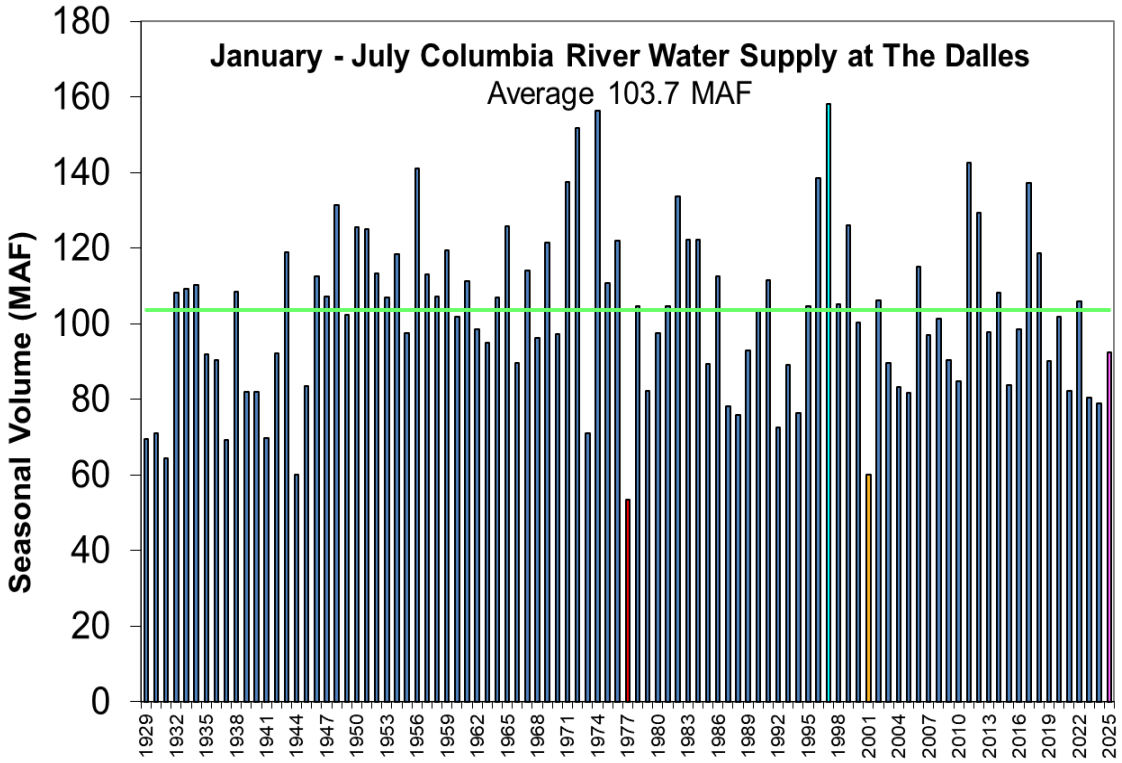


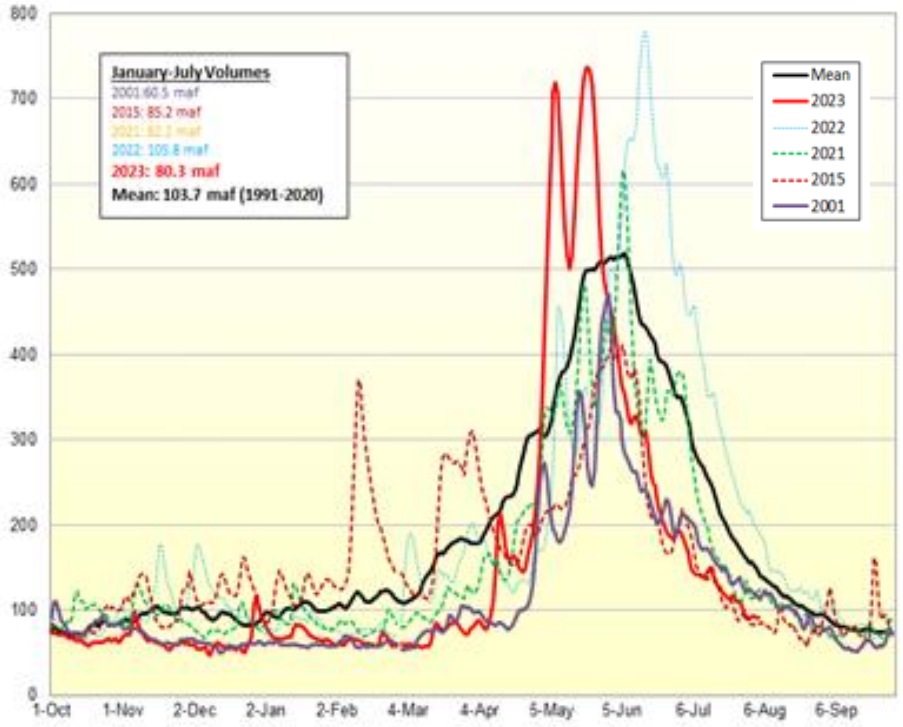
Washington Utilities



Source: 2023 Fuel Mix Disclosure Report (2022 data)

