



California ISO

2026 Summer Grid Reliability

Senate Energy, Utilities, and Communications Committee - Oversight Hearing

August 4, 2026

Primary Roles in Energy Supply Planning & Services



CARB

- Scoping Plan
- Air Regulations
- Carbon Market/Cap-and-Invest



CEC

- California Electric Demand Forecast
- Municipal Utility Renewable Portfolio Standard (RPS) Oversight



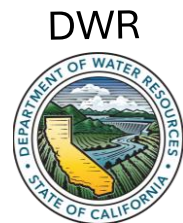
CPUC

- Integrated Resource Planning (IRP)
- Resource Adequacy (RA)
- Load serving entity RPS Oversight



CAISO

- Market Operation
- Transmission Operation and Generator Dispatch
- Transmission Planning



DWR

- Electricity backstop responsibilities such as the Electricity Supply Strategic Reliability Reserve Program (ESSRRP)
- Administering the Diablo Canyon Extension Fund



Actions - Grid Reliability & Clean Energy Transition

- **Improving Grid Planning Processes**
 - Improvements to forecasting for climate change-induced weather variability and electrification
 - Ordering sufficient and diverse energy resource procurement
 - Improvements to Resource Adequacy process and requirements
- **Scaling Supply & Demand-Side Clean Energy Resources**
 - Track procurement
 - Improve interconnection & permitting process
 - Opt-In Permitting
 - Transmission Permitting pilot program & dashboard
 - SB 846 (2022) requirements, including demand flexibility goal
- **Preparing for Extreme Events**
 - Agencies developed playbook for extreme events
 - Established dependable contingency resources
 - State funded Strategic Reliability Reserve, including OTCs, DSGS, & DEBA
 - Ratepayer programs, including ELRP
 - Non-programmatic, including emergency transfers & 202c waivers

Procurement Ordered by CPUC

In megawatts,* by year



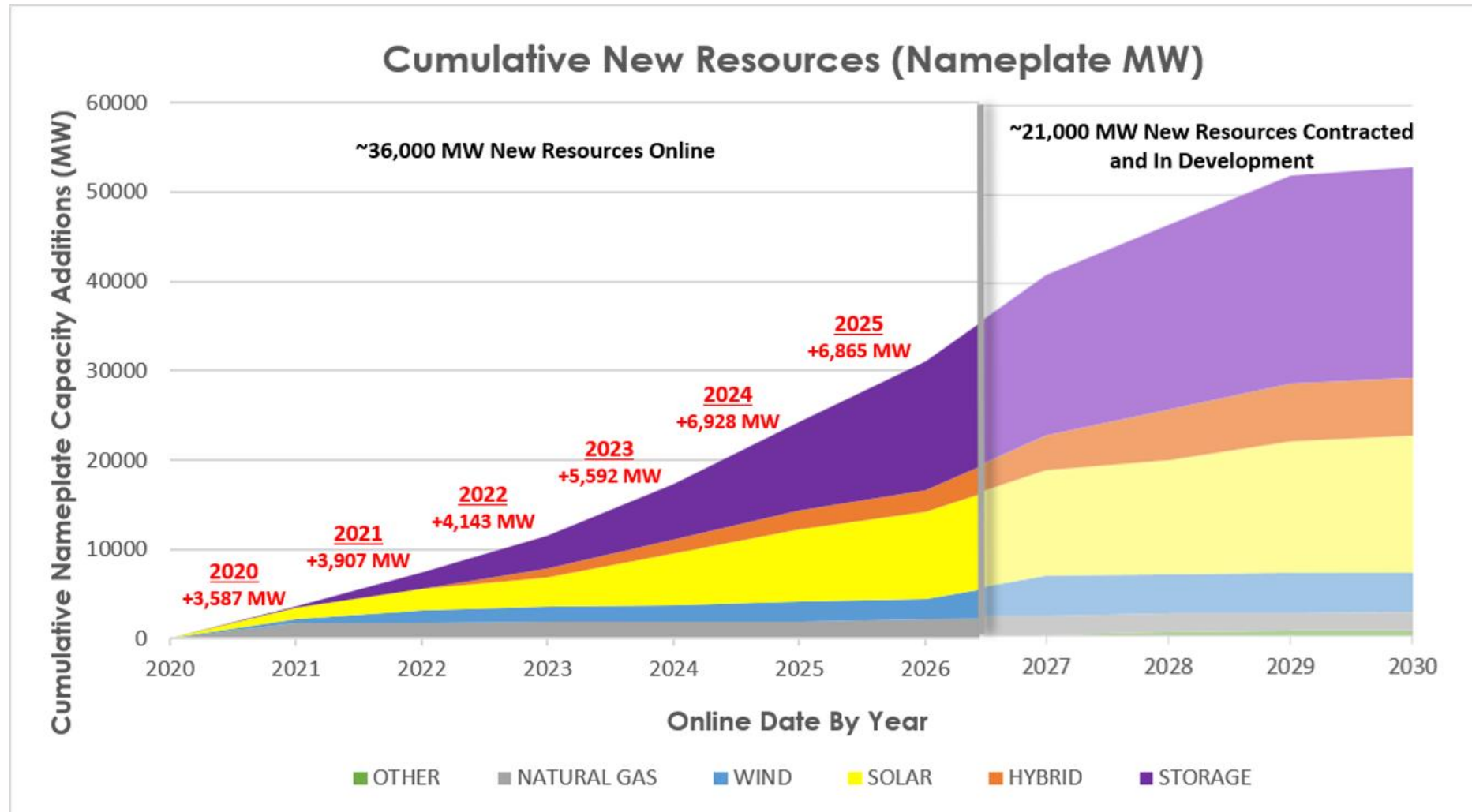
CPUC Orders	Amount (MW)	Time Period
Near-Term Reliability (ordered 2019)	3,300	2021-2023
Mid-Term Reliability (MTR) (ordered 2021)	11,500	2023-2025; 2028 (for LLTs**)
Supplemental MTR (ordered 2023)	4,000	2026-2027
Procurement Order 2026 (ordered in February)	6,000	2030-2032

