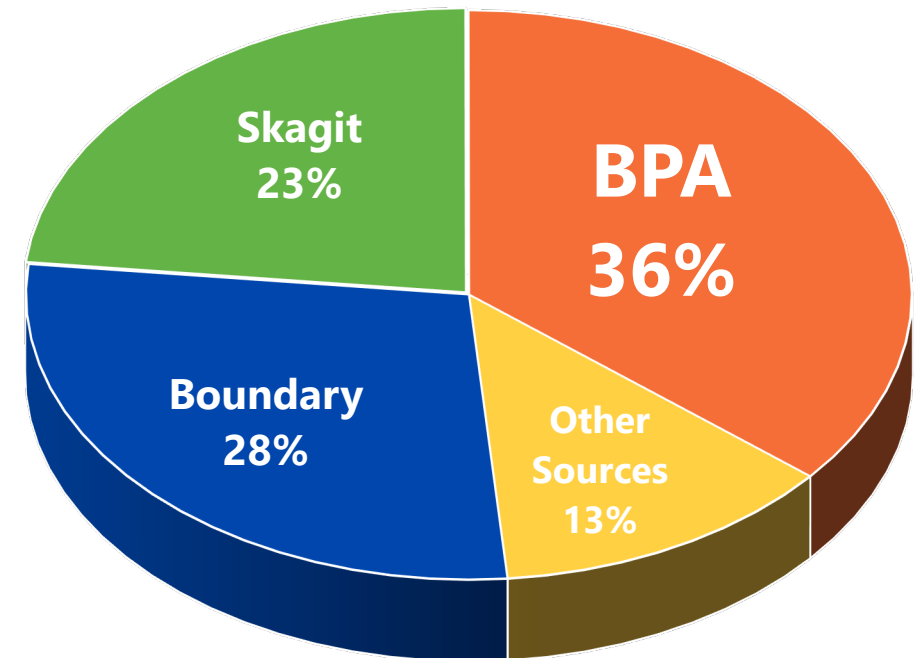


Introduction to Seattle's Power Supply: Bonneville Power Administration (BPA)

Sustainability, City Light, Arts & Culture Committee Meeting
March 1, 2024

One Third of Seattle's Electricity Comes from BPA

- Power
 - 36% of our power supply
 - \$37.93/MWh, below market value
- Transmission
 - Transports power from Boundary Dam and Mid-C trading hub to Seattle
 - "Firm" rights – guaranteed access
- \$191M per year contract cost
- Power purchase agreement is a 17-year contract that expires October 1, 2028



City Light Electricity Sources, 2021

What is the Bonneville Power Administration (BPA)

BPA delivers reliable, affordable and carbon-free hydropower produced in the Columbia River Basin to communities across the Northwest.

- Agency within the US Department of Energy with appointed Administrator and ~2,400 federal employees
- Funded primarily by cost-based rates paid by NW public utility customers
- Provides 28% of the power in the Northwest
- Provides power to 3 million people in the Northwest (ID, MT, OR & WA)
- Maintains 15,000+ circuit miles of high voltage lines
- Markets the hydropower from 31 federal dams in the Northwest
- Northwest Power Act was passed in 1980 to mitigate the impact on fish & wildlife from the hydropower system while providing affordable, reliable electric supply

Bonneville
POWER ADMINISTRATION



BPA: Regional Power Provider

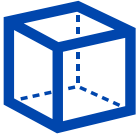


Sources: Esri, Bonneville Power Administration

MARK NOWLIN / THE SEATTLE TIMES

Power Supply: BPA Block Contract

- Three BPA power product options:



Block



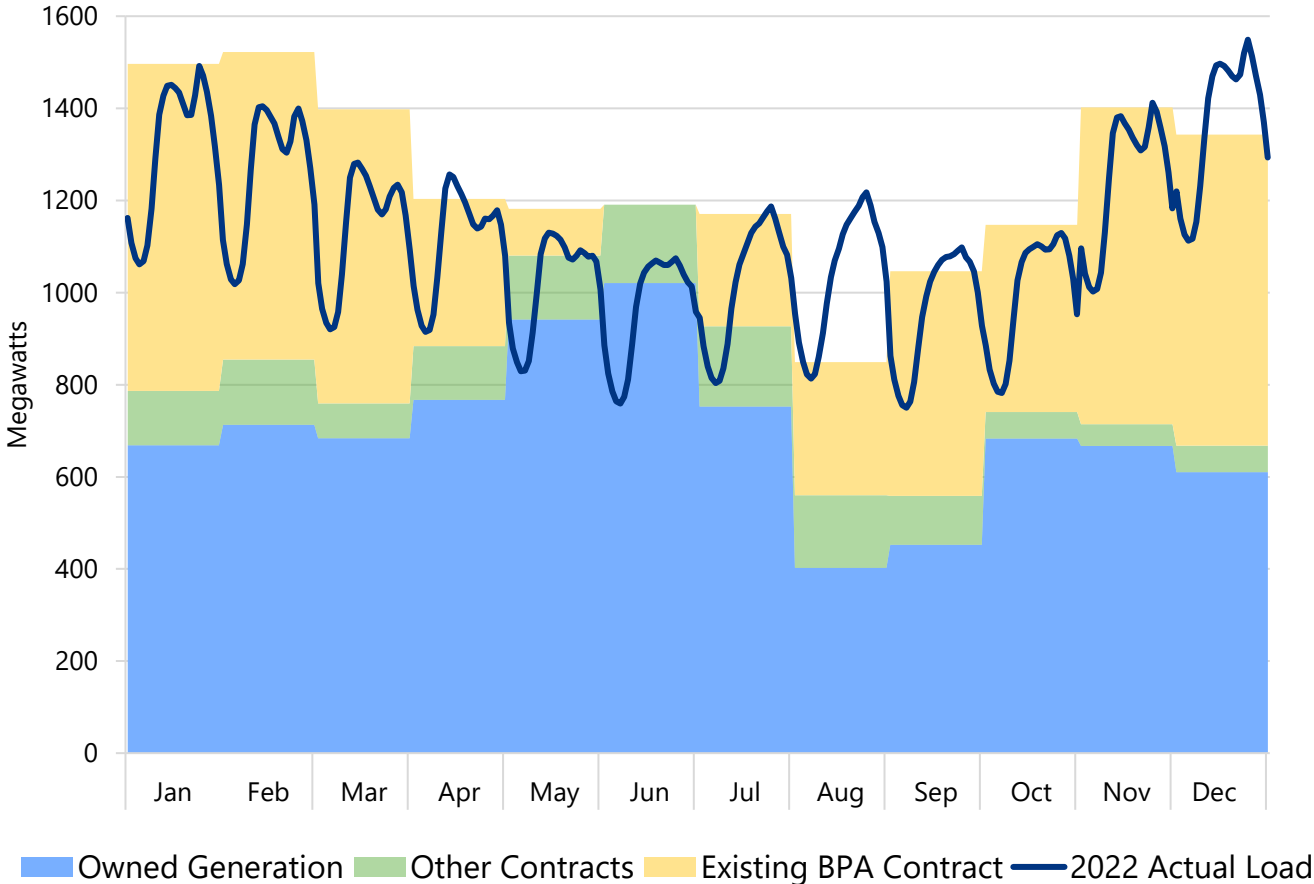
Slice



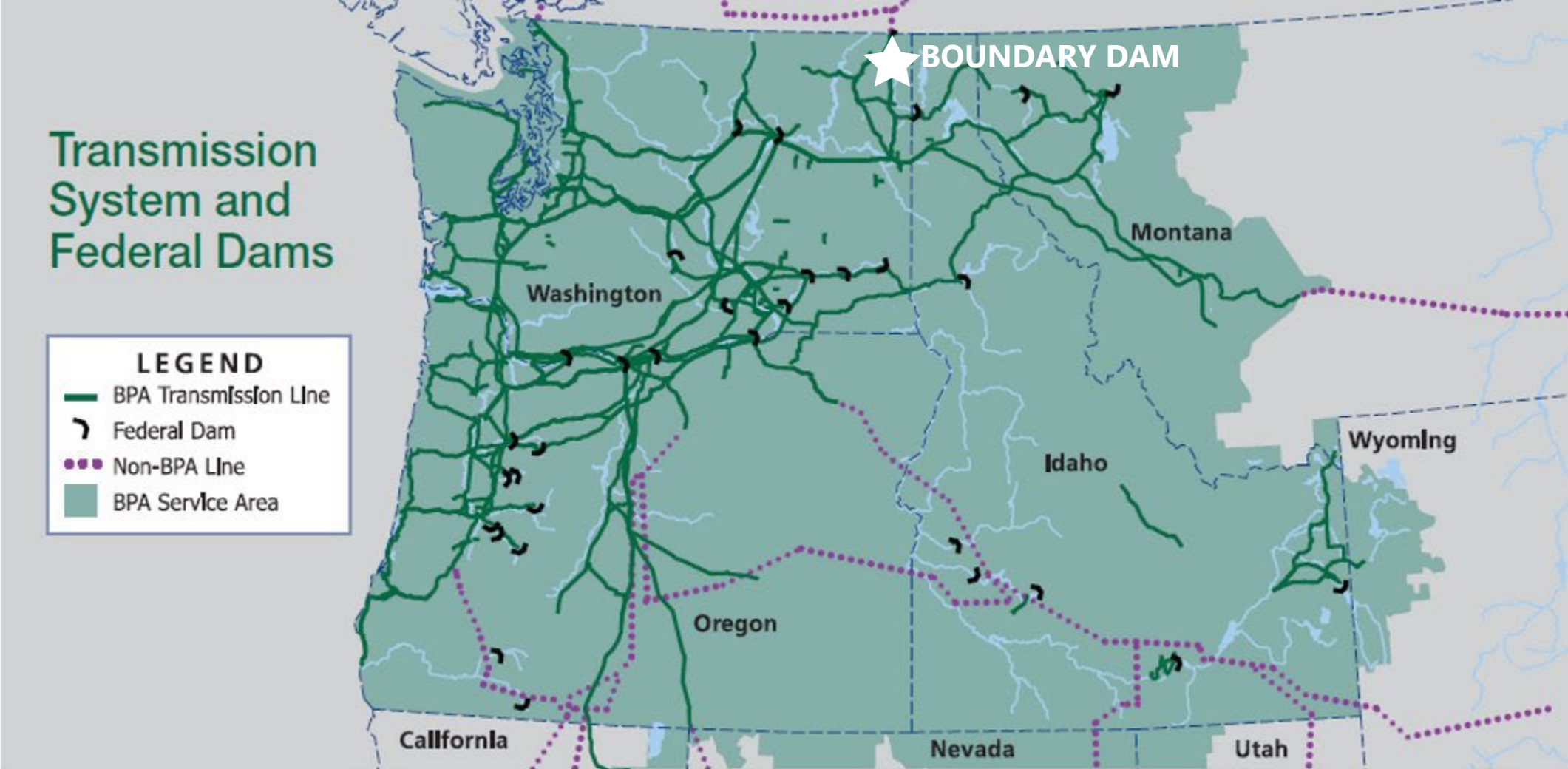
Load Following

- Seattle City Light buys “Block”, which provides shaped electricity tailored to our needs
- More in winter when electricity demand is higher
- Less in spring when our hydro generation is higher
- Also shaped intra-day between heavy and light demand hours

Seattle City Light Load-Resource Balance



BPA: Regional Transmission Provider