Columbia River Runoff Varies Year-to-Year, Month-to-Month





Storm Clouds Are Gathering

Load Service is already at Risk, Especially During Peak Load Events

1. Load Growth
2. Generation and Transmission Development Challenges
   - Clean Energy Transformation Act (CETA) driving renewable generating technology
   - Permitting
3. Growing Supply Gap

Peak Load Service Already At Risk

PSE Press Release Jan 13, 2024

We are asking customer to conserve natural gas and electricity use through the evening hours. Due to the extreme cold temperatures facing our area, regional utilities are experiencing higher energy use than forecasted, and we need to reduce strain on the grid

Associated Press Report, June 29, 2021

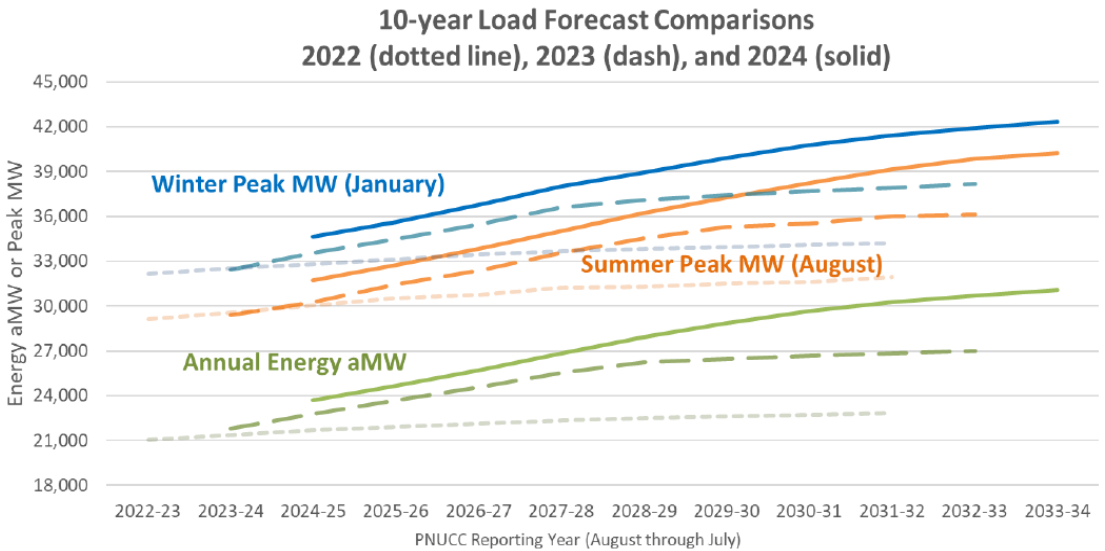
Avista had to implement deliberate blackouts on Monday because "the electric system experienced a new peak demand, and the strain of the high temperatures impacted the system in a way that required us to proactively turn off power for some customers,"

BPA Press Release March 1, 2019

NW energy supplies tight, consumers asked to conserve electricity

Forecast Retail Demand

Demand for electricity could grow by over 30% in next decade



Growth Rates

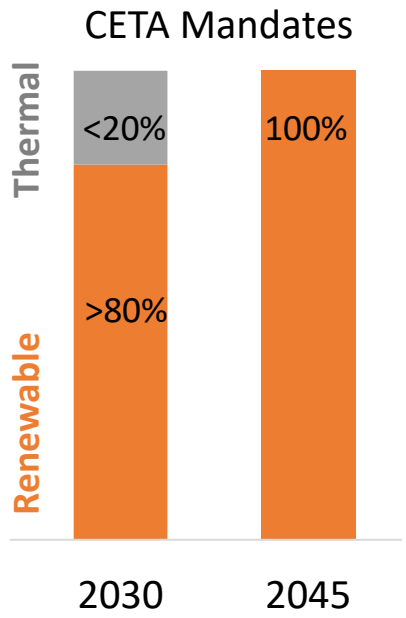
Winter Peak	5 year	10 year
2024 *Forecast*	2.9%	2.3%
2023 *Forecast*	2.7%	1.8%
2022 *Forecast*	1.0%	0.7%

Summer Peak	5 year	10 year
2024 *Forecast*	3.2%	2.7%
2023 *Forecast*	3.3%	2.3%
2022 *Forecast*	1.4%	1.0%

