Briefing on the 2021 Power Plan

Decarbonizing the Northwest: Decarbonization and Load Growth: Maintaining our Focus

June 1, 2022



THE 2021 NORTHWEST

POWER PLAN

FOR A SECURE & AFFORDABLE ENERGY FUTURE

The Northwest Power and Conservation Council

The 1980 <u>Northwest Power</u> <u>Act</u> authorized Idaho, Montana, Oregon, and Washington to develop a regional power plan and fish and wildlife program to balance the Northwest's environment and energy needs.

Three main tenets:

- Adequate, efficient, economical, reliable **power** system
- Protect, mitigate, & enhance fish and wildlife
- Open **public** process



NORTHWEST POWER PLAN

The Council's Power Plan

- Goal: Ensure an adequate, efficient, economical, reliable power supply
 - Focused on the electric system
 - Provides a long-term (20 year) perspective
 - Aims for a resource strategy meeting regional needs while managing cost and risk
 - Includes recommendations for Bonneville and the region around implementation
- How is the Plan Used?
 - Guides Bonneville Power Administration's resource decisions
 - Independent reference for all of the region's utilities, regulatory commissions, and policy-makers





https://www.nwcouncil.org/2021-northwest-power-plan/

2021 Power Plan: The Energy Landscape is Changing

Many changes since the Seventh Power Plan release

- State **clean policies across WECC** resulting in:
 - Significant coal retirements
 - Large renewable builds
- Dramatic **decrease in price** for alternative resources:
 - Market prices are rapidly decreasing and frequently negative by ~2030
 - Renewables cost have come down significantly
 - Decrease in price of combustion turbines
 - Decrease in gas prices
- Meanwhile, less low-cost energy efficiency
- Increase of renewables results in **dispatchability** being of paramount importance



Key Elements of the 2021 Plan's Regional Resource Strategy



Renewables

• Significant renewable build recommended (>3.5 GW by 2027), due to their low costs, interruptibility, and carbon reduction benefits. This build out will impact the transmission system.



Existing System

• Greater potential flexibility in the hydro system and the ability to more effectively use our thermal fleet to provide reserves is needed, collectively reducing regional needs and supporting the integration of renewables



Energy Efficiency

• Significantly less acquisition (750-1000 aMW by 2027) than prior plan due to greater costcompetitiveness with other resources, not being dispatchable, and being sensitive to market prices



Demand Response

• Products that provide highest value to the system are those that can be regularly deployed at low cost and with minimal to no impact on customer (e.g. Demand Voltage Regulation, Time Of Use tariffs)



Note: Plan includes projected impacts of climate change on future loads, hydro availability, and temperatures





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Role of Deep Decarbonization in Power Sector

- Aggressive emissions reduction could increase electrical load by ~50%
- To fill the greater need, more resources (renewables, EE, DR) are built
- Plan recognizes differing jurisdiction policies to decarbonization and encourages those pursuing it, to do so efficiently



