California ISO

Powering Progress: Designing Just, Reasonable, and Future-Ready Western Electricity Markets

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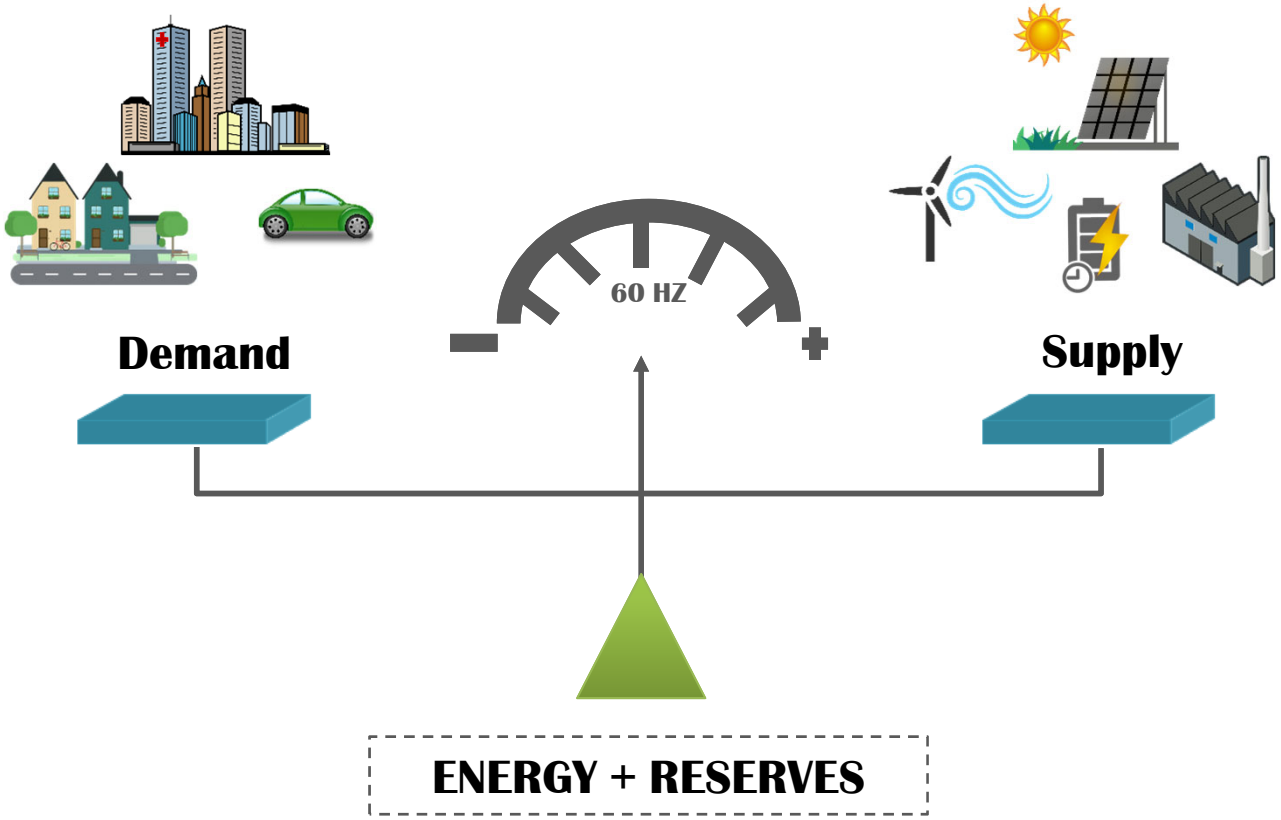
What is the CAISO, anyways?

The California Independent System Operator Corporation, also referred to as “CAISO” externally and “ISO” internally. We are:

- A non-profit public benefit corporation, a type of California corporation formed to create a "general public benefit," meaning a "material positive impact on society and the environment."
- A FERC-regulated public utility, operating pursuant to the terms and conditions of our FERC-approved tariff.

See, e.g., ISO Corporate Bylaws (https://www.caiso.com/documents/iso-corporate-bylaws-amended-and-restated.pdf) and ISO Tariff Library (https://www.caiso.com/library/tariff-sections).

The goal is to keep the electric system balanced



CAISO Operates Competitive Wholesale Energy Markets Regulated by FERC

CAISO's "full network model" analyzes active transmission and generation resources and find the least cost energy to serve demand.

- The Day-Ahead Market is made up of three market processes that run sequentially.
  - Opens for bids and schedules seven days before and closes the day prior to the trade date, with results published at 1:00 p.m.
  - *Extended beyond the CAISO Balancing Area and into EDAM Balancing Areas (go-live 2026).*
- The Real-Time Market is a spot market to meet the last increments of demand not covered by day-ahead schedules and is also the market that secures energy reserves and ancillary services.
  - Opens at 1:00 p.m. prior to the trading day and closes 75 minutes before the start of the trading hour, with results published approx. 45 minutes prior to start of trading hour.
  - *Extended beyond the CAISO Balancing Area in 2014; presently, 21 WEIM Balancing Areas across 11 Western states*.

See CAISO Tariff §§ 27-34 and Business Practice Manuals for Market Operations and the Energy Imbalance Market

The ISO provides two markets to optimize for reliability and economics

Day-Ahead Energy Market

Commits the most cost-effective and reliable mix of generation for the region

Enables parties to schedule contracted supply/demand

Enables suppliers to offer excess supply in the form of energy or reserves

Enables Load Serving Entities to secure pricing to meet their demand for energy

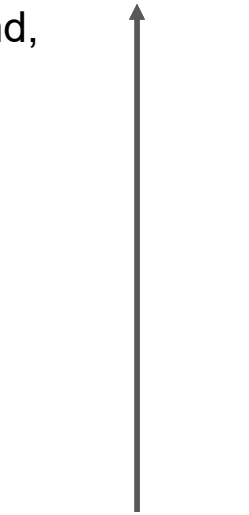
Real-time Energy Market

Economically dispatches resources to balance real-time supply and demand, while ensuring system reliability

Extends beyond California to other western states

Hour-ahead scheduling for intertie resources

Optimization every 15-min for intra-hour variability and every 5-min to meet instantaneous demand



WEIM

Inputs and outputs that are optimized in the Real-Time Market

INPUTS → PROCESS → OUTPUTS

- Real-time data:
  - *Grid and resource information*
  - *Resource plans:*
    - *Energy bids*
    - *Base schedules*
  - *Resource outages*
  - *Operator instructions*
- Day-ahead data:
  - *Grid and resource information*
  - *Energy delivery schedules*
  - *Capacity Reserve awards*

- Real Time Dispatch (RTD)
  - *resource dispatches for each 5-min interval*
- Fifteen Minute Market (FMM)
  - *resource sufficiency instructions for each 15-min interval*
  - *changes in energy transfers between BAAs*
- Settlement values
  - *Hourly, 15-min and 5-min intervals*

Building on our Foundation to Further Expand Western Market Opportunities

Fostering long-term and mutually beneficial relationships with neighboring utilities and states is critically important to a cost-effective and reliable clean-energy network.

Extending the regional market's advantages to a wider and more collaborative Western footprint is embedded in our overall vision, as we know from experience states in the West do better in achieving their own energy policy objectives when we work together on shared challenges and opportunities.

Through 2026, we will be focused on extending the ISO day-ahead market to participants across the West and pursue additional opportunities for regional coordination, effectively prioritizing and sequencing market design enhancements, and enabling new technologies through efficient market rules and interfaces.