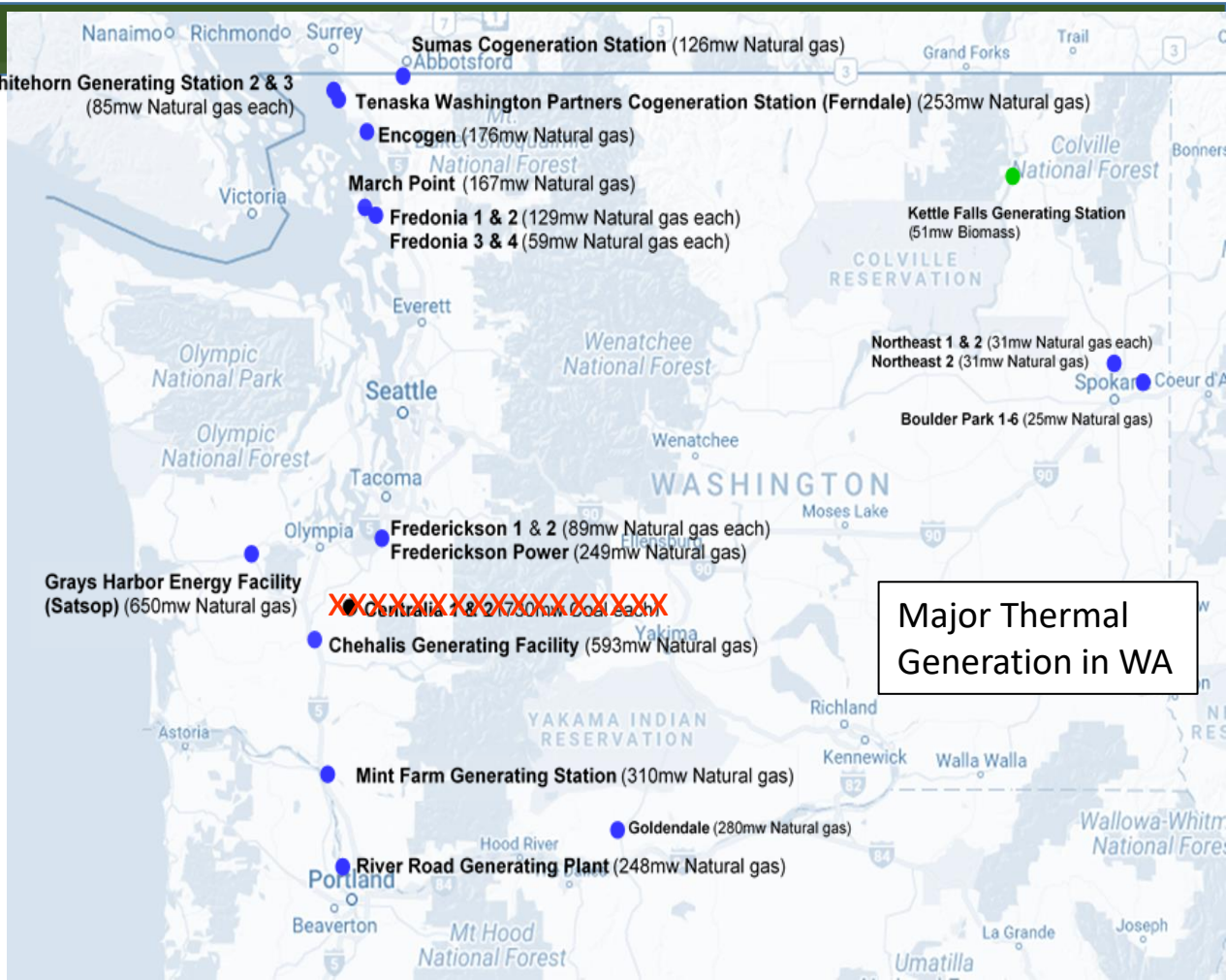
Energy	5 year	10 year
2024 *Forecast*	4.0%	3.1%
2023 *Forecast*	3.8%	2.4%
2022 *Forecast*	1.2%	0.9%

