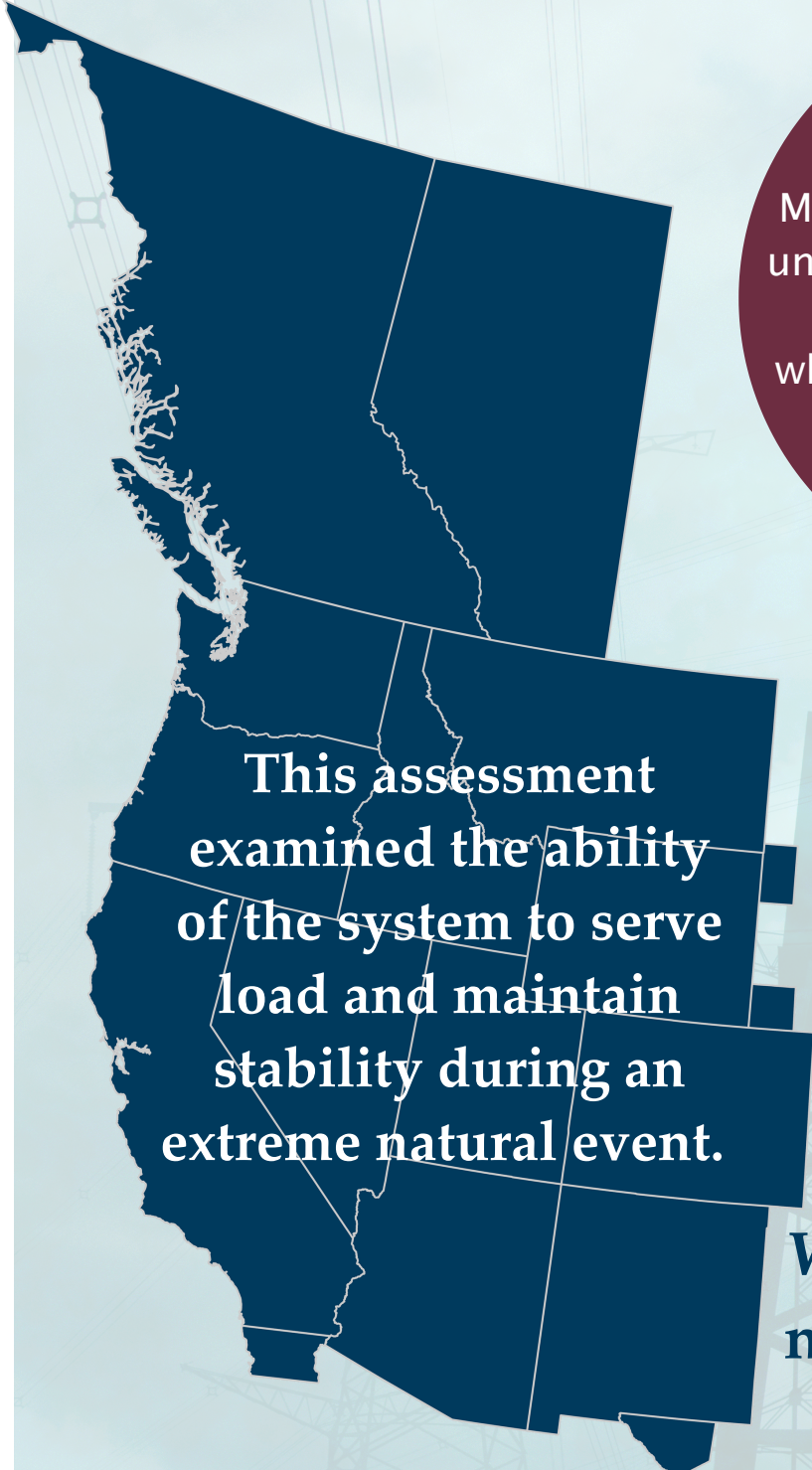


# 2030 EXTREME NATURAL EVENT STUDY

## Executive Summary



This assessment examined the ability of the system to serve load and maintain stability during an extreme natural event.

**Finding #1**  
Many regions experienced unserved energy, especially during shoulder hours when solar generation was ramping down.

**Finding #2**  
Multiple regions could not meet the ancillary service requirements for spinning reserves, regulation (up/down), and loading following (up/down).

**Finding #3**  
A greater magnitude of voltage fluctuations was observed during extreme natural events with certain outage conditions.

It is in the best interest of the reliability of the Western Interconnection that the impacts of extreme natural events on the bulk power system in the West be continually studied and planned for by all stakeholders. It would also be beneficial for the WECC Reliability Assessment Committee to discuss and coordinate the availability of extreme natural events data for further analyses.

### ABOUT THE 2030 EXTREME NATURAL EVENT STUDY

The extreme natural event considered for this study was a low-probability high-impact weather event significantly affecting the reliability of the Bulk Power System (BPS) for two weeks in the summer of 2030. It included a region-wide heat wave, a wildfire that reduced solar output, and a drought condition that reduced hydro generation in the Northwest region.

### WHY DOES THIS MATTER?

The Western Interconnection’s BPS has experienced challenges due to extreme weather events becoming more frequent and intense. Furthermore, the changing resource mix with higher renewable penetration adds more variability to the system. Climate change has emphasized the need to study extreme events, which can co-occur like extreme heat and wildfires, causing widespread impacts on the BPS.

[Click to read the report](#)   [Click to hear the podcast](#)

