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Joint Agency Reliability Planning Assessment

SB 846 Third Quarterly Report 2026

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ABSTRACT

The Joint Agency Reliability Planning Assessment addresses requirements for electric system reliability reporting in Senate Bill 846 (Dodd, Chapter 239, Statutes of 2022). This report provides the 2026 third quarterly review of the electricity supply forecast and risks to reliability in the California Independent System Operator territory and includes an updated analysis for summer 2026.

Keywords: Reliability, Reliability Planning Assessment, SB 846, California ISO, CEC, CPUC, California, electricity, supply and demand, extreme weather, electricity system planning, resource stack analysis, summer reliability, resource procurement

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EXECUTIVE SUMMARY

Senate Bill 846 (Dodd, Chapter 239, Statutes of 2022) mandated the California Energy Commission (CEC) and California Public Utilities Commission (CPUC) to develop and provide to the Legislature, quarterly joint agency reliability planning assessments beginning on or before December 15, 2022. These assessments include updates on electric system demand and supply for the next 5- and 10-year periods, as well as an assessment of electric system reliability under different risk scenarios. The report is also required to provide information on the status of new resources and delays or barriers to their availability to support reliability.

This assessment is the third quarterly report of 2026 and provides an update on electric demand and supply for summer 2026 for the California Independent System Operator (ISO) balancing area. The analysis completed in this report is based on data that were available as of June 1, 2026. This report does not update the 5- and 10-year-forward projections of system reliability or provide any recommendations to the Legislature; that assessment is done annually and was published as part of the first quarterly report.

As of the second quarter of 2026, the CPUC Integrated Resource Planning procurement orders appear on track to be met or exceeded on a collective basis. Over a series of orders, the CPUC ordered the equivalent of over 14.8 gigawatts (GW) of new Net Qualifying Capacity to be online to support summer reliability by June 2026. The California ISO has added about 36 GW of new nameplate resources since January 2020, which qualifies as over 22 GW of new September Net Qualifying Capacity. September Net Qualifying Capacity value describes the amount of capacity from each resource that can be counted towards meeting Resource Adequacy requirements in the CPUC's Resource Adequacy program for the month of September. A substantial subset of the new resources is under review for meeting compliance with the CPUC Integrated Resource Planning orders, including at least 14 GW of September Net Qualifying Capacity that is expected to count towards the CPUC compliance requirements.

Projected system conditions for summer 2026 continue to show improved reliability compared to the second quarter assessment due to additional resources anticipated to be online. The latest resource stack analysis, which focuses on September, the month with the highest risk of shortfalls, continues to show positive supply margins under planning standard conditions. Under planning standard conditions, the installed capacity surplus is projected to exceed 6,750 megawatts (MW), an increase of over 150 MW compared to the second quarter assessment. Even under extreme heat scenarios similar to 2020 and 2022 events, the system maintains positive supply margins with projections exceeding 4,600 MW for a 2020 equivalent event and 3,000 MW for a 2022 equivalent event.

Despite the forecasted surplus, certain risks to grid reliability remain. For example, wildfires can damage transmission infrastructure, potentially reducing electricity supply by up to 4,000 MW. Delays in new resource development could also reduce available

supply margins, while known loads could add over 1,300 MW of peak demand to the grid in 2026. If multiple risk factors occur simultaneously, there may be a need to activate contingency resources to maintain system reliability.

CHAPTER 1:
Third Quarterly Report

Introduction

This report provides an update to reliability-related activities and developments since the *2026 Second Quarterly Joint Agency Reliability Planning Assessment* was written.[1] The assessment is required to include estimates of supply and demand for the next 10 years under different risk scenarios, information on existing and new resources and delays, and a description of barriers to timely deployment of resources, as mandated by Senate Bill 846 (Dodd, Chapter 239, Statutes of 2022).