Generation Challenges

WPUDA – YOUR CONNECTION



Must replace more than 4600 MW of Natural Gas Generation

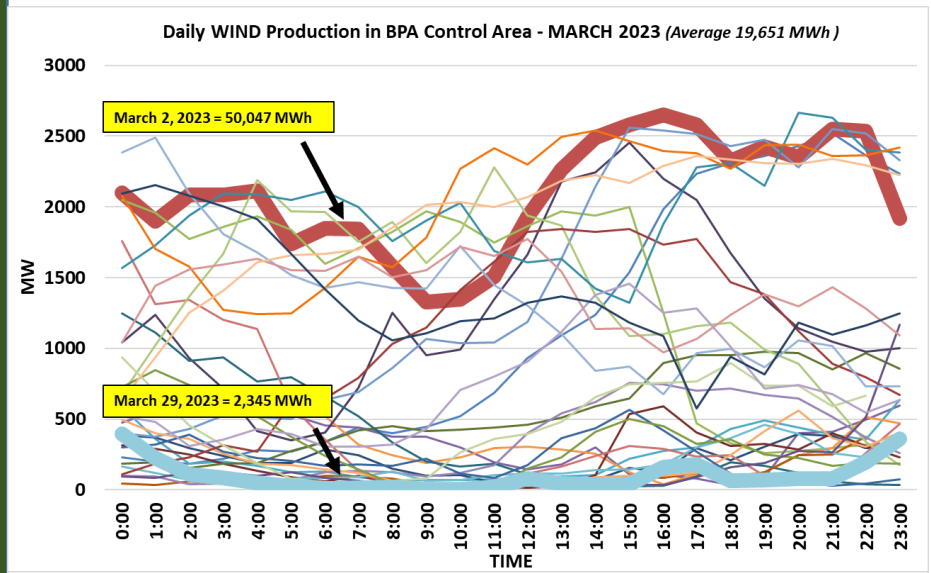


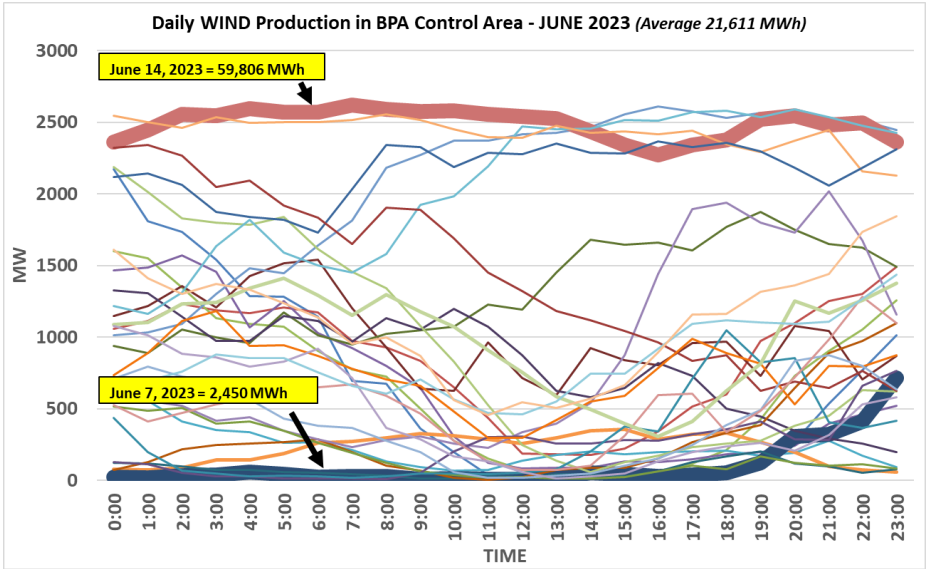
Two Questions Utilities Ask About New Generation

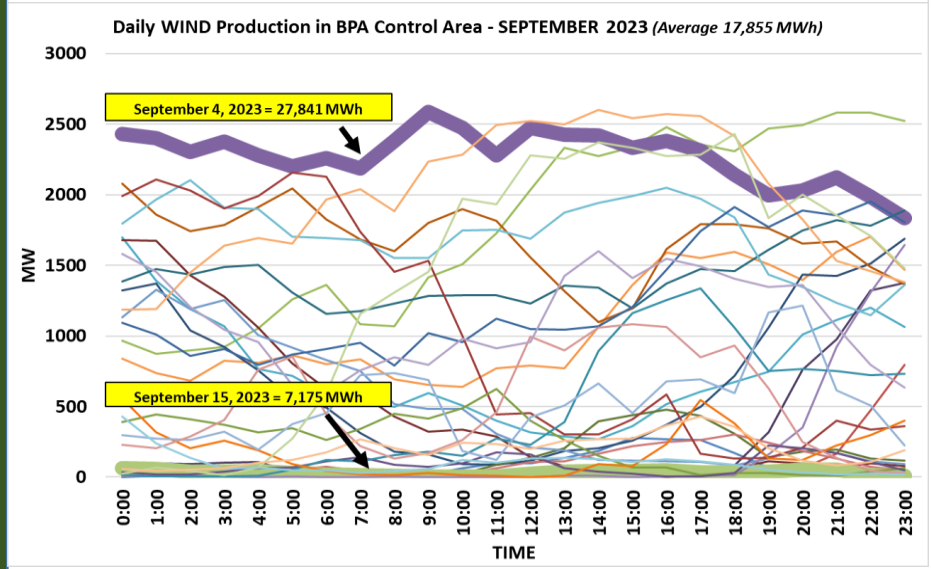
1. ***Can the resource be built?***
2. ***Does it meet the need?***

