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May 7, 2024

MEMORANDUM

TO: Council Members

FROM: Jennifer Light, Director of Power Planning

SUBJECT: Mid-Term Assessment Summary

BACKGROUND:

Presenter: Jennifer Light

Summary: The Power Committee will discuss staff's proposed updates to the summary for the 2021 Power Plan Mid-Term Assessment. The Council first released the Mid-Term Assessment in February of 2024. This update will be the first update to the summary since the release. The update accounts for new information and analysis presented at the March and April meetings, along with the load forecast presentation planned for the May Power Committee. Assuming Committee approval, staff will post the updated summary (including any required changes) and supporting mid-term assessment materials.

Workplan: A.1.6. Maintain Mid-Term Assessment.

Background: In the 2021 Power Plan, the Council committed to monitoring the region's rapidly evolving power system and policies, analyzing the impacts of changes, and reporting to the region through a mid-term assessment of the plan. Over the past few meetings, the Power Committee has been discussing how to provide timely and useful information to the region, while also transitioning some time to the preparation of the Council's next power plan. In January, the Power Committee agreed to move forward

with a mid-term assessment that would be hosted on the Council's website and provide a way of regularly updating the region as new information becomes available. At least quarterly, the Power Committee will review and approve updates to the mid-term assessment summary. This will be the first update since the adoption of the Mid-Term Assessment at the February 2024 Council meeting.

The proposed updates account for new information since February, including:

- Updated load forecast information showing electric vehicle forecasts tracking along the 2021 Power Plan high forecast and large and uncertain data center load forecasts.
- Information around the MLK winter event that caused significant challenges for the region, requiring the region to rely significantly more on market purchases than assumed in Council analysis to date.
- Updates on the progress of the implementation of the Conservation Program in the 2021 Power Plan showing that the region is making good progress towards the multiple goals outlined.
- Updated short-term load forecast to be used in the upcoming adequacy assessment for 2029, originally previewed at the Council's Resource Adequacy Advisory Committee in April and shared with the Power Committee at this May meeting.

Staff shared the draft updates with members under a separate cover.

Reference: [2021 Power Plan Mid-Term Assessment on Council Website](#)

2021 Power Plan Mid-Term Assessment Update

Jennifer Light
May 14, 2024



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Goal for Today

- Staff is seeking a head nod from the Power Committee on proposed updates to the 2021 2021 Mid-Term Assessment Summary, including any changes identified by the Committee today
- Reminder:
 - Summary is intended to capture the analysis and data available to date
 - As new information is available, staff will work with the Power Committee to update the summary

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Revisiting the Mid-Term Assessment

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Summary Highlights

- Region needs to develop resources at least as aggressively as in the plan
 - Regional renewable development is ahead of pace and efficiency acquisition is on track
 - Demand response is being developed, although more potential remains
- Significant load growth or resource retirement without replacement bring risk
 - Load growth, particularly in the industrial sector, is a current risk area we are analyzing
 - Changing decisions around coal retirements mitigate this risk somewhat
- Sufficient reserves are a critical element of the 2021 Power Plan strategy
 - Long-term, the WRAP and day-ahead market(s) will provide the signals needed
 - Near-term, there is some risk, which is being managed by utilities
 - Early data on regional efficiency acquisition suggests current levels may also mitigate risk

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Resource Development

Reserves:

Longer-term risk is lower with a binding WRAP and potential day-ahead market(s).

Near-term some risks remain. Utilities are managing through a mix of more conservative operation and increased market reliance.

Renewables:

Region has developed ~90% of the minimum identified in the plan, and utility IRPs identify more.

Renewable development is closely linked to the reserve needs, and staff will continue to monitor this relationship.

Energy Efficiency:

Region is on track to meet (or even exceed) the regional target. BPA is on track, although future savings will need to increase.

Should the region exceed the regional target, this too would mitigate some of the reserves risk.

Demand Response:

Utilities are developing a variety of demand response products to meet their needs.

There is more potential in products that support regional need, specifically those products that are low-cost and allow for regular flexibility.

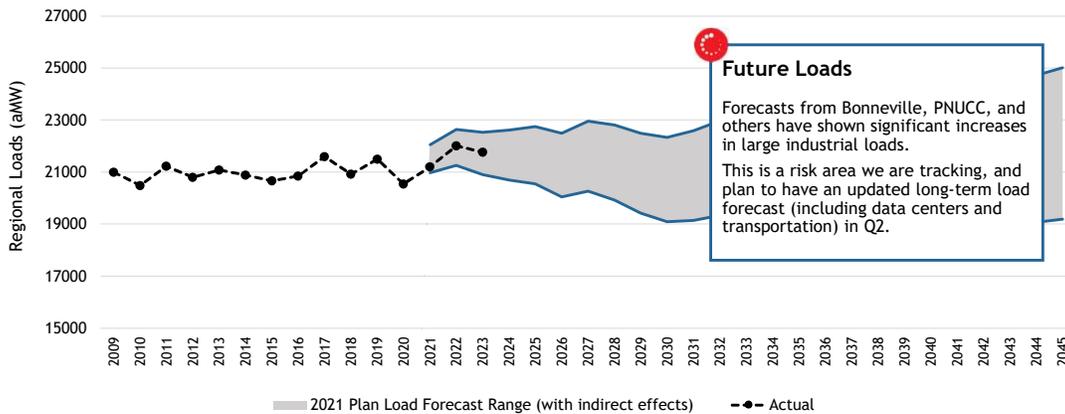
Existing System:

