California Has Enough Power to Keep the Lights on
Without Diablo Canyon Power Plant.

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On Behalf of San Luis Obispo Mothers for Peace
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Summary of Key Points

Data recently published by the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) demonstrate that **California has enough power (including storage) to keep the lights on** – without the 2,256 MW of Diablo Canyon Power Plant (DCPP) – **even during extreme heat events.**[2]

- California's peak electricity demand in 2025 was 46,094 MW.[3] Against that backdrop, the 2025 Fourth Quarterly Joint Agency Report shows that by Q4 2025, California has 61,038 MW of supply[4] and by the end of Q3-Q4 2025, California has 2,928 MW of new Net Qualifying Capacity[5] under

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[1] Mr. Konidena is an independent energy consultant, focusing on wholesale market practices and policy. From 2003 to 2018, he was employed by the Midcontinent Independent System Operator (MISO), where he used a range of software tools for resource forecasting and planning, including MISO's Planning Resource Auction and Module E Capacity Tracking (MECT) tool and the Electric Generation Expansion Analysis System (EGEAS). Before leaving MISO in 2018, his title was Principal Advisor in Transmission Asset Management.

[2] These data are presented in two reports: the CPUC and CEC's Joint Agency Reliability Planning Assessment SB 846 Fourth Quarterly Report 2025 (CEC-200-2025-026, Jan. 20, 2026) ("the 2025 Fourth Quarterly Joint Agency Report") and CPUC Decision 26-02-057 Decision Requiring 2029-2032 Electric Resource Procurement and Transmitting Portfolios for 2026-2027 Transmission Planning Process (Feb. 26, 2026; Date of Issuance March 5, 2026) ("CPUC Decision 26-02-057"), available at https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=601777006.

[3] Table 4: Comparison of Summer 2025 Resource Stack Inputs and Results for September – Hour 18, The 2025 Fourth Quarterly Joint Agency Report.

[4] The 61,038 MW figure represents total RA supply as of Q4 2025, as reported in the 2025 Fourth Quarterly Joint Agency Report. It comprises of Existing Resources (49,122 MW), Expected New Resources (2,307 MW), Solar (1,769 MW), Wind (1,307 MW), RA Imports (5,500 MW) and Demand Response (1,033 MW). Against a 2025 September Peak Demand of 46,094 MW, this yields a planning standard surplus of 7,319 MW under average conditions, 4,794 MW under a 2020 Equivalent Event, and 3,187 MW under a 2022 Equivalent Event.

[5] This paper discusses three types of capacity. Net Qualifying Capacity is the capacity that counts towards CPUC's Resource Adequacy program. The Joint Agency states that Net Qualifying Capacity is:

> a combination of the CPUC's qualifying capacity counting rules and the methodologies for implementing them for each resource type, and the deliverability of power from that resource to the California ISO system. CPUC IRP procurement orders (D.19-11-016, D.21-06-035, D.23-02-040) also require counting of resources for compliance using the associated NQCs, which can be different to those used in the RA program, depending on the resource type and order.

Nameplate Capacity is the "The maximum amount of electricity that a generating station (also known as a power plant) can produce under specific conditions designated by the manufacturer".

A surplus/shortfall capacity is a capacity that is above or below the capacity required to meet the planning standard or the 2020 equivalent event or the 2022 equivalent event.

contract to CPUC-jurisdictional load-serving entities, growing to 8,007 MW by end of 2026 and 15,393 MW by end of 2028. Battery storage alone accounts for 9,753 MW of the 2028 total. As of July 25, 2025, 27,000 MW of new nameplate capacity has come online within the California ISO territory since January 2020, with roughly 7,000 MW added in 2024 alone.

- As presented in the 2025 Fourth Quarterly Joint Agency Report, the September 2025 resource stack shows surpluses of over **7,319 MW** under average planning standard conditions, over **4,794 MW** under a 2020 Equivalent Event, and over **3,187 MW** under a 2022 Equivalent Event — all before counting the 4,711–4,836 MW of identified contingency reserves.
- CPUC Decision 26-02-057 requires 6,000 MW of Net Qualifying Capacity procurement by 2032.[6] Once that procurement is included, California's 2031 capacity position shows a surplus under all scenarios — baseline planning standard, 2020 Equivalent Event, and 2022 Equivalent Event alike. A capacity deficiency would arise only in the event of noncompliance with the CPUC's procurement order, for which there is no present basis. California maintains surpluses under both Equivalent Event scenarios through 2045.