Total Ordered: 24,800 MW

* Megawatts reflect Net Qualifying Capacity (NQC)

** The order requires LSEs to procure 2,000 MW of long lead time (LLT) resources by 2028. Per D.24-02-047, LSEs may request extensions for their required LLT procurement for commercial online dates no later than June 1, 2031.

CAISO Cumulative New Capacity (Nameplate MW)



Note: Data shown here shows a snapshot of new resources added to CAISO grid Q12020 – Q2 2026, including specified CAISO imports. Also shown is a projection of future new resources based on contracts in place by May 2026. "Other" resources includes geothermal, biomass, biogas, and hydropower.

2026 Summer Grid Readiness





2026 Summer - Grid Readiness & Outlook

- **The current 2026 forecast shows a further improved outlook compared to recent years.**
 - No shortfalls projected under traditional planning conditions
 - No shortfalls projected under extreme conditions like those experienced in 2020 and 2022, **largely due to 36,000 MW of new resources that have come online since 2020**
 - Battery storage **is providing more than 16,000 MW of new capacity since 2020** and continues to scale significantly
 - **Market is highly motivated to bring online new projects in advance of federal tax credit expirations**
- **Long-lasting west-wide extreme heat conditions, if combined with sudden events like a fire affecting key transmission lines, could still create tight conditions on the grid.**
 - Weather forecasts show potential for above normal temperatures and west-wide heat
- **Resources available to serve the grid are sufficient to exceed planning reliability standards, and additional contingency resources reach up to 4,000 MW.**