The plans for several of the assumed coal retirements in the 2021 Plan have changed. Several have been announced to be conversions to natural gas (instead of retirement) and some timelines have been pushed back.

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Tracking Loads

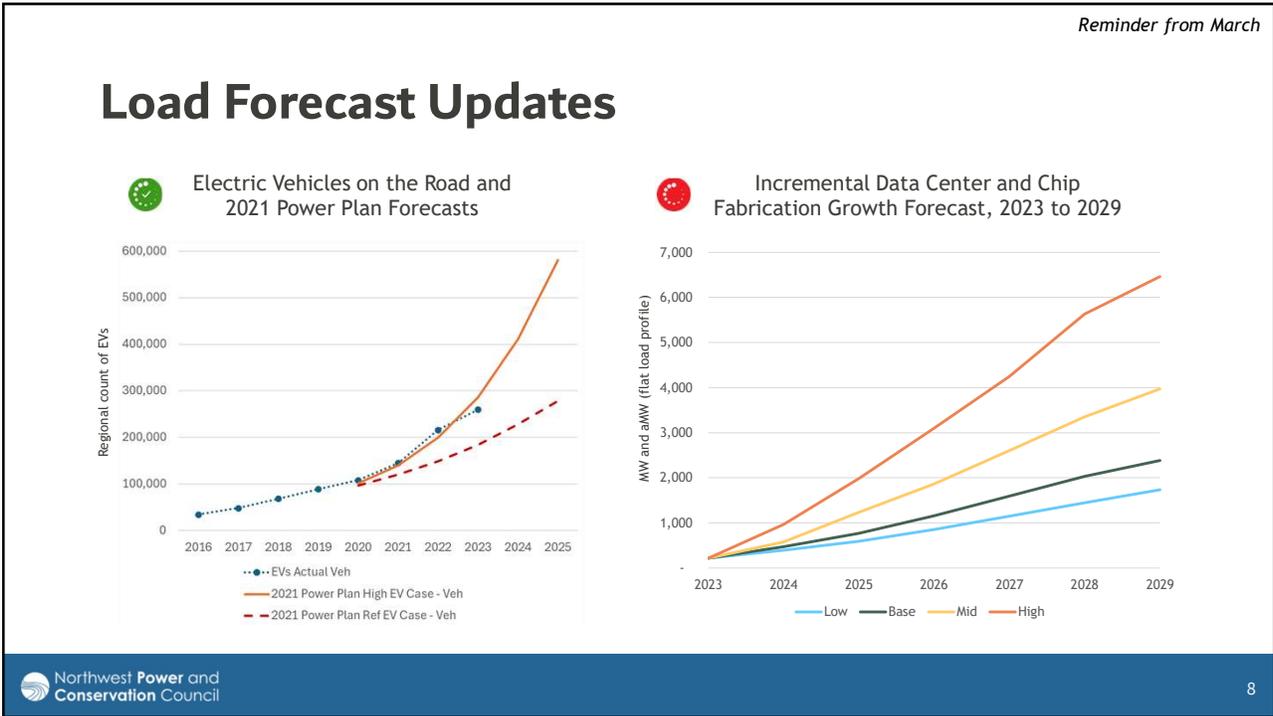
Regional Historic Loads & 2021 Power Plan Forecast



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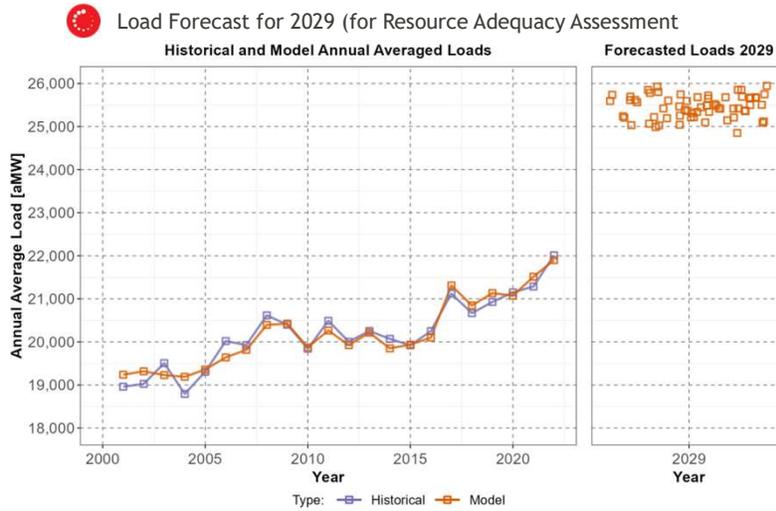
Updated Analysis Since February

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Load Forecast Updates (cont.)