Supply Forecast

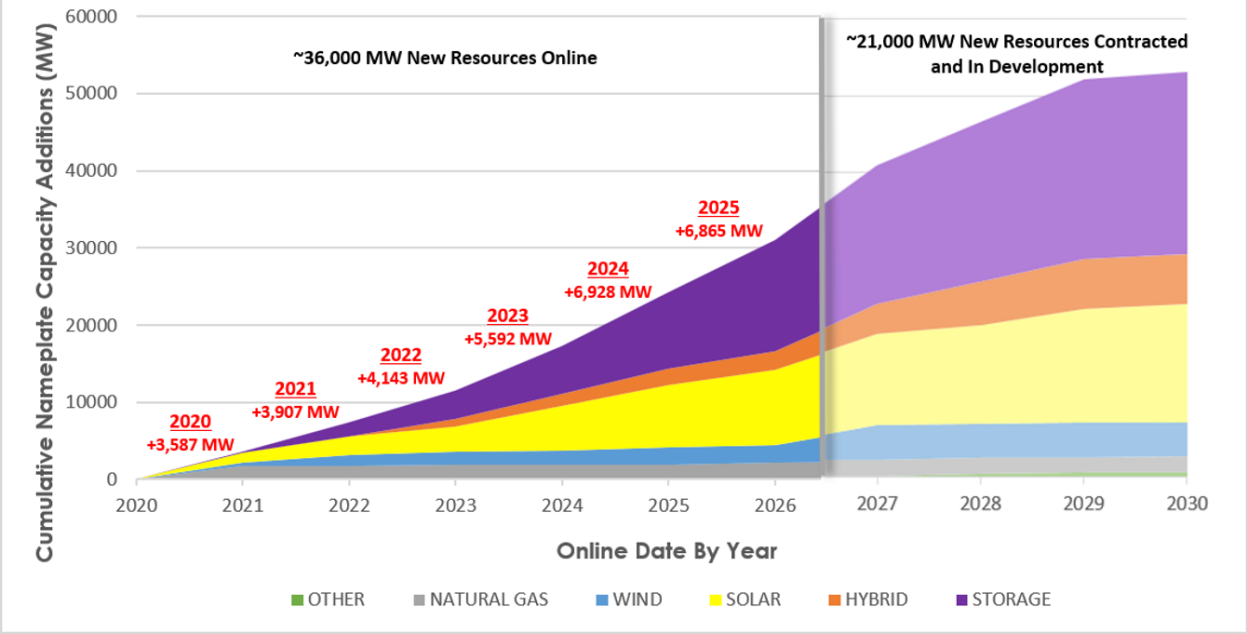
New Megawatts Online

Throughout the California ISO balancing authority, about 36 GW of new nameplate capacity have come online from January 2020 to June 1, 2026. As shown in Figure 1 the California ISO balancing area continues to experience rapid growth in clean energy resources, particularly solar photovoltaics (PV) and energy storage. Increased transmission development, approved by the California ISO, should increase the amount of both in-state and out-of-state project development in the coming years.

Figure 1 below shows 36 GW nameplate cumulative new capacity additions within the California ISO service territory from January 2020 to April 2026 as well as expected new resource additions based on current load-serving entity (LSE) contracts through 2029.

1 Saephan, Xieng (CEC) and Burns, Brendan (CPUC). May 2026. *Joint Agency Reliability Planning Assessment: SB 846 Second Quarterly Report 2026.* California Energy Commission. CEC-200-2026-005 https://www.energy.ca.gov/publications/2026/joint-agency-reliability-planning-assessment-sb-846-second-quarterly-report-2026.

Figure 1: Total New Energy Resources Online and Under Contract (Nameplate), 2020 to 2029



Source: CPUC

Note: Data shown here shows a snapshot of new resources added to the California ISO system from Q1 2020 to Q2 2026, including specified California ISO imports. Also shown is a projection of future new resources based on contracts in place by May 2026. "Other" resources include geothermal, biomass, biogas, and hydropower.

Since 2020, clean energy has been developed in counties throughout the state, but there are large concentrations in certain counties, as shown in Table 1.

Table 1: California Counties with the Largest Clean Energy and Storage Additions from January 2020 to April 2026

County	MW Nameplate
Riverside	7,160
Kern	4,919
San Bernardino	2,132
Kings	1,979
Fresno	1,551
San Diego	1,136
Imperial	1,035
Monterey	993
Los Angeles	839

Source: CPUC

Compliance with CPUC's Procurement Orders

Since 2019, CPUC has issued four procurement orders to LSEs under its jurisdiction within its Integrated Resource Planning (IRP) proceedings. These orders were each issued after the CPUC found that incremental capacity in future years was necessary to support system reliability needs. The CPUC procurement orders are issued in MW of "NQC," which is the equivalent amount of a hypothetical generation resource that is 100 percent available at all times, and a lower number than the nameplate or installed capacity of the same unit.[2] In this context, NQC is the amount of capacity that can be counted towards meeting requirements of the CPUC's IRP procurement orders (D.19-11-016, D.21-06-035, D.23-02-040, D.26-02-057). NQC values are drawn from CPUC system reliability modeling and are similar, though not identical, to NQC values for the month of September that are used in the RA program. Figure 2 below visualizes the timeline and amounts of these four recent procurement orders, totaling 24,800 MW (or 24.8 GW) of NQC with online requirements between 2021 and 2032.

