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February 2, 2021

MEMORANDUM

TO: Power Committee

FROM: 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 the schedule for the coming months of power committee work.

2021 NW Power Plan Status



THE 2021
NORTHWEST
POWER PLAN

FOR A SECURE & AFFORDABLE
ENERGY FUTURE

Topics From Last 3 Months

- December 15
 - Power Plan timing [overview](#) - Including new proposed draft release date
 - [State of Electric Utilities 2019](#)
 - [DEI at Advisory Committees](#) - key takeaways
 - [Overview](#) of updates to Regional Portfolio Model
 - [First look](#) at Baseline Conditions RPM Results
 - [Adequacy results](#) from Redeveloped GENESYS
- January 12
 - Power Plan Timing [Update](#)
 - [Overview](#) of Hydrogen
 - [Exports/Imports in RPM](#)
 - [Review](#) of Baseline Conditions Modeling Results
- January 28
 - [Update](#) on Power Plan Needs Assessment (Adequacy Reserve Margin)
 - Baseline Conditions Modeling [Results Update](#)
 - [Relative costs](#) of resources and update on Robustness of EE scenario approach
- Other past [Plan Related Presentations to the Power Committee or Full Council...](#)



Plan Related Topics This Month

- Power Plan Timing Update
- Robustness of EE Scenario

Full Council

- Review of Baseline Conditions Modeling Results
- State of Utilities Report and Update on 2020 Loads and Covid Impacts

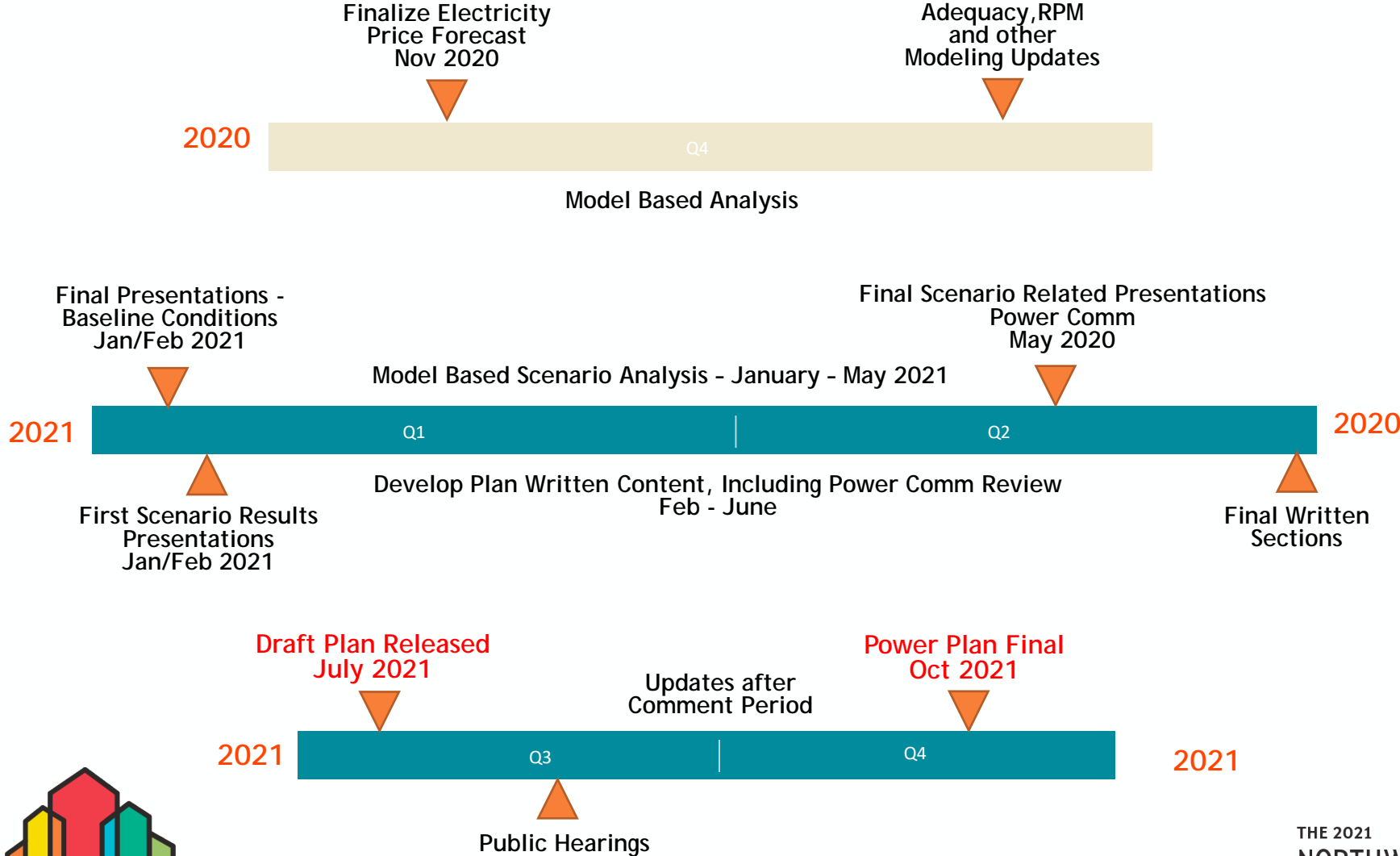




Proposed Schedule Updates

2021 Power Plan Work Schedule

Revised December 2020



February

- Robustness of EE Scenario Findings
- Baseline Conditions Discussion at Full Council