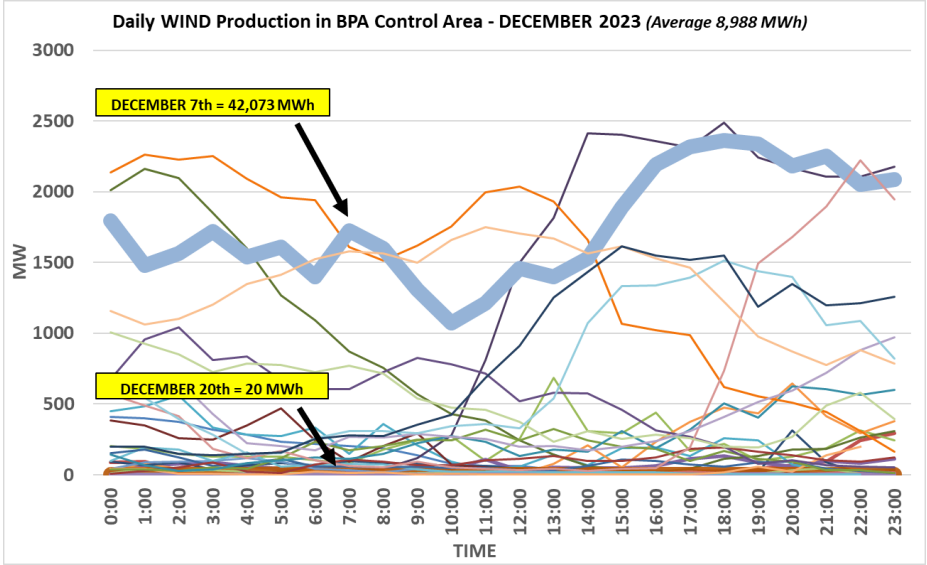
BPA Wind

WPUDA – Your Connection



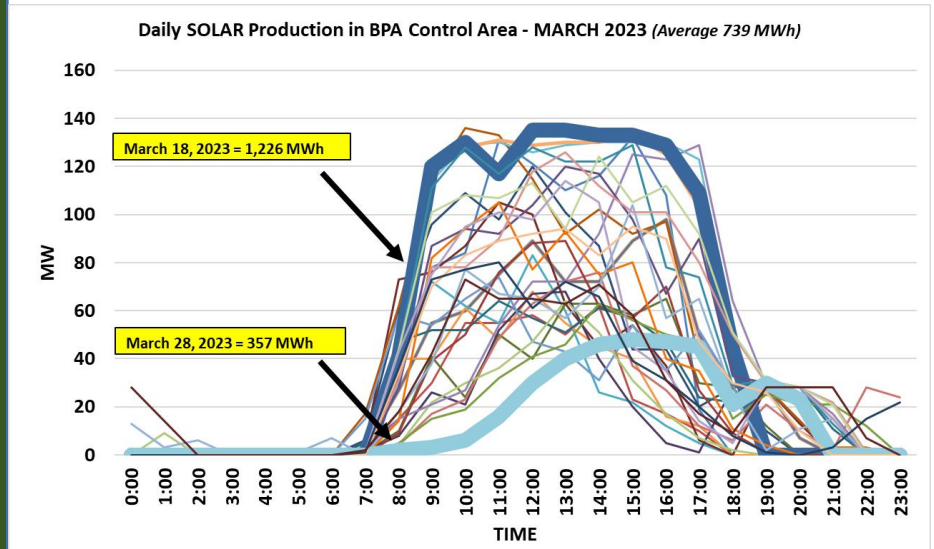


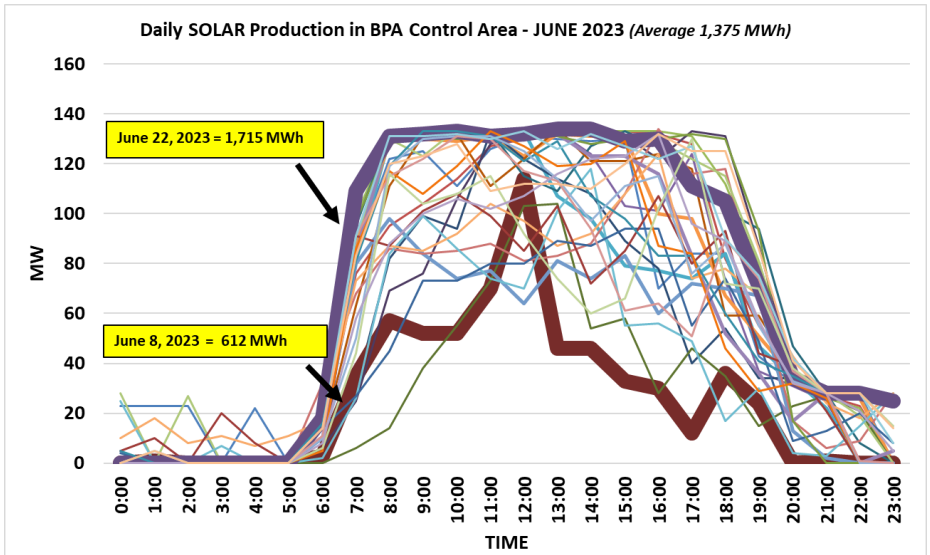


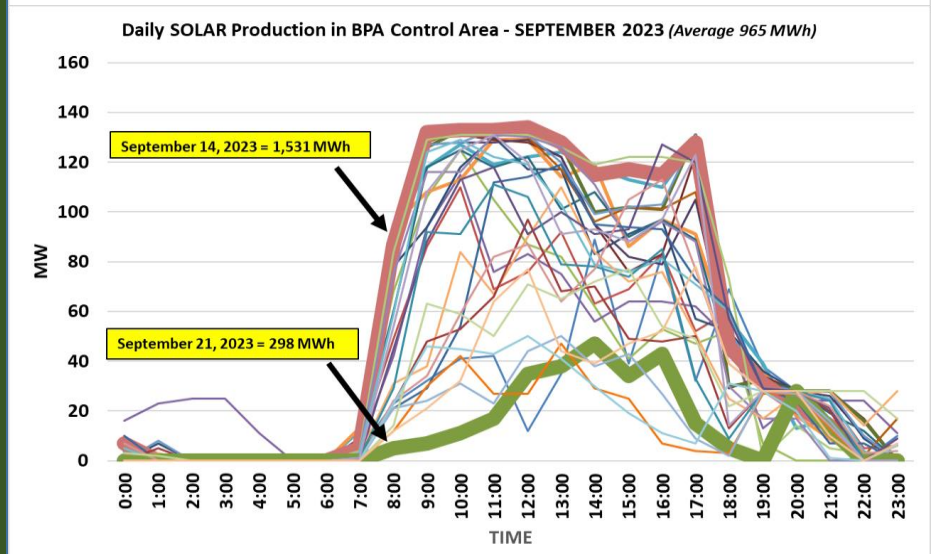


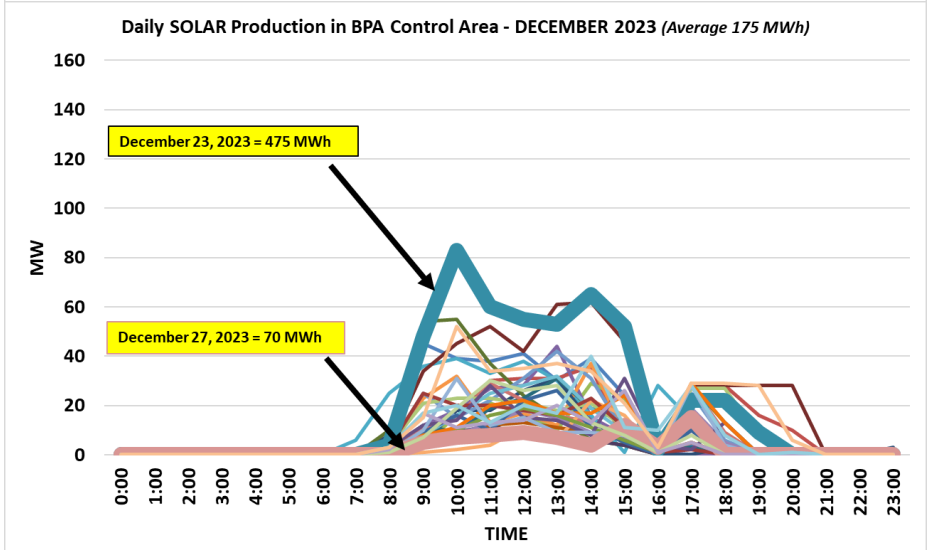