Finally, the March 2026 off-season heat wave — occurring before the first day of spring, when seasonal resources are typically scheduling planned maintenance outages and summer demand-response programs are not yet active — was precisely the type of "outside the forecast" extreme event CEC staff have cited as the reason California must retain DCPP. The grid handled it without a single emergency notification, Flex Alert, or curtailment request, consistent with the robust surplus margins documented in the 2025 Fourth Quarterly Joint Agency Report.

Technical Analysis

In June 2023, based on CPUC and CEC data from January 2020 – March 2023,[7] I testified in a CPUC proceeding that the retirement of DCPP in 2024 and 2025, as previously planned, will not have an adverse impact on energy reliability in California and that it would impede the development of other low or zero-carbon alternatives.[8] In July 2024, based on CPUC and CEC data from March through May 2024,[9] I gave similar testimony to the CPUC.[10]

Since then, data published in the 2025 Fourth Quarterly Joint Agency Report show that California has enough power to keep the lights on — without the 2,256 MW of DCPP — even during extreme heat

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[6] CPUC Decision 26-02-057 requires incremental procurement of 1,500 MW by June 1 of each year from 2029 through 2032, yielding cumulative new procurement of 6,000 MW by June 1, 2032.

[7] Table 1: Cumulative New Resource Additions, January 2020 Through March 2023, Kootstra, Mark and Nathan Barcic (CPUC). 2023. Joint Agency Reliability Planning Assessment. California Energy Commission. Publication Number: CEC-200-2023-007. As cited in the abstract, “The report provides the second quarterly review of the demand forecast, supply forecast, and risks to reliability in the California Independent System Operator territory from 2023 to 2032, as required by SB 846. The report includes an updated analysis for summer 2023.”

[8] https://mothersforpeace.org/wp-content/uploads/2023/07/Rao-Konidena-Testimony_Final.1.pdf

[9] The Net Qualifying Capacity data is based on CPUC Staff Aggregation of March 2024 LSEs’ Procurement Status Reports. The New Resource Additions since January 1, 2024 is based on CPUC staff, California ISO data through May 2024.

[10] https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2403018/7629/537498256.pdf.

events. As of Q3 2025, California's total RA supply of 59,191 MW stands well above the 2025 September peak demand of 46,152 MW, yielding a planning standard surplus of 7,319 MW under average conditions and surpluses even under the 2020 and 2022 Equivalent Event stress scenarios. This reflects an unprecedented and unexpected rate of renewable growth: 27,000 MW of new nameplate capacity has come online within the California ISO territory since January 2020, including roughly 7,000 MW added in 2024 alone. A further approximately 21,000 MW of nameplate capacity (roughly 15,393 MW in NQC terms) is contracted and in development through 2028. Highlights of the most recent data include:

- **Growth in Net Qualifying Capacity:** An estimated 2,928 MW of new NQC will be available by end of Q3-Q4 2025, growing to 8,007 MW by end of 2026 and 15,393 MW by end of 2028 — dominated by battery storage, which alone accounts for 9,753 MW of that total. This battery storage capacity is key because unlike solar and wind, batteries are dispatchable — they can be called upon precisely when the grid is under stress, including during the evening ramp and overnight hours when solar generation has ceased.