BPA Policy Issues & Upcoming Decisions

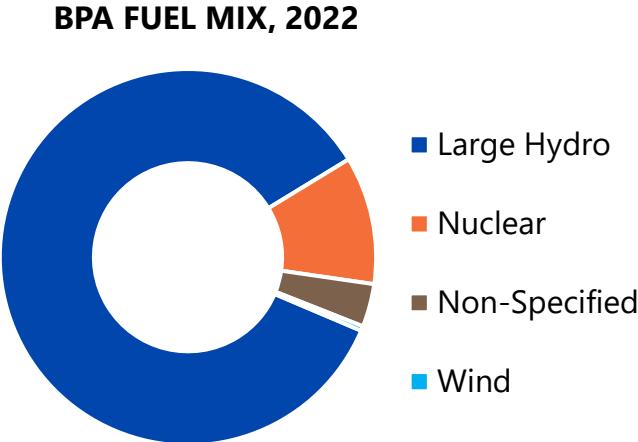


BPA Regional Policy Issues

- ➔ 1. Post-2028 contract development
- ➔ 2. Day-Ahead Market choice
- ➔ 3. Transmission system expansion & generator interconnection
- 4. Environmental litigation related to the Lower Snake River Dams
- 5. Columbia River Treaty
- 6. Residential Exchange Program
- 7. Energy Imbalance Market
- 8. Western Resource Adequacy Program