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Reminder from April

Conservation Program Progress

- Many of the elements of the Conservation Program from the 2021 Power Plan are on track or making process
 - Cost-effective conservation achievements are on track to meet or exceed the 2021 Power Plan target
 - Region is also acquiring efficiency above and beyond the cost-effective amount, connected in part to other elements of the Conservation Program
- Overall, this indicates potentially higher amounts of conservation than assumed in the 2021 Power Plan strategy

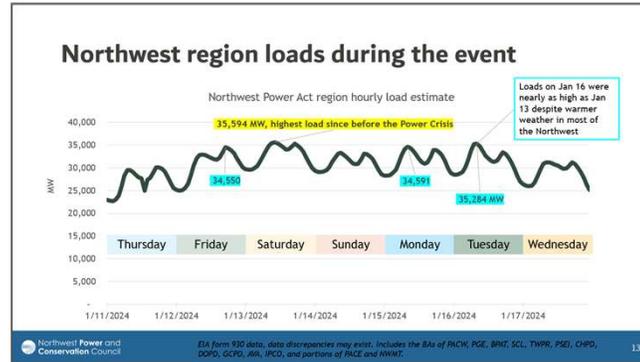
- Regional Conservation Target
- Bonneville Target
- Bonneville Maintain Budget
- Bonneville Fund ET
- Bonneville Fund Research
- Bonneville Support Building Codes
- Actions in Support of Target
- Attributes of EE
- Importance of NEEA
- Recognizing the Value of Research
- Addressing Equity with EE
- RTF: Flexibility and Resiliency
- RTF: Rigor to Measure Costs
- RTF: Load Profiles
- RTF: EE/DR Interface
- RTF: Equity in Evaluation Guidelines
- MCS: Common Appliance Standards
- MCS: No Backsliding
- MSC: Efficient Electrification
- Surcharge Recommendation

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Reminder from March

2024 Winter Storm Event

- Regional loads were higher than the region has seen since before the power crisis
- Import amounts would have exceeded the Council’s market reliance limits under current adequacy assessment assumptions
- Several system issues occurred at the same time



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Next Steps for the Mid-Term Assessment

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Upcoming Adequacy Assessment

- Adequacy assessment will explore whether the 2021 Power Plan strategy continues to provide a robust solution given the updated information:
 - Load forecast changes
 - Changes to timelines for existing plants
- If there are adequacy challenges identified in the modeling, the multi-metric approach will provide insight into the nature of the challenges
- Insights from the assessment, plus other existing analysis from the 2021 Power Plan, will allow the Council to provide more specific updated recommendations to the region if needed

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Next Steps for the Mid-Term Assessment

- Continuing to work towards the 2029 Adequacy Assessment will provide new insights particularly around the nature of modeling shortfalls, if any (expected Q3)
 - Seek to update the Mid-Term Assessment based on these findings in August/September
- Tracking and reporting on resource development will continue to inform mid-term
 - Energy efficiency (expected Q3)
 - Demand response (expected Q4)
 - Renewables (expected Q1 of 2025)

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Head-Nod on Proposed Summary

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Summary Highlights – Proposed Updates

- Region needs to develop resources at least as aggressively as in the plan
- Significant load growth or resource retirement without replacement bring risk
 - Load growth, particularly in the industrial sector, is a current risk area we are analyzing
 - Updated load forecasts indicate higher loads than anticipated in the early years of the plan, primarily driven by data centers and high-tech loads
 - Changing decisions around coal retirements mitigate this risk somewhat
- Region is generally on track, if not ahead, with resource development
 - Regional renewable development is ahead of pace and efficiency acquisition is on track
 - 2021 Power Plan called on jurisdictions pursuing decarbonization to do more efficiency, and early data from utilities in OR and WA demonstrate higher amounts of efficiency
 - Demand response is being developed, although more potential remains
- Sufficient reserves are a critical element of the 2021 Power Plan strategy
 - Long-term, the WRAP and day-ahead market(s) will provide the signals needed
 - Near-term, there is some risk, which is being managed by utilities
 - Early data on regional efficiency acquisition suggests current levels may also mitigate risk

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Comfort with Summary?



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