Figure 2: Timeline and Amounts of CPUC Procurement Orders, in GW NQC

CPUC Decision	Date of Order	2020		2022		2024		2026		2028		2030		2032	Total
D.19-11-016	November 2019		3.3												3.3
D.21-06-035 (MTR)	June 2021				9.5					2.0*					11.5
D.23-02-040 (Supplemental MTR)	February 2023							4.0							4.0
D.26-02-057	February 2026											6.0			6.0
Cumulative Procurement (All Orders)		0	1.65	2.475	5.3	11.3	12.8	14.8	16.8	18.8	18.8	20.8	22.8	24.8	24.8

Note: The 2028 order is for 1 GW of clean-firm capacity and 1 GW of energy storage of at least 8 hours' duration, and per D.24-02-047, LSEs may request extensions for their required procurement for commercial online dates no later than June 1, 2031.

These IRP procurement orders have driven a significant amount of the 32 GW Nameplate new resource development in the 2020s depicted in Figure 1. CPUC staff produce monthly reports of pre-verified IRP procurement, which provides current high-level estimates of the volume of new resource procurement in response to IRP procurement orders. These monthly reports are publicly available on the CPUC's "Tracking Energy Development" webpage.[3]

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2 In the past, CPUC IRP staff have also referred to NQC as "Net Qualifying Capacity" (NQC). The principle of the two metrics – measuring resources' estimated contribution to reliability in megawatts – is the same, but CPUC also uses monthly NQC values within its Resource Adequacy (RA) program. Depending on the creation date of the NQC values, they may be different than NQC in the IRP procurement orders. This report uses the term "NQC" for IRP orders and "NQC" for the values used within RA.

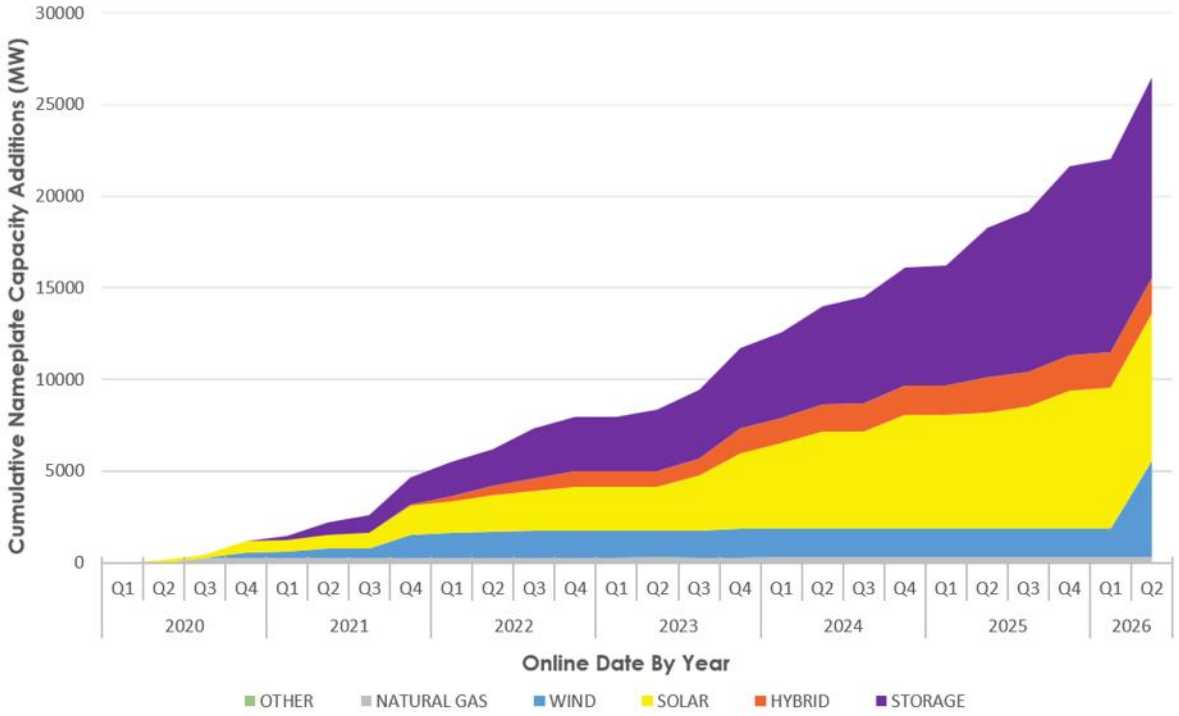
3 California Public Utilities Commission. "CPUC Resource Tracking Data Reports." Available at https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/summer-2021-reliability/tracking-energy-development/cpuc-resource-tracking-data-reports