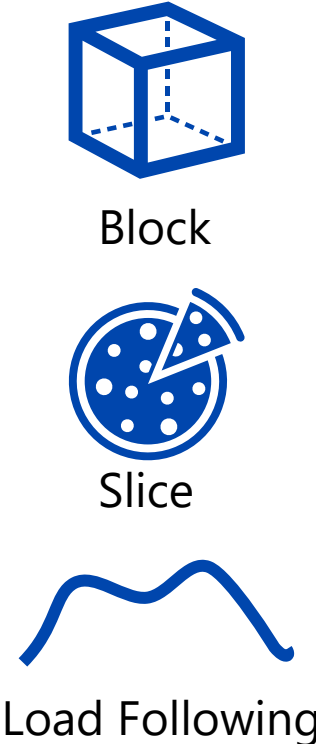
Post-2028 Contract Development

Emissions Policy

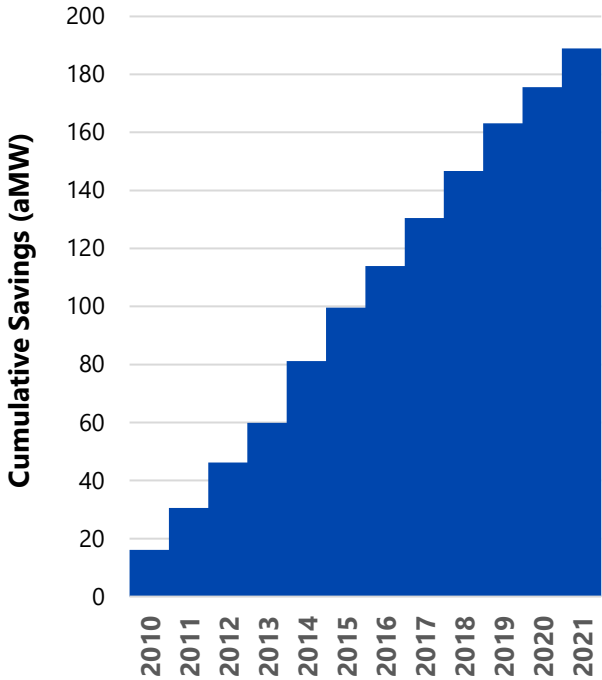


Source: www.bpa.gov/-/media/Aep/power/fuel-mix/2022-bpa-fuel-mix.pdf

Product Design



Energy Efficiency



Upcoming Decision: Day-Ahead Market

Which to join?

Option 1:

Extended Day-Ahead Market (EDAM)
with California Independent System Operator (CAISO)



Option 2:

Markets Plus (Markets+)
with Southwest Power Pool (SPP)



Option 3: Nothing

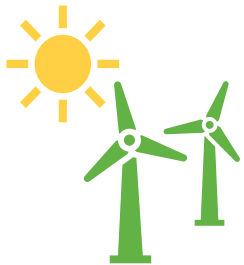
Regional Need for More Transmission



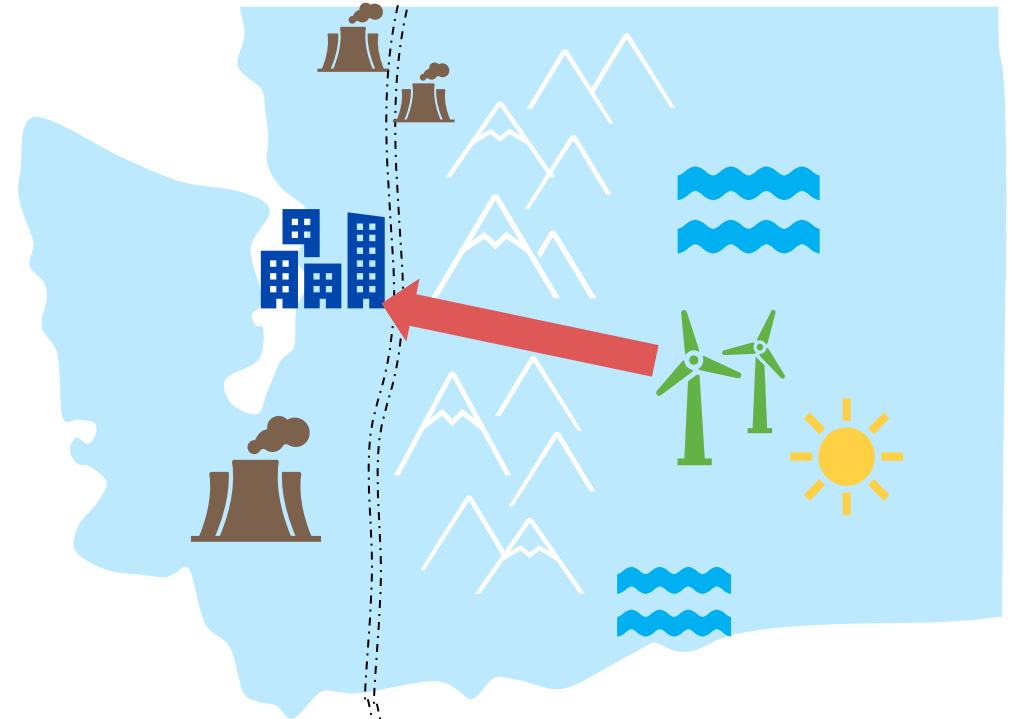
Demand for electricity growing due to tech industry growth, building and transportation electrification