2023-2026 Summer Forecast Comparison

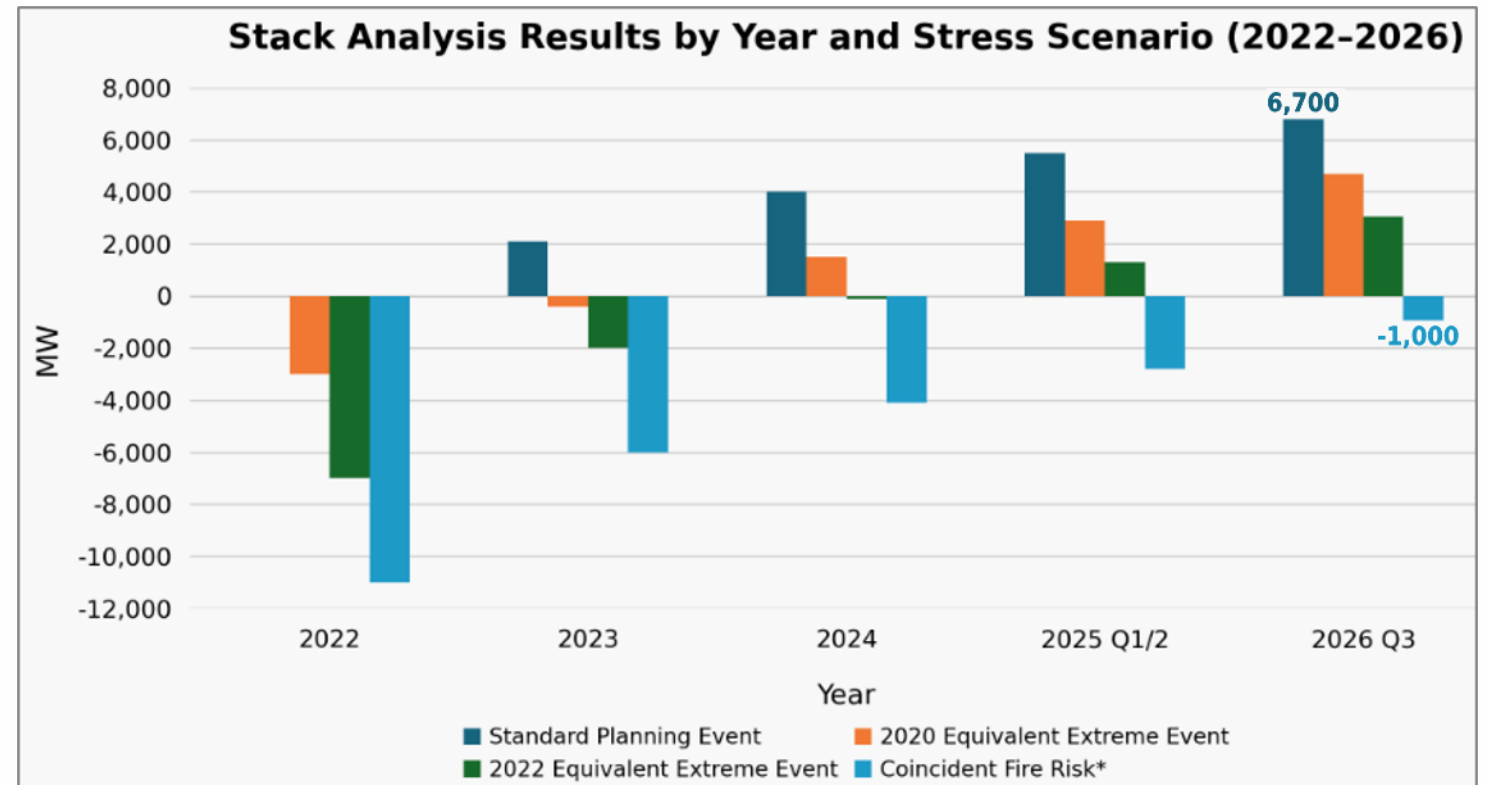


September Forecast	Summer 2023	Summer 2024	Summer 2025	Summer 2026	Summer 2026
	Aug 2023 Report	Jan 2024 Report	2025 Q1/2 Report	2026 Q2 Report	2026 Q3 Report
Demand (MW)					
Total Demand	47,327	45,972	46,152	46,546	46,546
Resources (NQC MW)					
Total Resources	55,533	56,439	63,765	66,625	66,784
Potential Surplus/Shortfall Before Contingencies Are Need (Resources – Demand) (MW)					
Reliability Planning Standard (w/ 18% Planning Reserve for 2026)	2,100	4,000	5,500	6,600	6,700
2020 Equivalent Extreme Event	-400	1,500	2,900	4,500	4,600
2022 Equivalent Extreme Event	-2,000	-90	1,300	2,900	3,000

Reliability Has Improved Since 2022



- The 2026 summer outlook remains cautiously optimistic
- No shortfall events are projected based on the Loss of Load Expectation analysis
- Positive supply margins are expected under extreme heat conditions similar to 2020 and 2022
 - Some risk remains: A wildfire-related transmission outage occurring during extreme heat could result in a shortfall
 - Under a 2022-equivalent heat event combined with a transmission loss, the potential shortfall is estimated at up to 1,000 MW
- Contingency resources are available to help address these extreme, coincident events



* Assumes a wildfire-related transmission outage reduces available capacity by 4,000 MW.

2026 Contingency Resources



Type	Contingency Resource	Estimated MW July	Estimated MW August	Estimated MW September
Strategic Reliability Reserve	DWR Electricity Supply Strategic Reliability Reserve Program and State Power Augmentation Program ¹	3,079	3,079	3,079
	Demand Side Grid Support (DSGS) ²	452	657	657
	Distributed Electricity Backup Assets (DEBA) ³ (under development)	0	0	0
CPUC	Ratepayer Programs (Emergency Load Reduction Program, Smart Thermostats, etc.)	114	115	113
	Imports Beyond Stack	0	0	0
	Capacity at Co-gen or Gas Units Above Resource Adequacy	504	504	509
Non-Program	Balancing Authority Emergency Transfers	300	300	300
	Thermal Resources Beyond Limits: Gen Limits Needing 202c	25	25	25
	Total	4,474	4,680	4,683

¹ The Time Schedule Order (TSO) associated with Alamos Generating Stations' National Pollutant Discharge Elimination System (NPDES) permit expired on December 31, 2025. As such, maximum generation from the Alamos Generating Station may be reduced to meet the requirements of the NPDES permit such as high outfall water temperature restrictions, especially between May and October 2026.

² DSGS capacity values are preliminary estimates based on budget assumptions and expected participation; actual capacity may vary due to uncertainties in enrollment and performance.

³ Seven projects, totaling approximately 186 MW, are anticipated to come online in 2027.

