

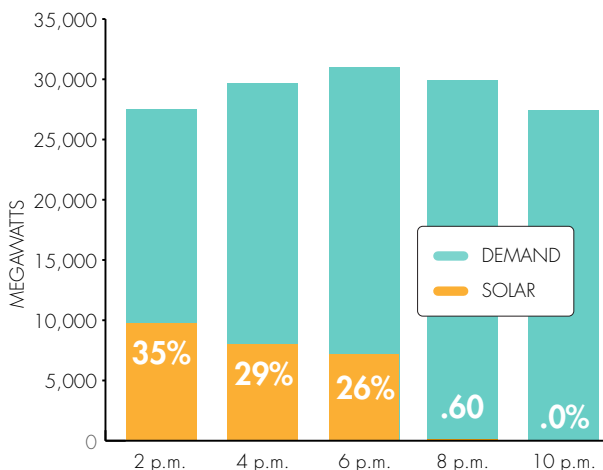
Summer Outlook

- Hydroelectric conditions are well above average
- Lower potential for calls for Flex Alerts
- Forecasted peak demand of 46,511 MW is relatively unchanged from 2018
- 2,702 MW of generation will retire or mothball
- Risk of reserve shortfalls increase later in summer as snow runoff declines

Result

ISO predicts adequate power largely because of above-normal hydroelectric supplies, however, reliability in Southern California is uncertain because of reduced natural gas capacity and restrictions.

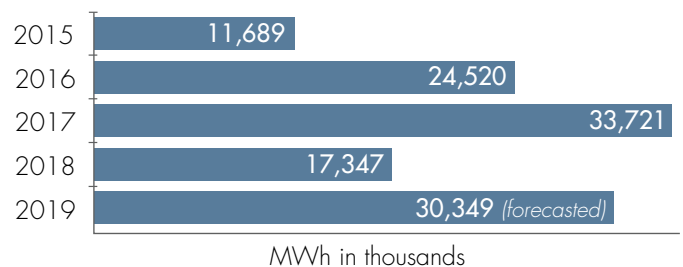
Percentage of solar serving demand on typical summer day in June



Hydroelectric supplies have increased

For the 2018-2019 season, snowpack water content is 162 percent of average, and major reservoir storage levels are 109 percent of average, meaning there is adequate water to generate hydroelectricity. However, this year's hydroelectric conditions will impact the level and frequency of oversupply conditions in the spring and summer.

Annual hydroelectric production



Natural gas outlook and impacts

The outlook for energy reliability during the evening hours in Southern California remains challenging due to reduced capacity and continued pipeline outages. There is a potential for energy shortages because of the need to rapidly increase power supplies during the late afternoon when solar generation declines and system demand is still high.

Today's Outlook

Watch the ISO's electricity supply and demand in real time on [Today's Outlook](#).

While the forecast predicts there is adequate power supply this summer, there are times when supply margins are tight because air conditioning drives up electricity demand. When that happens, the ISO has robust procedures for communicating with the public and market participants, and for taking action to protect grid reliability.

Flex Alerts & System Alerts, Warnings and Emergencies

A Flex Alert is a call for consumers to voluntarily conserve electricity when there is a predicted shortage of energy supply, especially if the grid operator needs to dip into reserves to cover demand. When consumers reduce electricity use at critical times, it can prevent more dire emergency measures, including possible power outages.

Last summer the ISO called two Flex Alerts, and because of adequate hydroelectric supplies, it is predicted there may be fewer calls for conservation in 2019.

What triggers Flex Alerts and other notifications?

A Flex Alert is typically issued in the summer when extremely hot weather pushes up electricity demand. This usually happens in the evening hours when solar generation is going offline and consumers are returning home and switching on air conditioners, lights, and appliances.

Other contributing factors include:

- Unplanned power plant outages
- Fires that lead to transmission line losses
- Peak electricity demand forecast
- Loss of generating or transmission equipment
- Humid, hot weather and heat storms

Emergency Notifications



Transmission Emergency

Declared for any event threatening or limiting transmission grid capability, including line or transformer overloads or loss.

Stage 1 Emergency

Contingency Reserve shortfalls exist or forecast to occur.

- ▶ Strong need for conservation

Stage 2 Emergency

The ISO has taken all mitigating actions and is no longer able to provide its expected energy requirements.

- ▶ Required ISO intervention in the market, such as ordering power plants online.

Stage 3 Emergency

The ISO is unable to meet minimum contingency reserve requirements, and load interruption is imminent or in progress.

- ▶ Notice issued to utilities of potential electricity interruptions

For more information, visit:

- [Today's Outlook](#)
- [2019 Summer Loads & Resources Assessment](#)
- [FlexAlert.org](#)