Table A - Estimated Cumulative New September Net Qualifying Capacity (MW)

Resource Type	**2025 Q3-Q4**	**2026 Q1-Q2**	**2026 Q3-Q4**	**2027 Q1-Q2**	**2027 Q3-Q4**	**2028 Q1-Q2**	**2028 Q3-Q4**
Solar	428	447	893	1,048	1,798	1,798	1,798
Battery	2,105	3,707	4,929	7,237	8,572	9,753	9,753
Paired/Hybrid	368	1,142	1,468	2,265	2,400	2,433	2,433
Wind	16	252	595	595	595	600	600
Geothermal	—	20	112	243	283	768	800
Biomass/Biogas	10	10	10	10	10	10	10
Total	**2,928**	**5,578**	**8,007**	**11,399**	**13,659**	**15,361**	**15,393**

Source: Tables 1–3, 2025 Fourth Quarterly Joint Agency Report; *(data as of July 2025, CPUC-jurisdictional load serving entities (LSEs) only).*

These figures in Table A reflect a dramatic improvement from the conditions described in my prior testimony. The 2022 Equivalent Event, which previously represented a potential shortfall scenario requiring contingency resources, now shows a robust surplus of over 3,100 MW even before contingency reserves are counted.

- **Contingency reserves:**[11] Identified contingency resources available in September 2025 total between 4,711 and 4,836 MW, including DWR's Strategic Reliability Reserve, demand-side grid support, ratepayer programs, and emergency balancing authority transfers. (It is also important to note that no reliability-driven need for contingency resources arose in July or August 2025).[12]

[11] A 2020 Equivalent Event signifies additional capacity needed to weather a heat event such as occurred in 2020, involving 9% higher demand over median and 2.5% higher outage levels. A 2022 Equivalent Event involves 12.5% higher demand over median and 2.5% higher outage levels. The amount of imports assumed in case of coincidental fire risk is 4,000 MW in both equivalent events. See Tables 4, 5, and 6, 2025 Fourth Quarterly Joint Agency Report.

[12] https://www.caiso.com/documents/grid-emergencies-history-report-1998-to-present.pdf

- **Surplus capacity under stress scenarios:** The Fourth Quarterly stack analysis for September 2025 (Hour 18) shows surpluses of over **7,319 MW** under average planning standard conditions, over **4,794 MW** under a 2020 Equivalent Event, and over **3,187 MW** under a 2022 Equivalent Event — all without triggering any need for contingency resources under those conditions absent a coincident wildfire. Even if a wildfire reduces transmission import capacity by up to 4,000 MW, the system remains reliable under planning standard and 2020 Equivalent Event conditions. Only a simultaneous extreme 2022 Equivalent Event combined with a major wildfire transmission loss would create a contingency need, estimated at up to 813 MW — well within the available contingency resource pool.

The following table summarizes CAISO operational data for the week of March 18–22, 2026, during a surprise off-season heat wave that drove triple-digit temperatures from the Bay Area to Southern California — precisely the type of event CEC staff have cited as justification for retaining DCPP.

Table B: March 2026 Off-Season Heat Wave — CAISO Grid Performance

Metric	**Value**	**Source**
Heat wave dates	March 18–22, 2026	CAISO load data
Season	Late winter (first day of spring: March 20)	—
Peak statewide demand	35,601 MW (Mar 20, Hour 18)	CAISO SLD_FCST_ACTUAL
September 2022 all-time peak	~52,061 MW	CAISO historical
Gap below 2022 record	16,460 MW (31.6% lower)	Calculated
Non-Spin Reserve MAX requirement	0 MW (all 480 intervals)	CAISO AS_REQ_RTM
Regulation Up MAX requirement	0 MW (all 480 intervals)	CAISO AS_REQ_RTM
Spinning Reserve MAX requirement	0 MW (all 480 intervals)	CAISO AS_REQ_RTM
Regulation Down MAX (downward flexibility)	1,010–2,690 MW	CAISO AS_REQ_RTM
Flex Alerts issued	0	CAISO notification history
Energy Emergency Alerts issued	0	CAISO notification history
Curtailment notices issued	0	CAISO notification history

To assess whether California has sufficient capacity to meet the increased load growth during 2031-2045 timeframe, I downloaded the updated load forecast from CEC 2025 Integrated Energy Policy Report website.[13] Table C shows the peak demand in September month for the 2031, 2036, 2041 and 2045. I have also accounted for the planning standard reserve margin of 17% and the reserve margins under

[13] https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report-iepr/2025-integrated-energy-policy-report

2020 Equivalent Event and 2022 Equivalent Event wildfire years. For capacity, I downloaded the Table 6 – Base Case Portfolio from CPUC Decision 26-02-057.This is the “base case” for CAISO transmission planning. I added the Resource Adequacy (RA) Imports and Demand Response values from the 2025 Fourth Quarter Report and assumed they are static throughout the 2031-2045 time.