2026 Summer Reliability

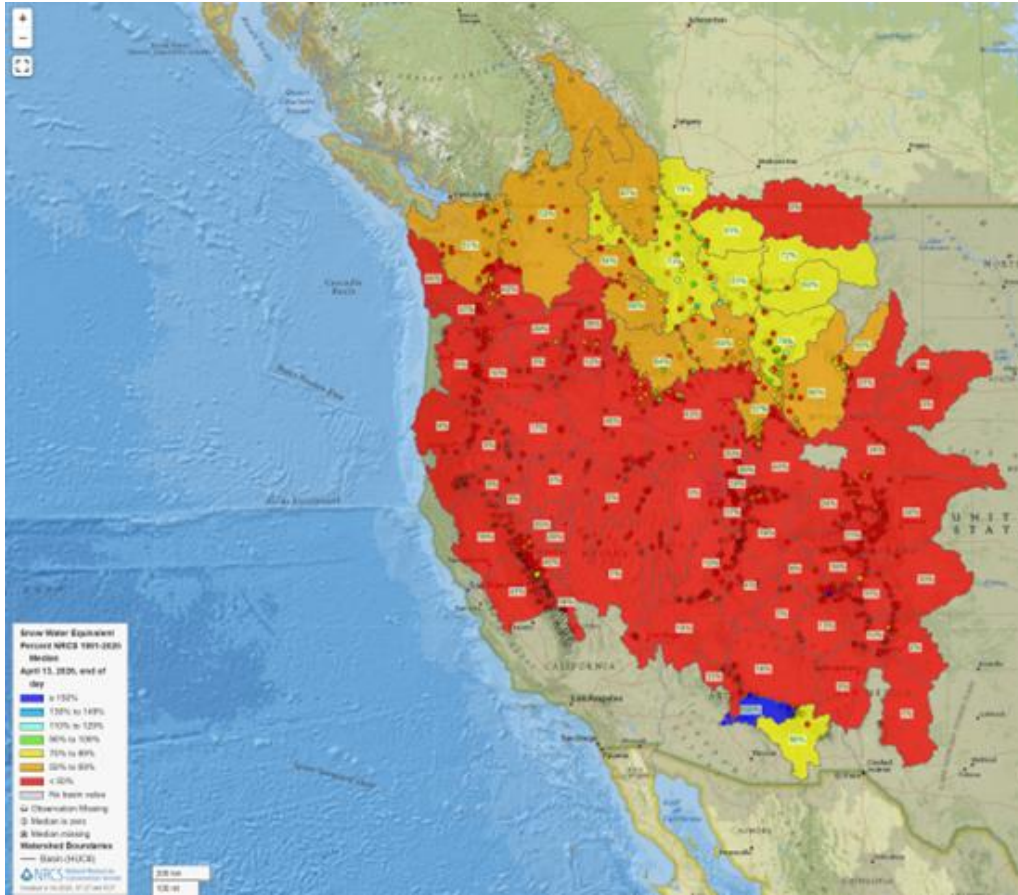


Forecasted summer conditions for 2026 continue to show improvements over previous summers driven by accelerated resource development

- CAISO's probabilistic analyses show a reasonable supply margin to meet forecasted demand and reserve margins
 - The loss-of-load expectation target of 1-in-10 is forecast to be met with a margin of approximately 2,547 MW
- CAISO also conducted a stack analysis and projects a surplus of capacity to meet projected demand in evening hours
- Abnormally dry conditions, increased wildfire risk, and the continued potential for widespread heat events and related disruptions remain factors that could pose risk to the CAISO grid as the season progresses

Below normal snow water in the mountains west-wide and most reservoirs below capacity

Snow Water Equivalent

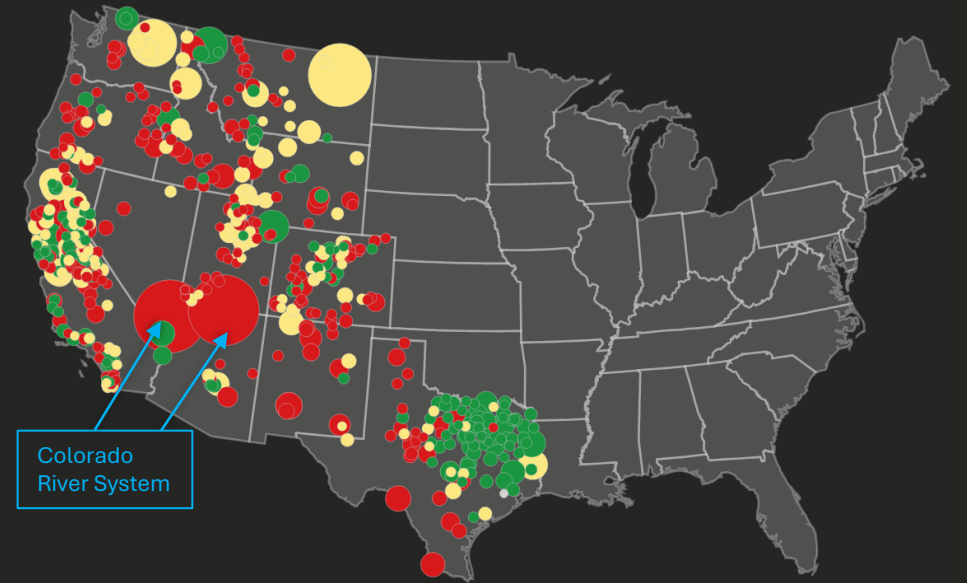
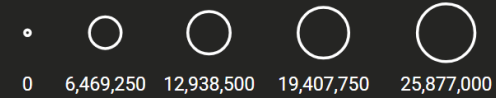