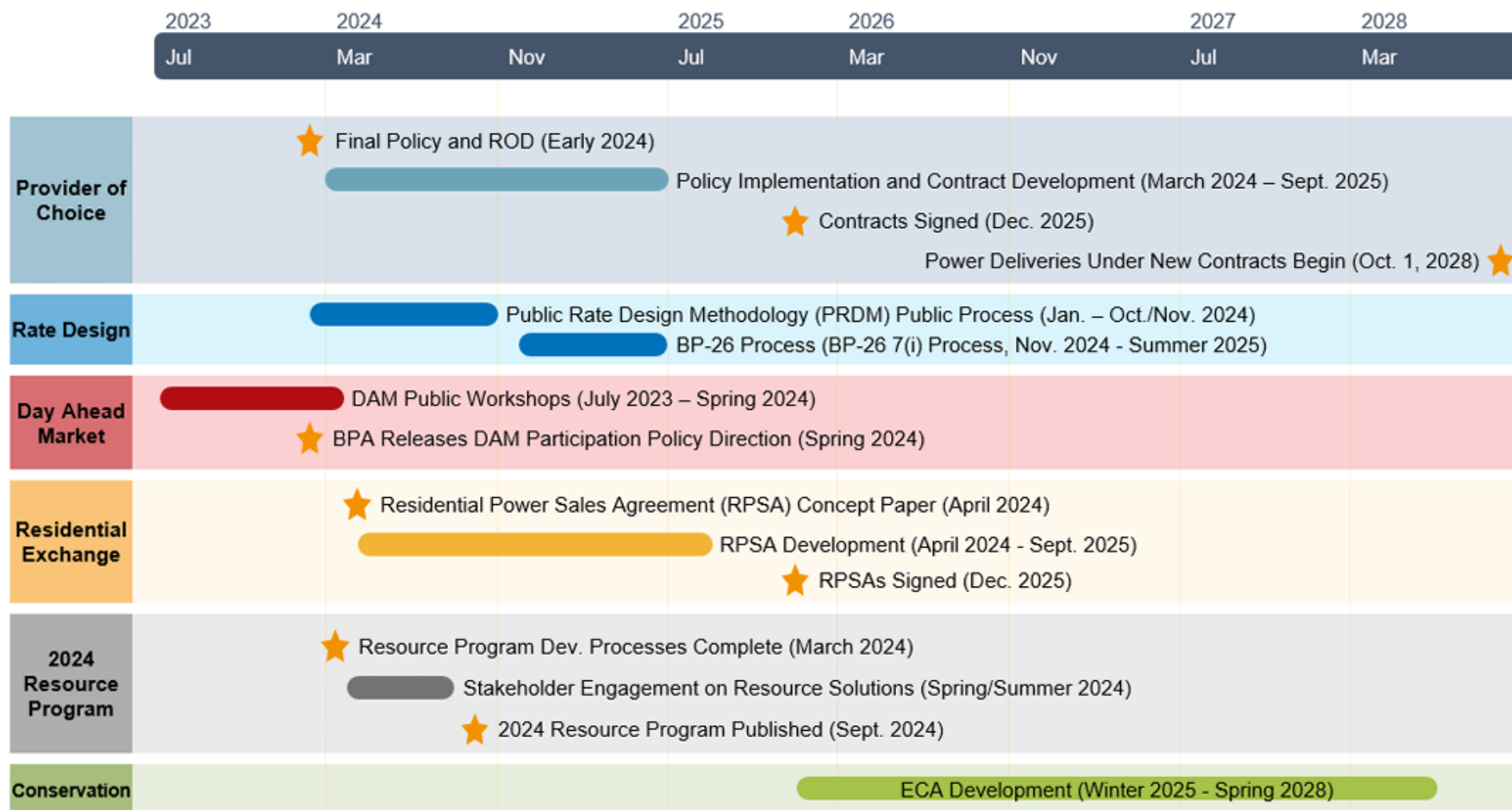
Reduced operation of "thermal" (gas & coal) power plants along I-5 corridor



New resources from wind and solar located east of the Cascades



Timeline for Upcoming BPA Policy Decisions





Seattle City Light

seattle.gov/city-light

