

Total system electric generation is the sum of all utility-scale in-state generation plus net electricity imports. In 2023, total generation for California was 281,140 gigawatt-hours (GWh), down 2.1 percent (6,080 GWh) from 2022. California's non-CO<sub>2</sub> emitting electric generation categories (nuclear, large hydroelectric, and renewables) accounted for 58 percent of total generation, compared to 54 percent in 2022. California's wide variety of climate and weather systems play a large role in how the various generation resources shape the annual power mix.

Data reporting requirements for total system electric generation are limited to those projects with a nameplate capacity of 1 MW and larger. As most solar PV systems installed on residential homes and commercial buildings are rated less than 1 MW in capacity, they are typically considered to be distributed generation (also called behind-the-meter generation) and are not required to report to the Energy Commission.

The large-scale weather patterns across the western United States in 2023 were partially driven by a transition from three straight years of La Niña, ending in summer, to a moderate strength El Niño that developed by late autumn. In California, cold and wet conditions with a deep snowpack (record breaking for some) was the highlight for the first half of the year and ended a three-year drought with replenished reservoirs.

Snowpack levels on April 1, 2023, were at record high levels throughout the Sierra Nevada. Snow water equivalent (SWE) was 200-300 percent of normal. The snow water equivalent measures the amount of water contained in the snowpack. Some snow course in the Sierra Nevada broke April 1 SWE records going back 90-100 years; snow courses are about 1,000 feet (300 meters) long and are situated in small meadows protected from the wind. Mammoth Pass, in the central Sierra Nevada, had 104.5 inches of SWE marking it the highest April 1 value in 93 years of records.

As a result of these conditions, hydroelectric generation in California increased 80 percent over the extremely low levels observed in 2022. This chart shows the historical minimum and maximum monthly hydroelectric generation reported for California since 2001 as well as monthly generation for calendar years 2022 and 2023.

Quarterly reports submitted by balancing authorities are used to determine the net energy imports for California. Imports are tracked from two geographical regions: the Northwest and the Southwest. The allocation of fuel types is based on Power Source Disclosure annual reports from load-serving entities such as investor-owned utilities, publicly owned utilities, and community-choice aggregators.

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