Late February

- Early Coal Retirement
- Update on Power Plan Needs Assessment (ASCC)

March

- Extra Regional Markets and Adequacy
- Markets for Energy/Capacity

Late March

- Greenhouse Gas Tipping Point

April

- Bonneville Portfolio
 - Including related load, model runs, other findings

Late April

- Bonneville Portfolio
 - Including related load, model runs, other findings
 - Pathways to Decarbonization inputs



These dates will likely change

May

- Bonneville wrap up if needed
- Pathways to Decarbonization
- Early written material review

Late May

- Pathways to Decarbonization wrap up
- Written material for plan review

June

- Written material for plan review

Late June

- Written material for plan review

July

- Written material for plan review
- Release of Draft Plan

August


- Public Comment
- Planning for public hearings



These dates will likely change

A photograph of a mountainous landscape shrouded in mist. In the foreground, a calm lake reflects the surrounding environment. The mountains in the background are partially obscured by thick white fog. A white, stylized geometric shape, resembling a house or a large letter 'A', is overlaid on the right side of the image. The word "Questions?" is written in a large, black, sans-serif font on the left side of the image.

Questions?



Extra Slides for
Reference

Plan Related Presentations to the Power Committee or Full Council

- Scenario Analysis
 - Relative costs of resources and update on Robustness of EE scenario approach (01/28/2020)
 - BPA scenario update (06/2020)
 - Review of Plan Scenarios – Part 1 (01/2020) & Part 2 (02/2020)
 - Scenarios proposed for inclusion (07/2019)
- Resource Strategy
 - Update on Power Plan Needs Assessment (Adequacy Reserve Margin) (01/28/2020)
 - Baseline Conditions Modeling Results Update (01/28/2020)
 - Exports/Imports in RPM (01/2021)
 - Review of Baseline Conditions Modeling Results (01/2021)
 - First look at Baseline Conditions RPM Results (12/15/2020)
 - Adequacy results from Redeveloped GENESYS (12/15/2020)
 - Overview of updates to Regional Portfolio Model (12/15/2020)



Plan Related Presentations to the Power Committee or Full Council

- Resource Strategy Continued
 - First look at redeveloped GENESYS result (12/03/2020)
 - Wholesale Electricity Price Forecast Update (11/2020)
 - Electricity Price Forecast Updates (10/2020)
 - Wholesale Electricity Forecast Results Part 2 (09/2020)
 - Challenges with RPM Methodology (09/2020)
 - Adequacy Update (ASCC/ARM) for 2021 Power Plan Part 2
 - Electricity Price Forecast Part 1 (08/2020)
 - Adequacy Update (ASCC/ARM) for 2021 Power Plan Part 1 (08/2020)
 - Briefings on Power Plan Analytical Process (02 - 04/2020)
 - Updates to RPM Methodologies (01/2020)
 - Overview of Plan and how the proposed resource strategy is developed (05/2019)



Plan Related Presentations to the Power Committee or Full Council

- Conservation and Energy Efficiency
 - [Comments](#) on Draft Framework for Conservation Program (10/2020)
 - [Initial Conservation Target Framework](#) (08/2020)
 - [EE Supply Curves](#) 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)
 - [Update](#) on planning parameters for EE supply curves (08/2019)
- Generation Resources
 - [Update](#) on WECC-Wide Clean Policy Wrap Up (08/2020)
 - [Summary](#) of primary generating resource reference plants and emerging tech reference plant for draft 2021 Power Plan (06/2020)
 - [Update](#) on Existing System, Coal Retirements, and Policies (05/2020)
 - [Update](#) on historical regional greenhouse gas emissions (04/2020)
 - [Draft natural gas reference plants](#) & [Draft conventional geothermal reference plant](#) (02/2020)
 - [Draft Pumped storage reference plant](#) (12/2019)
 - [Onshore Wind Generation Reference Plant](#) (11/2019)
 - Solar, Battery Storage, and Solar + Battery Storage [Reference Plants](#) (10/2019)
 - [Review](#) of Existing System and WECC-Wide Coal Retirements (09/2019)



