

2023 Western Assessment of Resource Adequacy

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OBJECTIVES

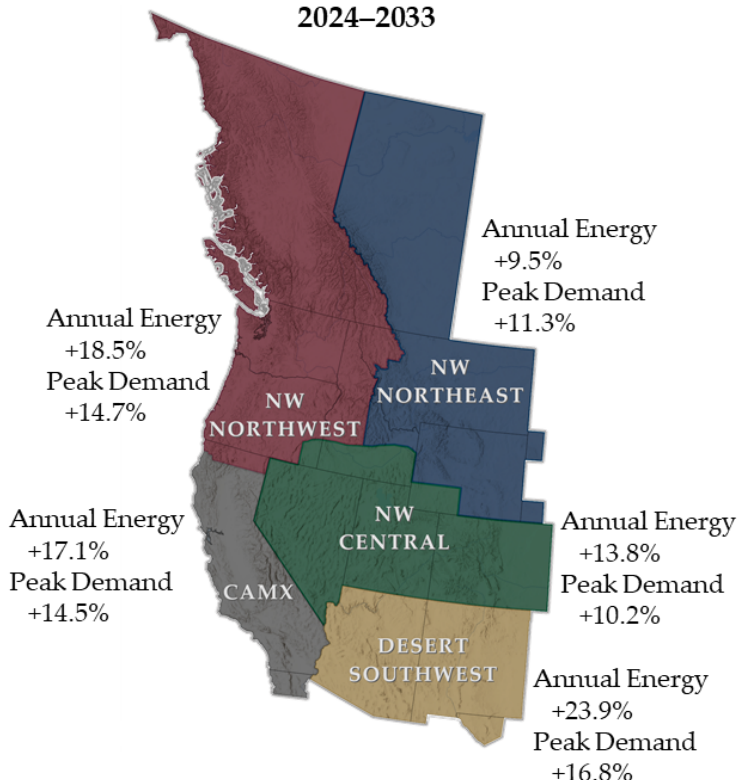
Resource planning decisions are made years before resources are needed, and the decisions entities make affect neighbors and the interconnection. A long-term, interconnection-wide, recurring assessment of resource adequacy helps ensure the reliability of the electric grid. WECC's Western Assessment of Resource Adequacy examines this issue and answers two questions:

- Are current resource plans sufficient to meet future demand for each of the next 10 years under the range of possible system conditions?
- How does variability in the system increase with changes in resources and demand currently reflected in resource plans, and how does this affect resource adequacy risk?

APPROACH

WECC examines resource adequacy through an energy-based probabilistic approach. The Western Assessment looks broadly at the Western Interconnection, as well as its five subregions. Using information about anticipated demand growth and planned resources from Balancing Authorities, WECC evaluates resource adequacy not only under expected future conditions, but across a range of possible conditions over the next 10 years.

Annual Energy and Peak Demand Growth 2024–2033



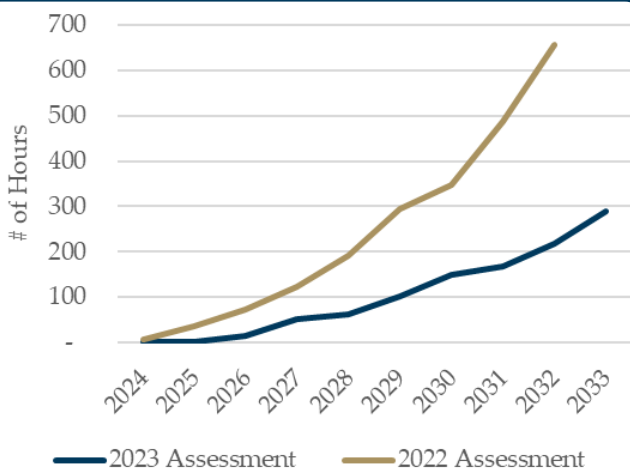
FINDINGS

Over the next decade, entities in the West plan to add 95 GW of resources, significantly more than what was built over the last 10 years. Solar, energy storage, and wind make up 80% of the new resources. Supply chain disruptions and the interconnection queue pose the greatest risk to building planned resources on time.

Load growth forecasts almost doubled in this year's assessment. In 2022, the anticipated 10-year load growth rate was 9.6%. This year's forecast 10-year growth rate is 16.8%. The new demand forecasts reflect electrification policies and significant data center growth.

Demand-at-risk hours over the next 10 years decreased compared to the 2022 Western Assessment, but they were not eliminated. The number of hours each year when there is a risk for load loss increases for each of the next 10 years.

With the large additions of variable generation planned for the next 10 years, variability in the system will continue to increase.



Demand-at-risk Hours for the Western Interconnection
2022 and 2023 Assessments