California ISO hits all-time peak of more than 97% renewables
Electric grid breaks another record, giving glimpse of zero-carbon future

FOLSOM, Calif. – In another sign of progress toward a carbon-free power grid, the California Independent System Operator (ISO) set a new record on April 3, when 97.6 percent of electricity on the grid came from clean, renewable energy.

The peak, which occurred briefly at 3:39 p.m., broke the previous record of 96.4 percent set on March 27, 2022. Before that, the grid’s record for clean power was 94.5 percent, set on April 21, 2021. The new milestone comes as the ISO integrates growing amounts of renewable energy onto the grid in support of the state’s clean energy goals.

“This new record is testament to the hard work and collaboration of many people, from policymakers to system operators,” said ISO President and CEO Elliot Mainzer. “While these all-time highs are for a brief time, they solidly demonstrate the advances being made to reliably achieve California’s clean energy goals.”

Ashutosh Bhagwat, chair of the ISO Board of Governors, said the new record is a tribute to California’s ambitious policy goals on climate and clean energy.

“When we see renewable energy peaks like this, we are getting to re-imagine what the grid will look like for generations to come,” he said. “These moments help crystallize the vision of the modern, efficient and sustainable grid of the future.”

The grid also set a historical solar peak of 13,628 megawatts (MW) just after noon on April 8, and an all-time wind peak of 6,265 MW just before 3 p.m. on March 4.

Renewable peaks typically occur in the spring, due to mild temperatures and the sun angle allowing for an extended window of strong solar production. ISO analysis forecasts a potential for more renewable records in April.

The ISO has collaborated extensively with the California Public Utilities Commission (CPUC), the California Energy Commission (CEC) and a broad group of stakeholders on market and transmission improvements to integrate increasing amounts of renewable energy. More than 15,000 MW of grid-connected solar power capacity and almost 8,000 MW of wind are now online.

With California committed to a carbon-free power system by 2045, more solar and wind are expected, along with dramatic growth in storage capacity on the system. Another 600 MW of solar and 200 MW of wind are projected to be added to the grid by June 1 of this year. The system currently has more than 2,700 MW of storage, most of it in
lithium-ion batteries, and that number is projected to grow to about 4,000 MW by June 1.

Storage has been critical to reliability during the transition to renewable energy, as it charges using solar and wind output during the middle of the day, and re-injects it back onto the grid on hot summer evenings when solar production has ended and demand remains high.

To follow the ISO’s energy peaks and historical data by month, please see Key Statistics on the News webpage. The document is designed to provide the public easy access to key data about the power grid and wholesale energy market during California’s transition to clean energy.

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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 (WEIM) is a real-time wholesale energy trading market that enables participants anywhere in the West to buy and sell energy when needed. The WEIM Governing Body is the governing authority designed by regional stakeholders and has shared authority with the ISO Board of Governors to resolve rules specific to participation in the WEIM.