Figure 3 and Figure 4 show a subset of the overall new resources that have come online in recent years. These two figures display estimates of the resources that can be easily tied to IRP procurement; i.e., the LSEs have claimed those resources for compliance with IRP procurement orders from the April 2026 edition of the monthly report. Figure 3 shows IRP-associated procurement in nameplate MW – but at a total that is significantly smaller than Figure 1's nameplate MWs over the same period; Figure 4 shows IRP associated procurement in September NQC MW. September NQC MW reflects resources' respective modeled contribution to system reliability during the most stressed hours in September, drawn from annual modeling for CPUC's Resource Adequacy (RA) program.[4] While it is not a formal assessment of compliance with CPUC orders, Figure 4 demonstrates that the CPUC has identified over 14 GW of new NQC resources have come online through Q2 2026 in response to IRP orders, which largely fulfills[5] the 14.8 GW NQC of new resources ordered by the CPUC, to come online by June 2026 as shown in in Figure 2. As of Q2 2026, the IRP procurement orders appear on track to be met or exceeded on a collective basis. While certain projects are delayed and certain LSEs may not achieve compliance, collectively the CPUC orders are being achieved.

4 September NQC MW is similar, but not exactly equivalent, to the IRP-accredited MW by which resources are counted for compliance with IRP procurement orders. This difference comes from the fact that monthly NQC values for RA are updated yearly, while procurement order ELCCs that are used to assess resources for IRP compliance are estimated and locked years in advance, to provide stability for new resource development.

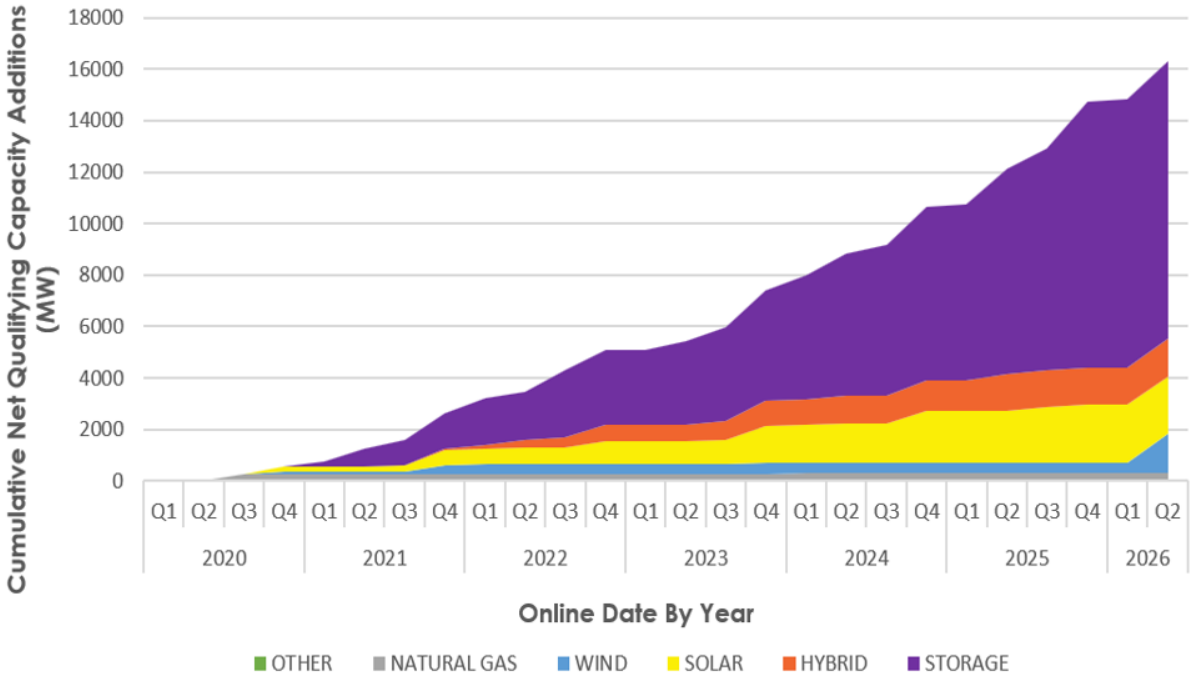
5 As noted in the prior footnote, September NQC and NQC are similar but not identical.