Reservoirs

Percent Full for Month Ending (May 2026), or Most Recently Available Month

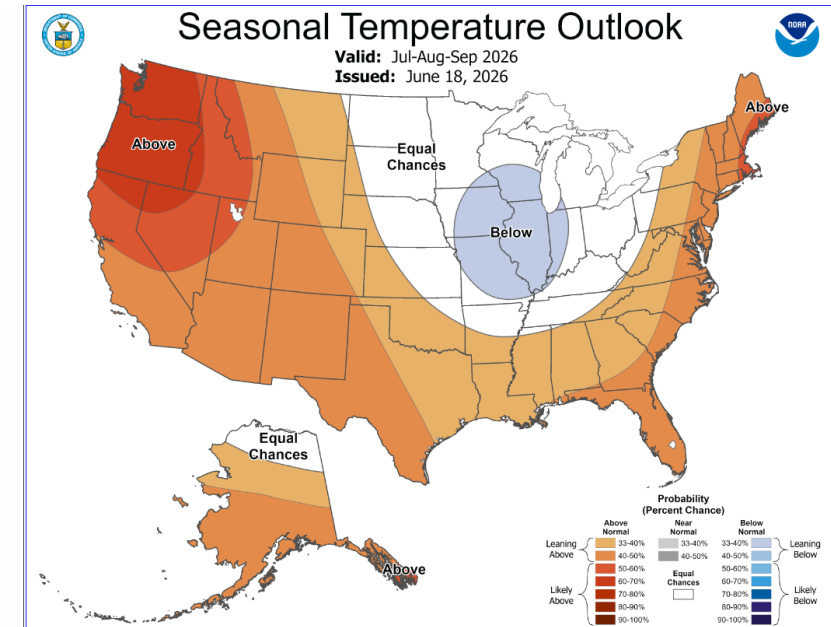
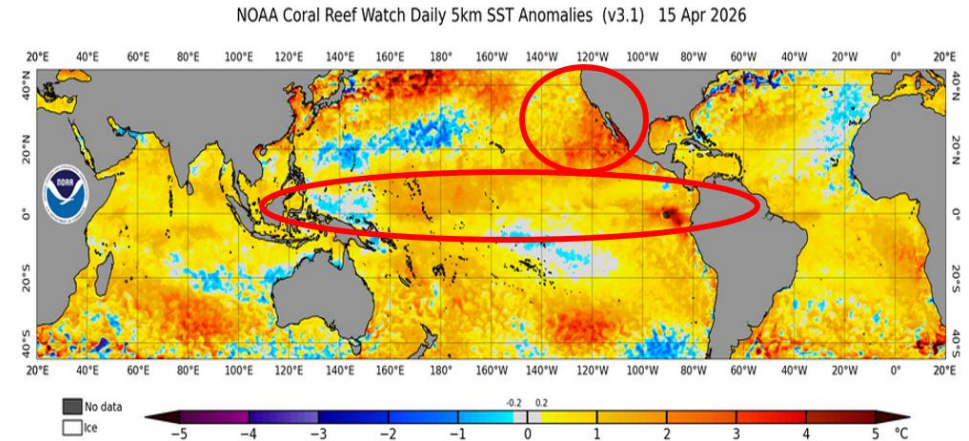
■ 75%+ ■ 50%+ ■ Less than 50%

Reservoir Capacity (acre feet)



Weather forecast guidance shows an increased chance of above normal temperatures across northern & interior CA

- July – September 2026:
 - Above-normal temperatures likely west wide (strongest in Pacific NW and Northern California)
 - Well above normal coastal sea surface temperatures are a critical driver increasing the likelihood of a warmer coastal summer and fall
 - Increased monsoonal-drive storm activity for SE California and the Desert SW
- Late Fall 2026:
 - Forecasts continue to show above-normal temperature potential across the West, with highest risk for the Pac NW and Northern California