Plan Related Presentations to the Power Committee or Full Council

- Load and Price Forecasts
 - Load Forecast [Updates](#) (08/2020)
 - [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)
 - [Updates](#) to load and other forecasts based on GCM Selection (02/2020)
 - Further Detail on [Load Forecast](#) (10/2019)
 - [Forecast](#) of Draft Loads w/Frozen Efficiency for 2021 Power Plan/Related GCMs, (09/2019)
 - [Economic drivers](#) for the plan (04/2019)
 - [Upstream Methane](#) (01/2020)
 - [Update](#) on Wholesale Electricity Price Forecast and Avoided Emissions Rate (11/2019)
 - Natural Gas Price [Forecast](#) for 2021 Power Plan (11/2019)
- Climate Change
 - [Update](#) on Climate Scenario Selection (04/2020)
 - [General Circulation Model](#) Scenario Selection (11/2019)
 - Intro to [Climate change](#) and the 2021 power plan (04/2019)



Plan Related Presentations to the Power Committee or Full Council

PLUS:

- Overview of Hydrogen (01/2021)
- State of Electric Utilities 2019 (12/2020)
- DEI at Advisory Committees - key takeaways (12/2020)
- Results from stakeholder survey on use of previous power plan content (08/2020)
- Development of technical written material for the Power Plan (07/2020)
- Stakeholder survey regarding use of previous plan's written content and supporting materials (07/2020)
- Update 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 assumptions for the 2021 Power Plan (07/2019)
- Establish existing system parameters and interpret state policies (07/2019)
- Consistent Treatment of Quantifiable Resource Costs (03/2019)
- Proposed discount rate for the 2021 Power Plan (02/2019)



Power Division Work Plan

2021

Updated February 2021

1. Guide affordable, adequate, clean energy future, develop the 2021 Northwest Power Plan and maintain analytical capability

Action	Work Area	Timeframe (Calendar Year)
A. Develop the 2021 Power Plan	A.1. Power Planning - All Teams	
	1. Develop and analyze scenarios for the Power Plan	2021
	2. Draft written material for the Power Plan	2021
	3. Start Implementation of 2021 Plan Actions and Recommendation	Late 2021
	A.2. Conservation	
	1. Finalize EE targets and related findings for the power plan	2021
	2. Develop MCS and surcharge methodology	2021
	3. Develop methodology for identifying cost-effective EE measures	2021
	A.3. Demand Response	
	1. Finalize recommended DR and related findings for the power plan	2021
	A.4. Forecasting and Economic Analysis	
	1. Provide final energy and economic forecasts for plan	2021
	2. Provide final natural gas and other fuels forecasts for the plan	2021
	A.5. Generation Resources	
	1. Finalize GR related sections of supporting material and main plan document for draft/final plan	2021
	2. Develop environmental methodology, existing system, transmission availability, RPS, emissions and other data sets for the 2021 Plan.	2021
	A.6. System Analysis	
	1. Complete scenario analysis for the plan	2021
	2. Finalize System Adequacy Requirements (ARM/ASCC) for the draft/final plan	2021
	3. Develop cost effective methods for providing reserves	2021

Power Division Work Plan

2021

Updated February 2021

B. Ongoing work separate from Power Plan	B.1. Conservation	
	1. Coordinate with regional entities (e.g. NEEA, BPA, utilities, regulators) to ensure the regional goal for cost-effective conservation is achieved. Cuts across a number of Action Items, ongoing priority	RCP Results reported annually.
	2. Work with regional entities to ensure the model conservation standards are implemented, Cuts across MCS Action Items, ongoing priority	
	3. Continue to lead the Regional Technical Forum and engage in the development and approval of measure savings estimates and protocols	Budget/Workplan Approval in October of each year, RCP results annually, Annual Report in June of each year
	4. Enhance the understanding and use of capacity impacts from conservation. Cuts across a number of Action Items, includes tracking Utility IRPs, BPA EE Planning, is an ongoing priority	Part of RCP Results reported annually and ongoing tracking of IRPs
	5. Ongoing priorities like tracking emerging technology, working with end use load projects, etc..	
	B.2. Demand Response	
	1. Convene advisory committee to explore barriers and strategies to demand response development	DRAC meetings held quarterly
	2. Coordinate with regional utilities and Bonneville to ensure demand response costs, capabilities, and potential are included in planning documents.	Ongoing
	B.3. Forecasting and Economic Analysis	
	1. Continued monitoring of regional sales, loads and temperatures	Ongoing
	2. Continued monitoring of economic picture of the region	Ongoing
	3. Continued enhancement of Council's economic and forecasting models for loads, sales and fuel prices.	Ongoing
	4. Continued monitoring of natural gas and oil situation in the region, national and international markets.	Ongoing
	5. Fuel-cycle emission modeling for natural gas and coal	Ongoing

Power Division Work Plan

2021

Updated February 2021

B.4. Generation Resources	
1. Track/update generating resource datasets - new/existing projects, generation, environmental legislation, transmission, emissions, etc.	Ongoing
2. Track regional and WECC-wide renewable portfolio standards and clean policies	Ongoing
3. Track and summarize regional and WECC-wide integrated resource plans	Ongoing
B.5. System Analysis	
1. Complete Annual Adequacy Assessments - Ongoing, Implementation	Annually
2. Complete Wholesale Electricity Price and Avoided Emissions Rate study	Annually
3. Update and tune models as needed to keep them current and relevant	Annually