California ISO

FACT SHEET

Resource Adequacy: The need for sufficient energy supplies

Resource adequacy ensures there is enough capacity and reserves for the California Independent System Operator (ISO) to maintain a balanced supply and demand across the electric grid.

The California Public Utilities Commission (CPUC) requires suppliers and load-serving entities—investor owned-utilities, community choice aggregators, direct access providers, 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 with an effective rate of 17.5 percent. (1-in-2 peak demand means there's a 50% chance that the forecast will be less or more than actual peak load.);
- Local resource adequacy requires that load-serving entities have the capacity needed to meet demand in the event a local transmission grid emergency occurs;
- Flexible resource adequacy requires load-serving entities to show they have procured enough capacity to meet demand in the crucial early evening hours when solar resources are no longer available.

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 within California and other states 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.

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.

But when resource insufficiency occurs, although the ISO is depending on contracted imports, it may be unable to acquire additional resources, including imports.

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