As shown in Table C, California will have a capacity surplus of 5,917 MW in 2031 under the 17% planning reserve margin standard and a surplus of 2,795 and 808 MW in 2031 under the 2020 and 2022 Equivalent Events respectively. Table C also shows that after 2031, California will have a capacity surplus in 2036-2045 under all three reserve margin standards. Under the 17% Planning Reserve Margin (PRM), the surplus ranges from 20,370 MW in 2036 to 57,657 MW in 2045. Under the 2020 Equivalent Event, the surplus ranges from 16,823 MW in 2036 to 53,742 MW in 2045. Even under the most stringent 2022 Equivalent Event, Table C shows a surplus of 14,566 MW in 2036, growing to 51,251 MW by 2045. These results demonstrate that California has adequate capacity resources to meet projected peak demand across the entire 2031–2045 planning horizon without the addition of DCPP's 2,256 MW of capacity.

Table C – Estimated Capacity and Load Forecast for 2031-2045

Variable\Year	**2031**	**2036**	**2041**	**2045**	**Source**
TPP Proposed Base Case	61,300	89,300	109,300	134,400	CPUC Decision - Table 6. New Resources Included in 2026-272 TPP Proposed Base Case
Incremental Procurement	4,500				CPUC Decision -Table 5. Proposed Procurement to be Required from LSEs Collectively (in ELCC MW)
RA Imports	5,500	5,500	5,500	5,500	Joint Agency Report
Demand Response	1,033	1,033	1,033	1,033	Joint Agency Report
Total Capacity (MW)	72,333	95,833	115,833	140,933	Calculation
Peak Demand (MW) - Sep/2026	56,766	64,498	68,641	71,176	2025 Integrated Energy Policy Report - Jan 2026 release
Peak Demand w/ 17% PRM	66,416	75,463	80,310	83,276	for 17% - Joint Agency Report
2020 Equivalent (22.5%)	69,538	79,010	84,085	87,191	for 22.5% - Joint Agency Report
2022 Equivalent (26%)	71,525	81,267	86,488	89,682	for 26% - Joint Agency Report
Surplus/ Deficient - 17% PRM	5,917	20,370	35,523	57,657	Calculation
Surplus/ Deficient - 2020 Eq	2,795	16,823	31,748	53,742	Calculation

Surplus/ Deficient - 2022 Eq	808	14,566	29,345	51,251	Calculation

CONCLUSION

In conclusion, the 2,256 MW of DCPP capacity is not needed for reliability in California. As of July 2025, 27,000 MW of new nameplate capacity has already come online within the California ISO territory since January 2020. Against a 2025 September peak demand of 46,094 MW, this buildout has been substantial. California is on track to have an additional 15,393 MW of Net Qualifying Capacity under contract by end of 2028. The Joint Agency's 2025 Fourth Quarterly Report indicates a surplus of 7,319 MW for September 2025 under average planning standard conditions — and surpluses of 4,794 MW and 3,187 MW even under 2020 and 2022 Equivalent Event stress scenarios, respectively, all before counting the 4,711–4,836 MW of identified contingency reserves.

The March 2026 off-season heat wave — occurring before the first day of spring — was precisely the type of "outside the forecast" extreme event CEC staff have cited as the reason California must retain DCPP. The grid handled it without a single emergency notification, Flex Alert, or curtailment request, consistent with the robust surplus margins documented in the 2025 Fourth Quarterly Joint Agency Report.

Based on the CPUC decision requiring 2029-2032 electric resource procurement, once the 4,500 MW of Net Qualifying Capacity procurement required by 2031 is included, California shows a surplus in 2031 under all scenarios — including the more demanding 2020 and 2022 Equivalent Event stress tests. A deficiency would arise only in the event of noncompliance with CPUC's procurement requirements, for which there is no present basis. Looking further ahead, California maintains surpluses under both Equivalent Event scenarios through 2045.