BPA Solar

WPUDA – Your Connection



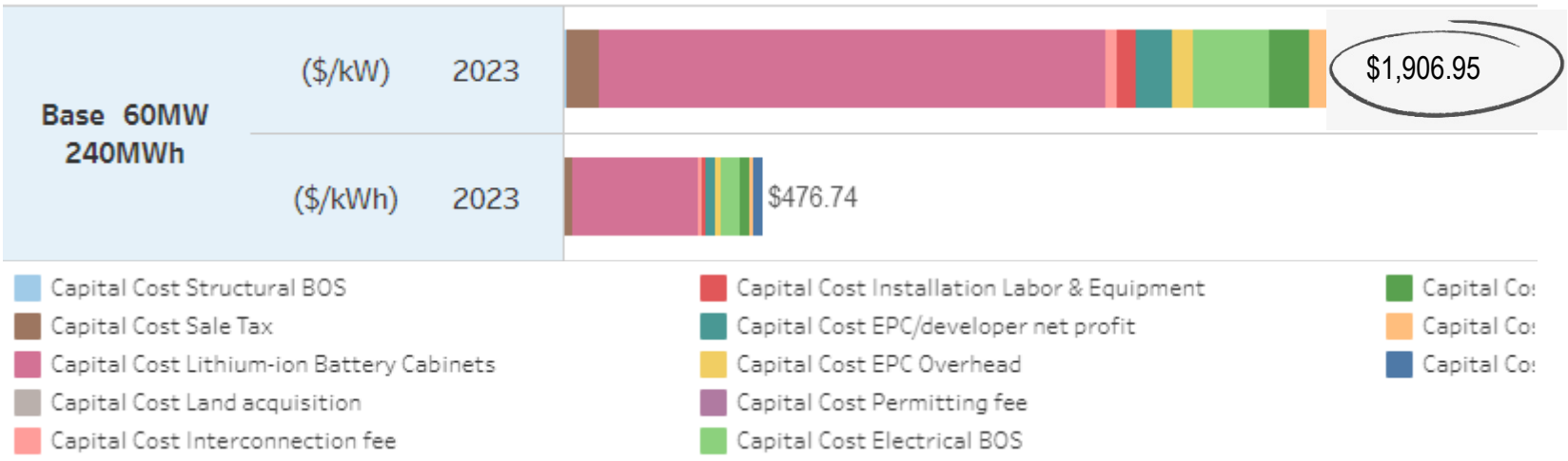






Utility-Scale Battery Storage

60 MW over 4-hours (240-MWh total usable energy)



NREL

ATB data for technologies on the website: https://atb.nrel.gov/

