



Summer Readiness and Grid Reliability

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Summer 2022 Review

Overview

- California load conditions were moderate till August 31 - September 8
- Record breaking extended heat for large portion of region but not all at the same time

Role the WEIM had on reliability

- During September 2022 WEIM performed to get surplus to areas of higher need
- Responded to outages during critical times

Growth of storage

- Approximately 3,000 MW of storage added to the system

Key observations for 2023:

- 2023 materially improved conditions due to:
 - Addition of over 3,000 MW storage since summer 2022
 - Beneficial hydro conditions – at or near historical high
- Resource fleet scheduled to be online by June 1 exceeds the 1-in-10 planning target with a margin of approximately 200 MW
- Resources scheduled by September 1 exceeds the 1-in-10 planning target with a margin of approximately 2,300 MW
- Note planning targets address probability of calling on emergency measures, not actual loss of firm load

Key observations for 2023 (continued):

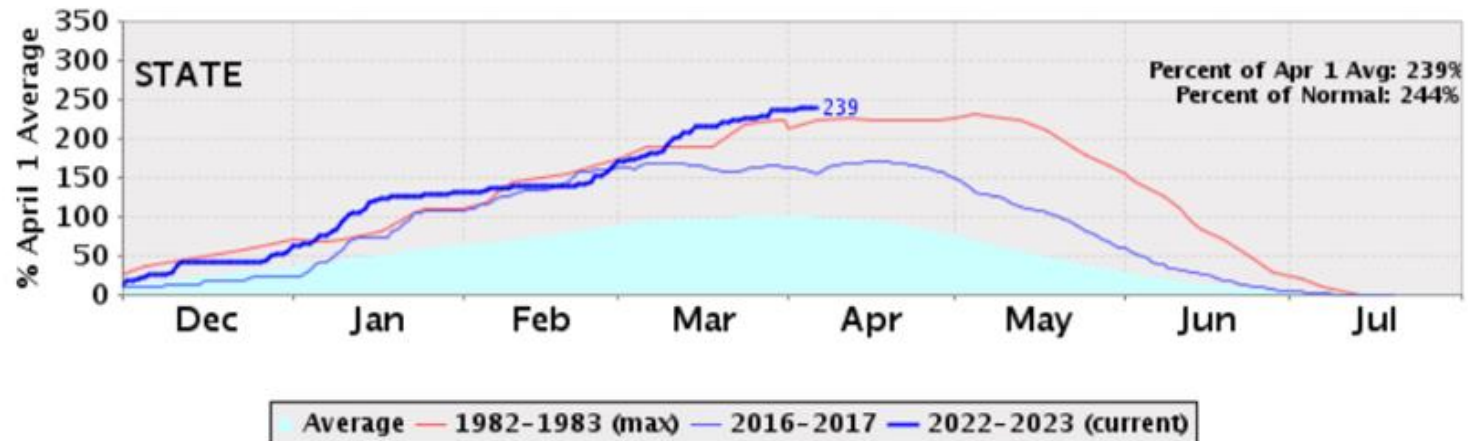
- Grid remains vulnerable to high loads and availability of imports during widespread heat events, especially in late summer
- Hours of most vulnerability continue to shift to hours after sunset when solar output declines
- Strategic reserves have been mobilized to safeguard against these extremes

The ISO is showing considerable improvement in the resource situation driven off of new resources and high hydro conditions

- New resource development is continuing through the summer:

Resource Type	Incremental Installed Capacity Between Sept 1 2022 and <u>June 1, 2023</u>	Incremental Installed Capacity Between Sept 1 2022 and <u>Sept 1, 2023</u>
Wind	518	518
Solar	2,478	3,774
Battery Storage	2,293	4,302

- Hydro conditions are tracking to record highs:



Statewide Percent of average to date

244.0%

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The improved resource situation more than offset modest increases in CEC load forecasts

CEDU 2022 Planning Forecast for ISO Balancing Authority Area

	Forecast for 2023	Last year's forecast for 2022
1-in-2 forecast	46.8 GW	46.3 GW
1-in-5 forecast	48.8 GW	48.3 GW
1-in-10 forecast	49.9 GW	49.4 GW

In 2022, while the actual peak demand reached 52,061 MW in 2022 – a 1-25 year event (weighted 3-day temperature using 28 years of weather data).

2023 Operations – Updates

- Clarification of emergency declaration verbiage for CAISO BA
- Strengthened criteria for the California Flex Alert
- Discussions with RC west customers regarding contingency reserve management
- Improved coordination of internal communication roles and responsibilities
- Continuous improvement of system operations tools

ISO's communications for summer readiness centralizes information about weather, market and grid

- System Conditions Bulletin
 - Provides real-time forecasting and grid conditions
 - Posted when conditions change, with a social media post to drive traffic
- Flex Alert
 - Refreshed FlexAlert.org
 - In partnership with CPUC and CEC
 - Advertising campaign launches in May
 - Campaign includes utility-driven consumer conservation incentive program
- Robust social media plan for grid conditions and Flex Alert
 - Twitter, LinkedIn, Facebook

The screenshot displays the FlexAlert.org website. At the top, there is a navigation bar with the 'FLEX ALERT' logo, links for 'What is a Flex Alert?', 'Ways to save energy', and 'News', and a 'Sign up' button. The main content area features a dark blue header with the text 'Flex Alerts are voluntary calls for consumers to conserve electricity' and 'SIGN UP' and 'LEARN MORE' buttons. Below this is a flowchart with three steps: 'What triggers a Flex Alert?' (extremely hot weather), 'Who issues a Flex Alert?' (California ISO), and 'When is a Flex Alert issued?' (day before). The bottom section, titled 'What should consumers do when a Flex Alert is issued?', provides tips for 'Before a Flex Alert' (pre-cool home, use major appliances, close window coverings) and 'During a Flex Alert' (lower AC temperature, use fans, turn off electronics).