California ISO Summer Assessment reaffirms that grid is better positioned for this summer, but reliability risks remain

FOLSOM, Calif. – The California Independent System Operator (ISO) expects electricity supply conditions for the upcoming summer to be in better shape than last year, but the power grid is still susceptible to stress during extreme heat waves that extend across the West, according to the ISO’s summer outlook released today.

The 2021 Summer Loads and Resources Assessment projects the energy grid will have more capacity to meet demand in 2021 than it did in 2020, a critical element for averting rotating power outages, such as those that occurred last August.

The additional capacity is the result of resource procurement ordered by the state. A series of market redesigns and policy changes in the ISO’s system taken since September 2020 along with improved communication and coordination protocols has improved overall preparedness for this summer.

However, if heat events similar to those that gripped the western states region last summer occur, imported energy from other states could be limited, and the power grid will be at risk of supply shortages and possible emergency conditions, the assessment finds.

“The ISO and its partners in the state and throughout the western region are focused on being as prepared as we can for the summer heat,” said Elliot Mainzer, president and CEO of the ISO. “New resources are coming online by summer, and we have taken the lessons learned from last year to make modifications to our market and operations. This makes us cautiously optimistic that there will be enough electricity to meet demand this summer.

“But there are remaining risks to reliability, such as an extreme prolonged heat wave affecting wide swaths of the West, or serious wildfires,” he continued. “In partnership with utilities and other service providers across the state, we will be providing Californians with advance notice of stressed grid conditions along with specific actions they can take to help reduce demand for power. We can all play a constructive role in helping transition to a low-carbon grid in a reliable and cost-effective manner.”
The ISO’s annual Summer Assessment evaluates the expected supply and demand, to help prepare for the hot weather months of June through September.

This year’s outlook includes roughly 2,000 megawatts (MW) of additional, readily available resources coming online to serve ISO net peak demand compared to this time last year, including battery storage that is expected to absorb excess renewable energy in the middle of the day, and inject it back into the grid after sunset when solar generation goes offline. The state and ISO are continuing to pursue other opportunities to add an additional 1,000 to 1,500 MW of new resources to the system by summer.

The 2021 forecasted peak demands are about the same as last year under normal weather conditions. However, extreme heat events are becoming more likely, as the assessment points out. By incorporating last August’s historical heat wave into the assessment, it pushes weather previously regarded as extreme into what is now considered more normal ranges.

California hydroelectric energy supplies will also be significantly lower than normal, with the state weathering a second consecutive year of below normal precipitation. Snowpack water content peaked at 60 percent of normal, similar to last year’s conditions, and reservoir levels have decreased to 70 percent of normal.

Imports will play a substantial role in this summer’s power grid reliability. The assessment measured the likelihood of energy deficiencies and system emergencies, finding that at typical import levels based on historical data, there is a low probability of grid stress.

But results based on analyses of more limited import levels associated with a widespread heat event showed that the probability of having to rely on measures to reduce load during emergency conditions, including rotating power outages, increases significantly during high demand conditions.

Conservation will be pivotal to cushioning the grid when it needs it the most, typically during hot summer evenings when demand remains high for air conditioning use and solar production is going offline. In coordination with the California Public Utilities Commission (CPUC), the ISO will issue Flex Alerts -- voluntary calls to consumers to cut down on electricity use from 4 – 9 p.m. – when system conditions are forecast to be tight. The state and the ISO are planning to launch a refreshed Flex Alert campaign in June to alert residents earlier of a potential supply shortage and spread the conservation message more widely.

Grid stability will also be improved through expanded communications and coordination among utilities and stakeholders in the state and across the West. The ISO and its partners will continue to seek out and use extraordinary measures during emergencies, in an effort to avoid rotating outages.

For more information on all the actions and developments in advance of summer, visit our [2021 Summer Readiness webpage](https://www.caiso.com) on caiso.com.
The California Independent System Operator (ISO) is a nonprofit public benefit corporation dedicated, with its partners, to continuous improvement and secure operation of a reliable grid operated for the benefit of consumers. It provides comprehensive grid planning, open and nondiscriminatory access to one of the largest networks of high-voltage transmission power lines in the world, and operates a $9 billion competitive electricity market. Recognizing the importance of the global climate challenge, the ISO is at the forefront of integrating renewable power and advanced technologies that will help provide a sustainable energy future efficiently and cleanly.

The Western Energy Imbalance Market (EIM) Governing Body is the governing authority designed by regional stakeholders with delegated authority from the ISO Board of Governors to resolve rules specific to participation in the Western EIM.