California ISO expects sunny outcome for grid during solar eclipse
Electric system operator launches webpage on plans for historic event

FOLSOM, Calif. – As one of the nation’s most solar-connected electrical grids, the California Independent System Operator (ISO) announced that it is prepared for the Aug. 21 solar eclipse, which will cast a wide shadow on solar power plants. The ISO expects sufficient energy supplies and network reliability during the eclipse.

California has some of the most ambitious renewable energy goals in the nation, including reaching 33 percent renewable energy by 2020, and 50 percent by 2030. Currently, the ISO’s solar generation capacity is nearly 10,000 MW, and can serve up to 40 percent of the ISO’s load some days.

“I am confident in the technology of our market and grid, and in the expertise and abilities of our staff to manage the operational challenges associated with the eclipse,” said ISO President and CEO Steve Berberich. “As we welcome increasing amounts of renewable energy onto the grid, we are learning much about emerging shifts in operations that will define the electric system of tomorrow. Our team is committed to keeping the power flowing for Californians, as we navigate the unusual circumstances presented by the eclipse.”

The eclipse will affect the ISO’s balancing area and Energy Imbalance Market (EIM) participants from about 9 a.m. to noon, reducing solar output from both utility-scale generation connected to the grid, and from rooftop solar installations that serve homes and businesses. As solar power production declines that morning, the ISO forecasts it will need to dispatch about 6,000 megawatts (MW) of power from alternative sources. For context, one MW of electricity powers about 1,000 homes.

The ISO, state energy leaders, the California Public Utilities Commission (CPUC) and California utilities have been planning for the loss of solar generation during the eclipse for more than a year. Preparation has centered on analyzing the likely loss of solar energy and arranging procurement of additional reserves and system resources, primarily from flexible ramping sources, such as hydropower and natural gas plants. The transfer capability among western EIM participants is expected to offer additional flexibility.
“The eclipse presents some grid management challenges for California and the West, however, with detailed planning and engagement among all parties we are expecting no shortage of electricity or reliability incidents related to the eclipse,” said Nancy Traweek, ISO’s executive director of system operations. “Market participants are aware this is a rare and significant solar event, and they have worked closely with us to develop plans.”

Traweek said the ISO will use lessons learned from this eclipse to prepare for the next North American solar eclipse, which will occur in 2024.

While the ISO has enough energy supply to make up for lost solar production during the eclipse, consumers should always use energy wisely. Conservation is always of value, reduces emissions and makes the grid more reliable. The CPUC has a website, caleclipse.org, for more information on conservation during the eclipse. The ISO requests that the public stay alert in the event the ISO declares a Flex Alert, a call for voluntary electricity conservation measures. Get energy efficiency tips and sign up for notifications at flexalert.org.

To help the public understand the effects of the solar eclipse on the grid, the ISO unveiled a new webpage dedicated to eclipse-related matters. Viewers can track the ramp down and ramp up of solar production, along with the current and net energy demand in real time. The webpage also includes links to fact sheets on the impact of the eclipse and the ISO’s preparation activities, forecasts, safe viewing tips, and a live feed showing the path of the eclipse as it moves across the United States.

During the eclipse, the ISO will welcome the media for interviews, status briefings, and viewings of the grid control center.

The California ISO delivers wholesale electricity to local utilities for distribution to 30 million customers. The ISO serves 80 percent of California and a small portion of Nevada, supplying more than 260 million megawatt-hours of electricity each year.

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