

Resource Adequacy: The need for sufficient energy supplies

Resource adequacy ensures there is enough capacity and reserves for the grid operator to maintain a balanced supply and demand across the electric system.

The California Public Utilities Commission (CPUC) requires suppliers and load-serving entities—investor owned-utilities, community choice aggregators, and energy service providers—to have enough contracted capacity to meet system, local, and flexible resource adequacy requirements.

- System resource adequacy requirements stipulate that load-serving entities contract enough capacity to meet the 1-in-2 peak demand forecast, plus an additional planning reserve margin. A 1-in-2 peak demand means there's a 50% chance that the forecast will be less or more than actual peak load. The CPUC's planning reserve margin is currently set to 16 percent.
- Local resource adequacy requires that load-serving entities procure the capacity needed to meet demand in the event a local transmission grid emergency occurs.
- Flexible resource adequacy requires load-serving entities to procure enough flexible capacity to meet the highest expected three-hour net load ramp each month.

If demand for electricity turns out to be significantly higher than forecasted, especially during extreme region-wide heat waves, there can be periods when there will not be enough resources to meet demand.

Imports from other California balancing areas and other state are a key part of the ISO's energy mix and they are even more critical when there are insufficient resources within the ISO footprint to meet demand.

During projected tight energy supplies, the ISO will issue a series of emergency notifications to obtain additional capacity or reduce energy use to relieve stress on the power grid.

Reliance on non-contracted imports can pose a problem. This is particularly risky when an extreme heat wave blankets California and the West. When energy supplies are tight, the ISO may not receive as much imported – non-contracted – energy because neighboring utilities must keep the energy they would have shared to meet their customers' needs.