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> **Ted Ferrioli** Oregon

Guy Norman Washington

Patrick Oshie Washington



Bo Downen Vice Chair Montana

Jennifer Anders Montana

> Jim Yost Idaho

Jeffery C. Allen Idaho

July 7, 2020

MEMORANDUM

TO: Council Members

FROM: Ben Kujala, Chad Madron

SUBJECT: Power Plan Project Timing Check-In

BACKGROUND:

Presenter: Ben Kujala, Chad Madron

Summary: Staff will provide an overview of power plan related presentations and

findings to date and discuss schedule for the next six months of power

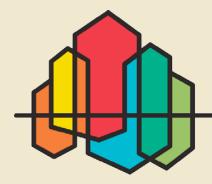
committee work.

We will also provide an update on power plan process tasks and status of

current work.

503-222-5161 800-452-5161 Fax: 503-820-2370

2021 NW Power Plan Status

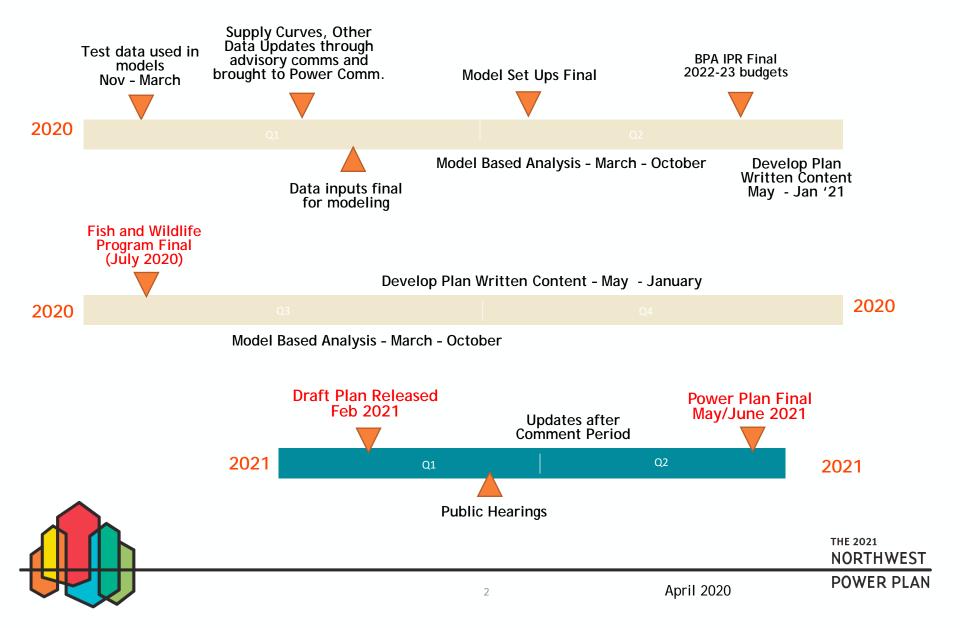


THE 2021
NORTHWEST

POWER PLAN

FOR A SECURE & AFFORDABLE ENERGY FUTURE

2021 Power Plan Work Schedule



Scenario Analysis

- BPA scenario <u>update</u> (06/2020)
- Review of Plan Scenarios Part 1 (01/2020) & Part 2 (02/2020)
- Scenarios proposed for inclusion (07/2019)

Resource Strategy

- Briefings on Power Plan Analytical Process (02 04/2020)
- <u>Updates</u> to RPM Methodologies (01/2020)
- Overview of Plan and how the proposed resource strategy is developed (05/2019)



- Conservation and Energy Efficiency
 - <u>EE Supply Curves</u> for Baseline and for Scenario Analysis (05/2020)
 - EE Typical Meteorological Year Adjustment (04/2020)
 - Draft EE Supply Curves (03/2020)
 - Briefing on Lighting Standards and Considerations for the 2021 Power Plan (02/2020)
 - <u>Update</u> on planning parameters for EE supply curves (08/2019)

Generation Resources

- <u>Summary</u> of primary generating resource reference plants and emerging tech reference plant for draft 2021 Power Plan (06/2020)
- <u>Update</u> on Existing System, Coal Retirements, and Policies (05/2020)
- <u>Update</u> on historical regional greenhouse gas emissions (04/2020)
- <u>Draft natural gas reference plants</u> & <u>Draft conventional geothermal reference plant</u> (02/2020)
- <u>Draft Pumped storage reference plant</u> (12/2019)
- Onshore Wind Generation Reference Plant (11/2019)
- Solar, Battery Storage, and Solar + Battery Storage <u>Reference Plants</u> (10/2019)
- Review of Existing System and WECC-Wide Coal Retirements (09/2019)