EDAM Update

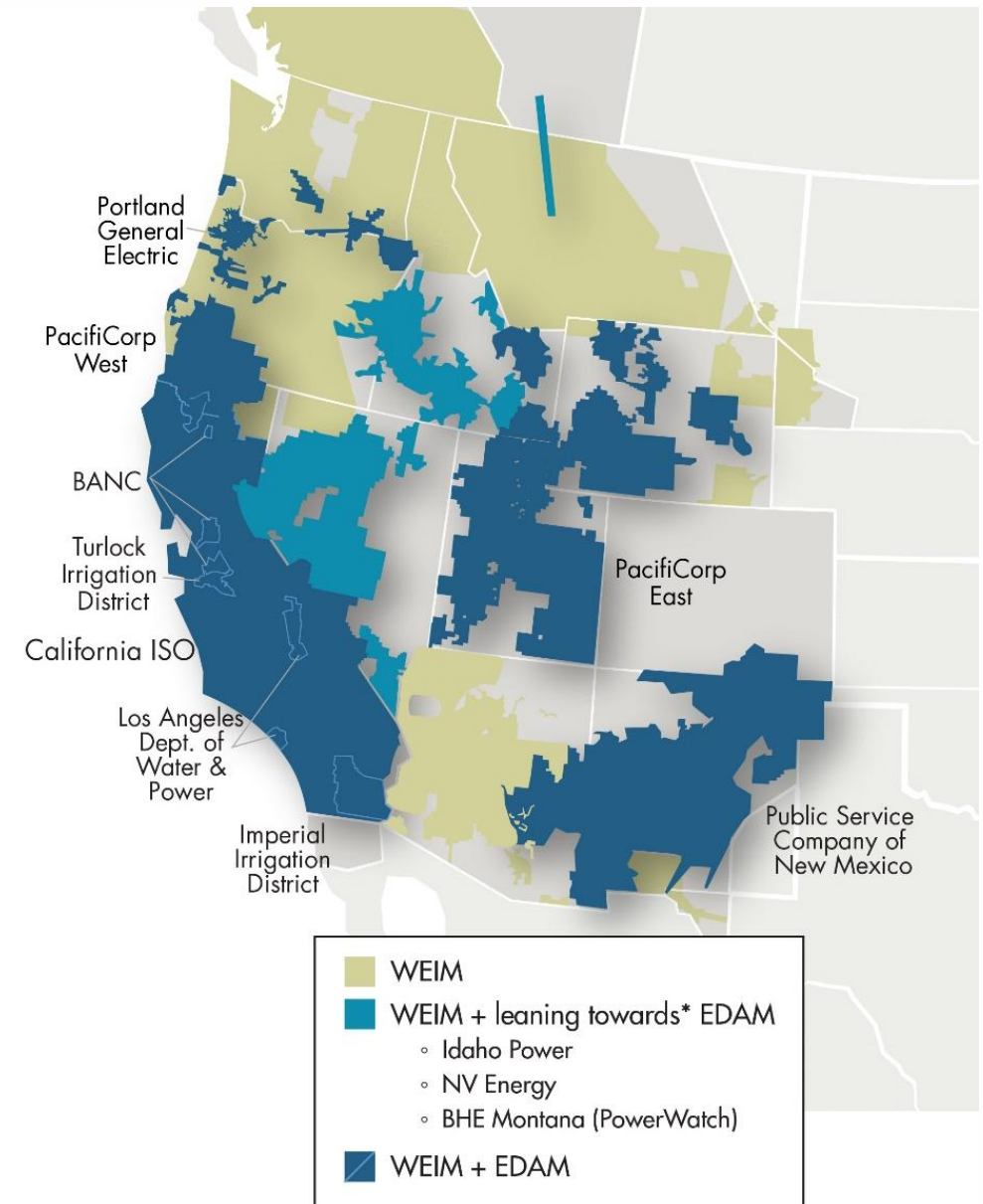


Extended Day Ahead Market (EDAM)

EDAM is a voluntary day-ahead electricity market designed to deliver reliability, economic, and environmental benefits to utilities throughout the West.

Building on the success of the Western Energy Imbalance Market, EDAM increases regional coordination, supports states' policy goals, and meets demand cost-effectively.

- Market launched May 1, 2026
- Seven entities committed to join
- Three additional entities signal intent to join or prefer EDAM for their day-ahead market



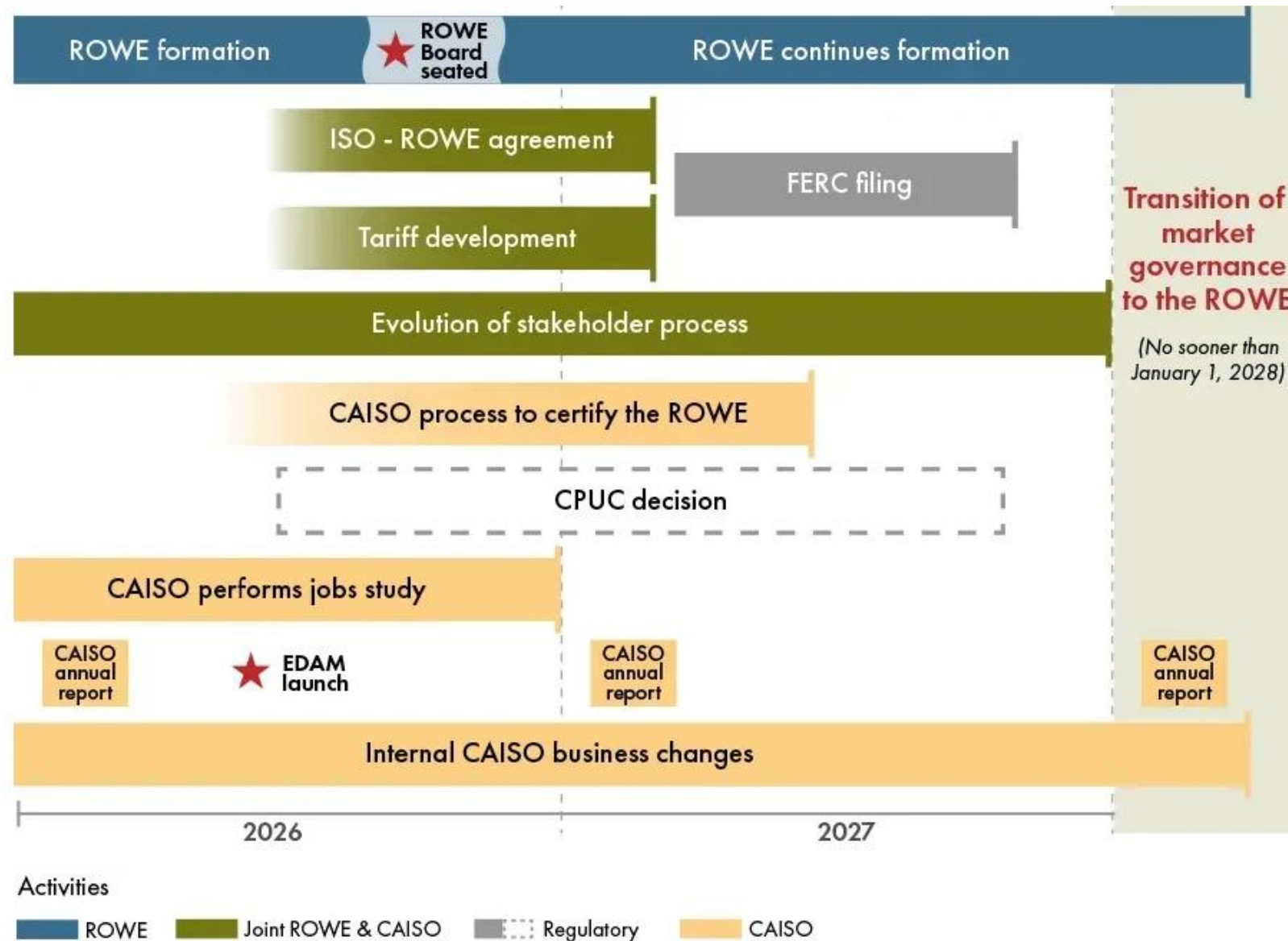
**These entities have publicly indicated a leaning towards EDAM as their preferred day-ahead market.
Map boundaries are approximate and for illustrative purposes only. Copyright ©2026 California ISO*

