



Update: Summer 2023 Reliability Outlook

Assembly Utilities and Energy Oversight Hearing

May 16, 2023



Three Reliability Challenges in California

Planning Processes

- Improve ability to account for climate change-induced weather variability
- Ensure timely and sufficient procurement across all jurisdictions
- Improve processes associated with interconnection and permitting

Scaling Resources

- Expand diversity of resources
 - Demand-side (e.g., more demand flexibility)
 - Supply-side (e.g., long-lead resources)

Extreme Events

- Augment Strategic Reliability Reserve



Actions Taken – Expanded Summer Planning

Coordinated activities

- Reliability analyses
- Resource tracking
- Contingency tracking
- Entity-specific emergency actions tied to CAISO System Operations Emergency Plan
- Real-time communication at senior levels



California ISO



Improved Outlook for 2023

- Improved hydro conditions and increased resources result in an **improved outlook for summer 2023** compared to previous summer 2023 projections provided in the February report.
- While system conditions have improved, the system remains vulnerable to extreme event conditions.
 - Analysis projects **shortfalls** under extreme events
 - The state has **contingency resources**, including the Strategic Reliability Reserve, to help address extreme events



Results Summary

Overall improved outlook for the summer under all scenarios due to:

- Improved hydro
- Increased imports

	Projected September Estimated Surplus or Need for Contingencies	
	February Report	May Report
Under Expected Demand	~ 1,550	~ 2,350
2020 Equivalent Event	~ -1,050	~ -250
2022 Equivalent Event	~ -2,700	~ -1,850

Green is surplus, Red is shortfall before contingencies

Shortfalls do not include coincident catastrophic fire risk

Note: Going into summer 2022, the forecasted shortfalls under **2020 and 2022 equivalent** event would have been **3,000 and 7,000 MW**, respectively.



Resource Mix Comparison

- Improvements
 - DWR forecasts greater hydro generation, which contributes 800 MW
 - Average Resource Adequacy imports increased, contributing 500 MW
- Demand Adjustments
 - Updated hydro conditions result in 500 MW of pump load added at peak hours

	September 2023- February Report (MWs)	September 2023- May Report (MWs)	Change (MWs)
Supply			
Demand Response	1,274	1,274	- 0
Existing Resources	44,817	45,646	▲ 829
New Batteries (Nameplate)	1,759	2,106	▲ 347
New Hybrid (Nameplate)	1,061	1,452	▲ 391
Resource Adequacy Imports	5,500	6,000	▲ 500
Total	54,411	56,478	▲ 2067
Demand			
2022 Forecasted Peak Demand	46,827	46,829	▲ 2
Pump Load Adjustment at Net Peak	0	500	▲ 500

Results are for CAISO for September 2023



Contingencies

- Available Contingency Resources
 - Strategic Reliability Reserve
 - Electricity Supply Strategic Reliability Reserve Program (ESSRRP), Demand Side Grid Support (DSGS)
 - CPUC Programs
 - Emergency Load Reduction Program (ELRP), Smart Thermostats, etc.
 - DWR State Water Project
 - Non-Program Resources
 - Balancing Authority Transfers, Thermal Resources Beyond Limits etc.
- Total Available
 - July: ~2,800 MW
 - August: ~2,800 MW
 - September: ~2,600 MW



Additional Reliability Updates

- May 17th Summer Reliability Outlook Workshop
- 2023 IEPR Theme: Accelerating Clean Energy Interconnection
- Strategic Reliability Reserve Updates
 - DWR secured OTC contracts
 - Demand Side Grid Support (DSGS) updated guidelines for summer 2023 will go to June Business Meeting
 - Distributed Energy Backup Assets (DEBA) guidelines to be released this summer