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- Load and Price Forecasts
 - Briefing on upstream methane in Power Plan (06/2020)
 - BPA Load forecast (04/2020)
 - Out-of-region load forecast and California climate-inclusive load forecast (04/2020)
 - <u>Updates</u> to load and other forecasts based on GCM Selection (02/2020)
 - Further Detail on <u>Load Forecast</u> (10/2019)
 - <u>Forecast</u> of Draft Loads w/Frozen Efficiency for 2021 Power Plan/Related GCMs, (09/2019)
 - Economic drivers for the plan (04/2019)
 - <u>Upstream Methane</u> (01/2020)
 - <u>Update</u> on Wholesale Electricity Price Forecast and Avoided Emissions Rate (11/2019)
 - Natural Gas Price <u>Forecast</u> for 2021 Power Plan (11/2019)
- Climate Change
 - <u>Update</u> on Climate Scenario Selection (04/2020)
 - General Circulation Model Scenario Selection (11/2019)
 - Intro to Climate change and the 2021 power plan (04/2019)

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PLUS:

- <u>Update</u> on New Version of GENESYS (05/2020)
- Draft DR Supply Curves (03/2020)
- Review State Clean Energy Policies and Impact on 2021 Plan Analysis
- Briefing on methodology for quantifying the environmental costs and benefits of new resources for the 2021 Power Plan (09/2019)
- Environmental Methodology Development Primer (8/2019)
- Establishing global financial and economic <u>assumptions</u> for the 2021 Power Plan (07/2019)
- Establish existing system parameters and interpret state policies (07/2019)
- <u>Consistent Treatment</u> of Quantifiable Resource Costs (03/2019)
- Proposed discount rate for the 2021 Power Plan (02/2019)



This Month

- Development of technical written material for the Power Plan
- Survey of existing stakeholders re: power plan written content



August

- System Adequacy (ASCC/ARM)
- Electricity Price Forecast
- Muncipal and Similar Policy Goals

September

- Baseline Conditions Runs
- EE Robustness
- Extra Regional Markets and Adequacy

October

- Markets for Energy/Capacity
- Greenhouse Gas Tipping Point
- Bonneville Portfolio

November

- Pathways to Decarbonization
- Bonneville Portfolio Continued
- Early written material review

December

- Scenario findings summary
- Written material for plan review

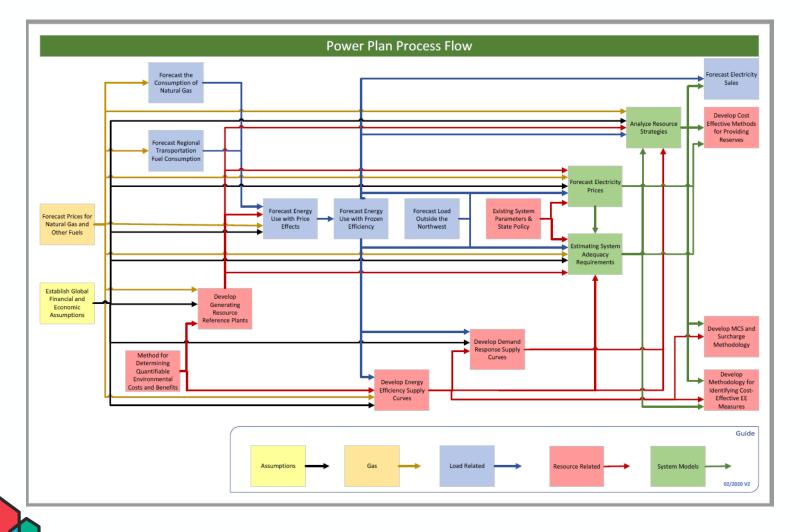
January

 Written material for plan review



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Plan Process Status



Power Plan Process Flow Forecast the Forecast Electricity Consumption of Sales Natural Gas **Develop Cost** Effective Methods Analyze Resource Strategies for Providing Reserves Forecast Regional Transportation **Fuel Consumption Forecast Electricity** Prices Forecast Energy **Existing System** Forecast Energy Forecast Load **Forecast Prices for** Use with Price Use with Frozen Outside the Parameters & Natural Gas and Effects Efficiency State Policy Northwest Other Fuels Estimating System Adequacy Requirements Establish Global Develop Financial and Generating Economic Resource Assumptions **Reference Plants** Develop MCS and Surcharge **Develop Demand** Methodology **Response Supply** Method for Curves Determining Quantifiable Develop Environmental Develop Energy Methodology for **Costs and Benefits Efficiency Supply Identifying Cost-**Curves Effective EE Measures Guide Load Related System Models Assumptions Gas Resource Related 02/2020 V2