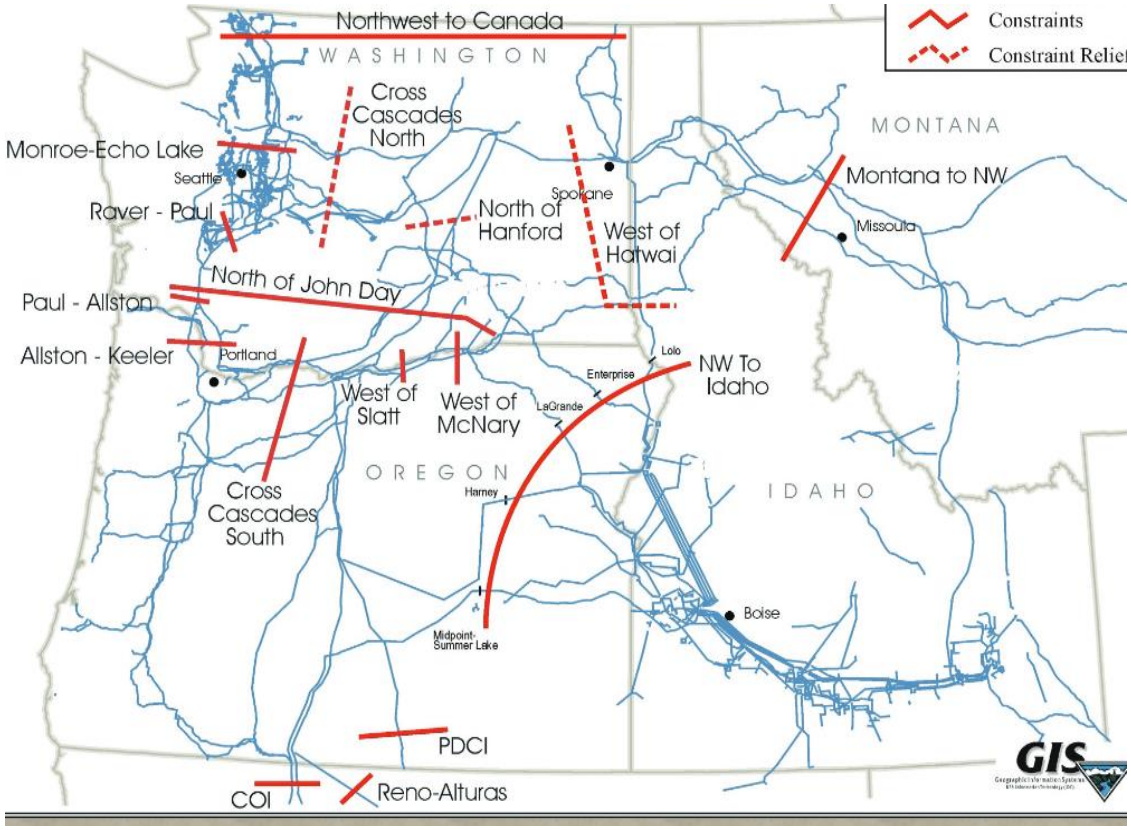
Transmission Challenges

Transmission constraints limit the amount of power delivered to western Washington

Transmission also limits energy imports from Wyoming (wind) or CA/AZ/NM (solar)

