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January 30, 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 summary for the 2021 Power Plan Mid-Term Assessment. This is the first summary to be reviewed by the Power Committee. Assuming Committee approval, staff plans to post the 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.



2021 Power Plan Mid-Term Assessment


Jennifer Light
February 6, 2024



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Goal for Today

- Staff is seeking a head nod from the Power Committee on the proposed 2021 Mid-Term Assessment Summary, including any changes identified by the Committee today



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Revisiting the Plan and Most Recent Adequacy Assessment

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Reminder: 2021 Power Plan Strategy



Existing System: Increase Reserves

To reduce regional needs and support integration of renewables, the region needs to double the assumed reserves. This can most cost-effectively be done through more conservative operation of the existing system (both thermal and hydro units).



Renewables: At least 3,500 MW by 2027

Renewables are recommended due to their low costs, interruptibility, and carbon reduction benefits. Long-term build out will impact the transmission system and should be done mindful of the cumulative impacts of the new resources.



Energy Efficiency: 750-1,000 aMW by 2027

Significantly less acquisition than prior plan due being less cost-competitive, a lower build resource, not inherently dispatchable, and sensitive to market prices. Efficiency that supports system flexibility is most valuable.



Demand Response: Low-Cost Capacity

Highest value products are those that can be regularly deployed at a low-cost and with minimal to no impact on customer. The Council identified demand voltage regulation and time of use rates as two products, estimating 720 MW of potential.

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Reminder: 2027 Adequacy Assessment Findings

- Region will need to develop new resources at least as aggressively as recommended in the 2021 Plan
- If demand growth remains consistent with the plan's baseline forecast, the power supply would be adequate with the 2021 Plan strategy
- If there is accelerated demand growth, major resources are retired earlier than expected without replacement, or limited market supply, additional resources and reserves will be needed to maintain adequacy

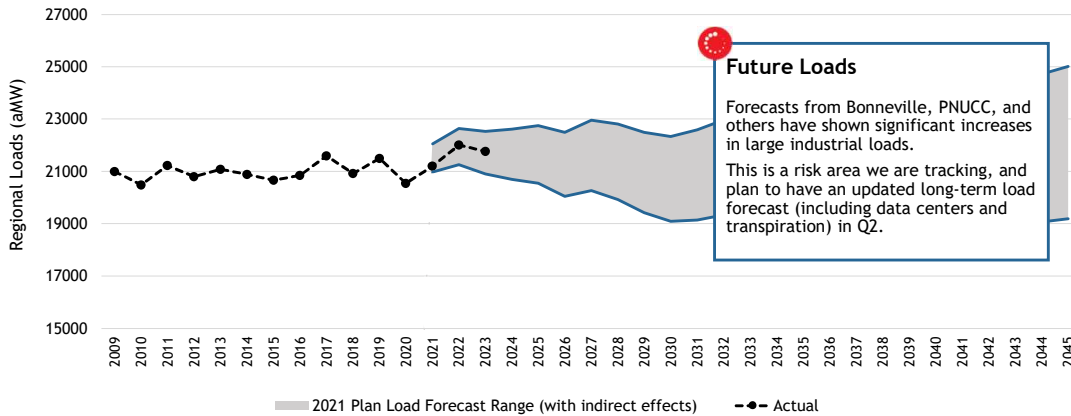
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Tracking Loads and Resources

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Tracking Loads

Regional Historic Loads & 2021 Power Plan Forecast



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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 plan have changed. Several have been announced to be conversions to natural gas (instead of just retirement) and some timelines have been pushed back.

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Next Steps for the Mid-Term Assessment

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Next Steps for the Mid-Term Assessment

- Updated load forecast information might shift the narrative (expected Q2)
 - Hourly short-term (5-year) load forecast to inform the adequacy assessment
 - Initial long-term (20-year) load forecast
 - Updates to data centers and transportation forecasts will feed both of these forecasts
- Continuing to work towards the 2029 Adequacy Assessment will provide new insights (expected Q3)
 - Will incorporate updates to loads and resource information
 - Will also include recommended thresholds for the new adequacy metrics
- 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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Current Summary

- 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
- 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
- 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

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Comfort with Summary?



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