AB 825 Annual Report

2026 AB 825 Report

ISO Activities	2025 Implementation
Changes to federal tariffs	40+ filings submitted to FERC. FERC approved key elements of EDAM design.
Policy initiatives and recurring processes	Enhanced stakeholder processes to enable greater participation in market design discussions.
Assessment of market activity	WEIM electricity prices decreased last year compared to 2024
Actions taken by the ISO Board	25 actions approved by the board, including 2024-2025 Transmission Plan
Actions taken within the transmission planning process	Recommended 31 transmission upgrades with a total investment of \$4.8 billion

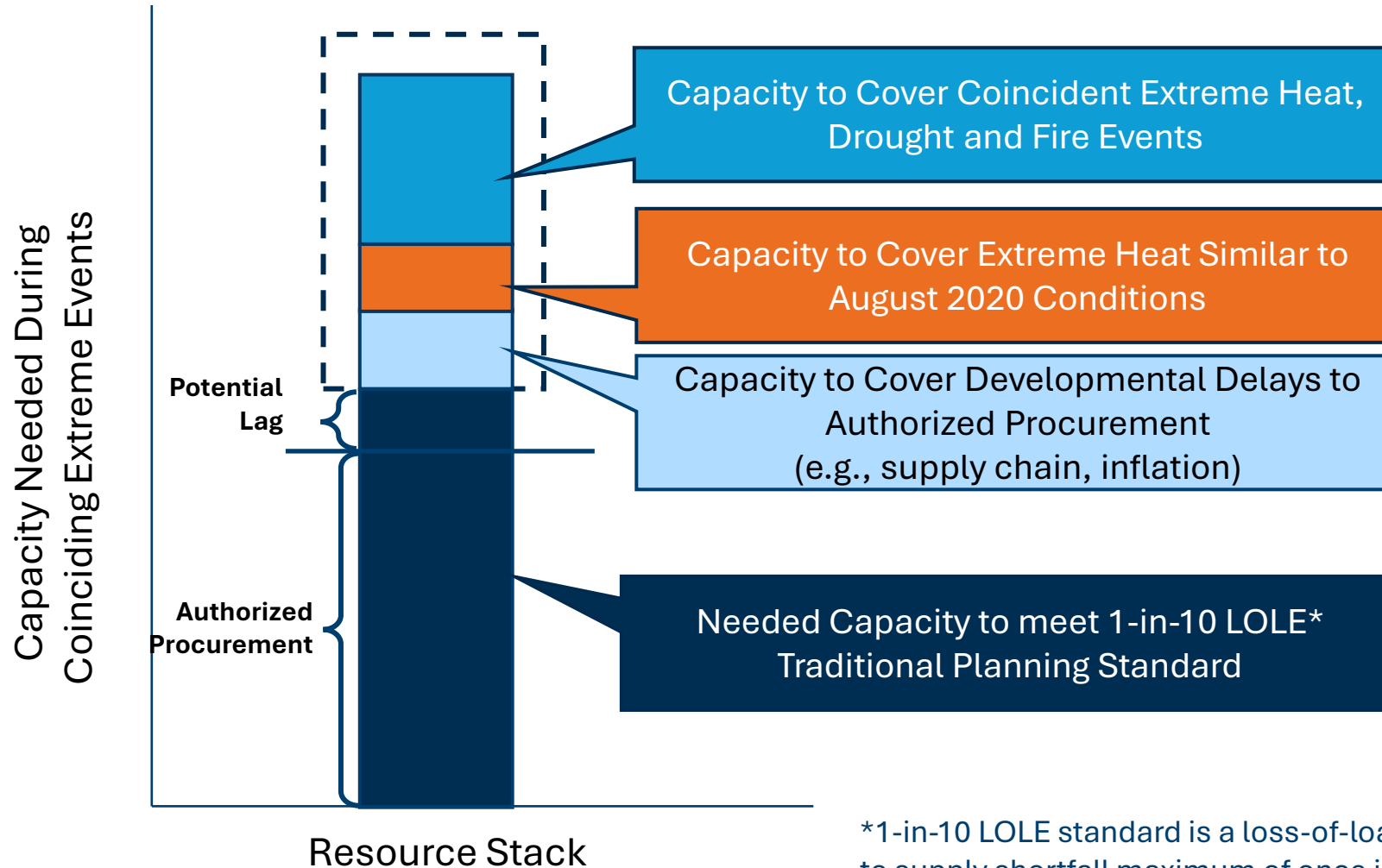
AB 825 Implementation



Long-Term Reliability Planning



2022 Context - Why a Reliability Reserve?

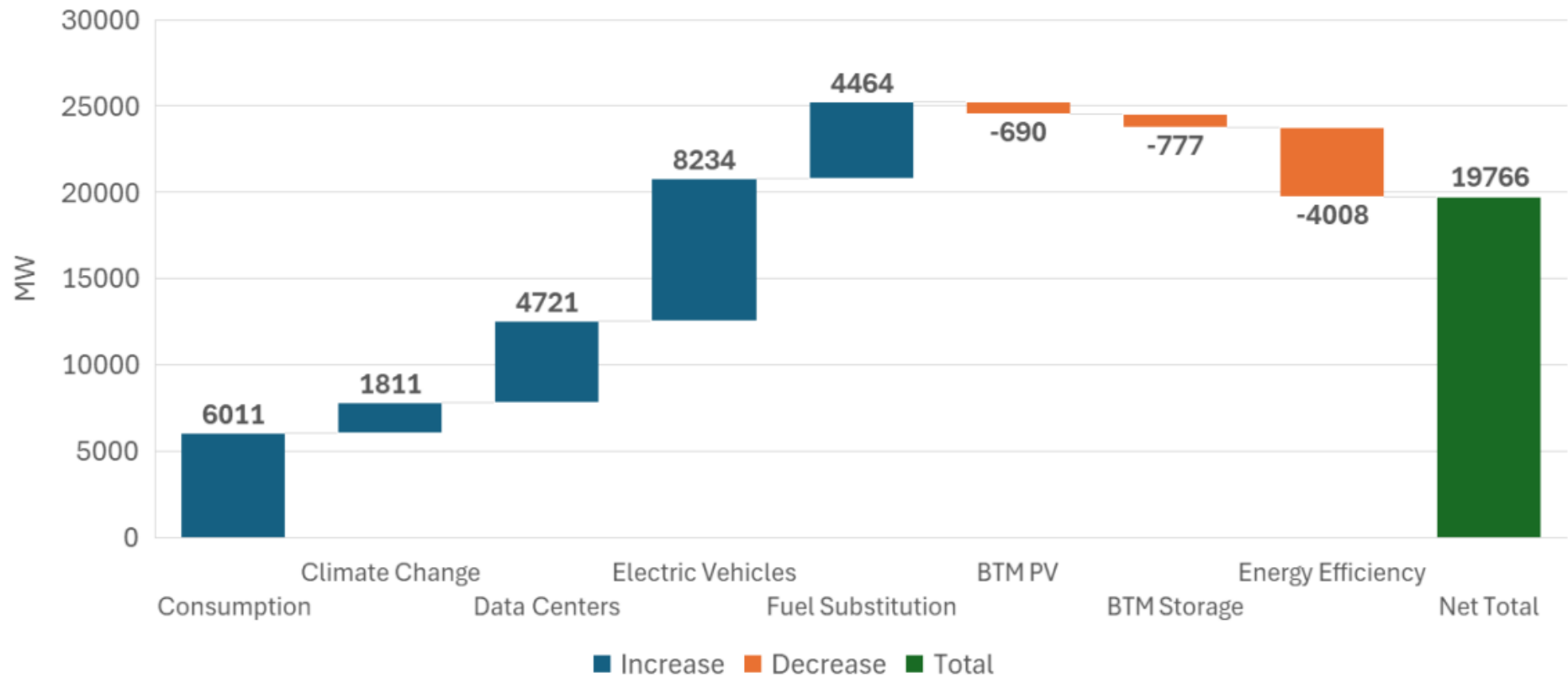


*1-in-10 LOLE standard is a loss-of-load (outage) expectation due to supply shortfall maximum of once in ten years.

State Forecasting Significant Load Growth



CAISO Load Growth From 2025 to 2045 (September Peak Day, 6-7pm PDT)



Source: CEC January 11th, 2026 Business Meeting



Long-Term Tracking

- **Significant progress in planning and procurement – structurally better position**
 - Forecast improvement to factor in climate change
 - Historic procurement over the last five years, and CPUC monitoring needs
- **Ongoing agency coordination in tracking and planning under evolving conditions**
 - Large loads and transportation and building electrification
 - Uncertainty due to federal policies
- **Continue to build on strong emergency planning**
 - Emergence of the Extended Day Ahead Market (EDAM) supporting reliability in the west
 - Existing contingencies beyond strategic reserve

Thank You!

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