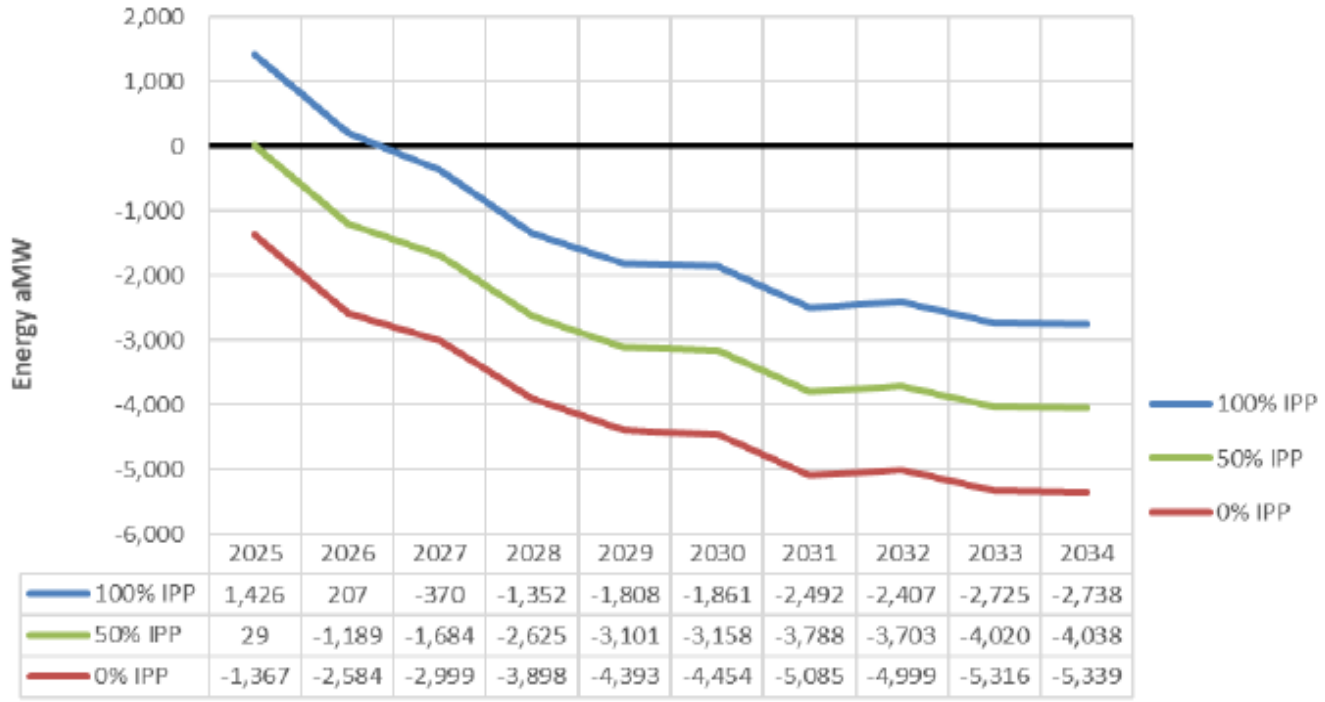
The WA state energy strategy found that a huge amount of new transmission is needed by 2050 outside this state:

- 6 GW from Montana
- 5 GW from Idaho



Forecast Supply Gap through 2034

Table 3-9 PNW Regional Annual Energy Surplus/ Deficit by Uncommitted IPP Generation %



	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
100% IPP	1,426	207	-370	-1,352	-1,808	-1,861	-2,492	-2,407	-2,725	-2,738
50% IPP	29	-1,189	-1,684	-2,625	-3,101	-3,158	-3,788	-3,703	-4,020	-4,038
0% IPP	-1,367	-2,584	-2,999	-3,898	-4,393	-4,454	-5,085	-4,999	-5,316	-5,339

Sources: 2024 Pacific Northwest Loads and Resources Study, BPA

2024, Lazard: "…diverse generation fleets will be required to meet baseload power needs "

As electricity generation from intermittent renewables increases, the timing imbalance between peak customer demand and renewable energy production is exacerbated…

[T]he optimal solution for many regions is to complement new renewable energy technologies with a "firming" resource such as energy storage or new/existing and fully dispatchable generation technologies (**of which CCGTs remain the most prevalent**).

…alternative energy systems alone will not be capable of meeting the base-load generation needs of a developed economy for the foreseeable future. The optimal solution is to use in a diversified generation fleet. -Lazard, 2017

2025 Legislative Issues

1. **Add an alternative compliance mechanism for utilities to meet EIA renewable energy mandate**

   Focus customer resources on actions that improve local grid resiliency.

2. **Consider the impacts to utility costs and grid reliability when considering legislative bills**

   For example, Bills supporting Electric Vehicles and Electric Vehicle Charging Infrastructure

3. **Establish a Public Safety designation for resources necessary for grid reliability**

4. **Other:**

   Exempt utility service vehicles from fleet electrification mandates

   Remain neutral on BPA's day-ahead market decision

   Do not establish EV chargers up-time standards

   Support utility wildfire liability reform

   Low-income assistance

These requests: a) improve grid reliability; b) benefit customers; and c) reduce utility costs
These requests do not: d) impact state finances; or, e) undermine state long-term policy objectives

Questions?

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WASHINGTON PUBLIC UTILITY DISTRICTS ASSOCIATION
WPUDA
YOUR connection

Generation Types have Different Attributes