Figure 3: New Resources for IRP Procurement Orders in Nameplate MW, 2020-2026



Source: CPUC

Figure 4: New Resources for IRP Procurement Orders in September NQC MW, 2020-2026



Source: CPUC

Note for Figure 3 and Figure 4: Data shown here are a snapshot of new resources added to the California ISO grid Q1 2020 – Q2 2026 for compliance with Integrated Resource Planning (IRP) procurement orders, including specified California ISO imports. "Other" resources include geothermal, biomass, biogas, and hydropower. Hybrids include some storage, and some generation (typically solar). Resources that have come online for reasons other than compliance with an IRP procurement order are excluded from these figures. See IRP Procurement Track website for more information about IRP Procurement Order Compliance.

While the monthly reports provide high-level snapshots of new resource procurement, CPUC staff formally verify compliance with IRP procurement orders on a project-by-project basis for each LSE under CPUC's jurisdiction. This process normally takes several months to complete after LSEs submit semiannual compliance documentation. In July 2025, after analyzing the LSEs' December 2024 compliance filings, CPUC staff released a formal compliance summary showing claimed procurement by LSEs toward the IRP procurement orders of D.21-06-035 (known as "Mid-Term Reliability," or MTR) and D.23-02-040 (known as "Supplemental MTR").[6] CPUC staff review of the December 2024 filings indicates that LSEs subject to the MTR and Supplemental MTR procurement obligations have largely met their obligations for years 2023 and 2024.[7]

LSEs achieved high levels of compliance despite interconnection challenges and a constrained generation market, due to both the large number of new resources that have come online in the past few years and the regulatory flexibility for LSEs to use bridge resources (largely imports) in the event of project delay.[8]

For example, for the 2023-2024 period, LSEs procured and brought online 7,449 MW of NQC, which is about 93 percent of their cumulative 8,000 MW NQC obligation. Most of the contracted capacity submitted for MTR and Supplemental MTR compliance was for battery storage, solar, or hybrid resources. More comprehensive information about compliance with IRP procurement orders can be found in the CPUC Summary of Compliance with IRP Order D.19-11-016 and MTR D.21-06-035 Procurement.[9]

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6 California Public Utilities Commission. 2025. *California Public Utilities Commission (CPUC) Staff Review of Load-Serving Entities' (LSEs') Compliance with the Mid-Term Reliability (MTR, D.21-06-035) and Supplemental MTR (SMTR, D.23-02-040) Decisions*. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/compliance-status-reportmid-term-reliability-mtr-and-supplemental-mtr.pdf.

7 Compliance year 2023 is "Tranche 1" of the MTR order, while compliance year 2024 is "Tranche 2" of the MTR order.

8 D.21-06-035 (MTR) allowed the use of a short-term, "bridge" contract to be used to ensure compliance in the event of a specific delayed resource. D.23-02-040 stated that bridge contracts cannot be longer than three years. D.24-09-006 allowed bridge contracts that meet certain requirements to count towards the Diablo Canyon Replacement category of the MTR Decision. D.25-09-007 removed the option for LSEs to use bridge contracts as a method for compliance, with the exception of contracts that were entered into prior to the adoption of D.25-09-007.

9 California Public Utilities Commission. 2025. *CPUC Staff Review of LSEs' Compliance with the MTR, D.21-06-035 and Supplemental MTR D.23-02-040 Decisions*. Available at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/compliance-status-reportmid-term-reliability-mtr-and-supplemental-mtr.pdf.

Estimates of Planned Resources

Figure 1 shows new resources online and forecasts future additions. Using the same data from Figure 1 (which is shown in Nameplate), Table 2 through Table 4 forecast capacity under contract to CPUC-jurisdictional LSEs through 2029, but in units of September NQC. Table 2 organizes these data by Transmission Access Charge (TAC) Area,[10] Table 3 by LSE type, and Table 4 by resource type. The tables include procurement for LSE compliance with IRP procurement orders, procurement for LSE compliance with Renewables Portfolio Standard, and procurement the CPUC approved in the Emergency Reliability proceeding. All totals provided below represent the cumulative LSE-reported September NQC under contract to CPUC-jurisdictional LSEs.[11]

LSE procurement activity is ongoing to meet existing CPUC IRP procurement orders. Table 2 through Table 4 do not include all known resources in development in California, nor is all of this procurement in the California ISO's footprint. In addition, the tables represent only resources known to be under contract to CPUC-jurisdictional LSEs between 2026 and 2029, as of April 2026.[12] The new supply resources are measured in September NQC, a measure of a resource's maximum capacity eligible to be counted towards the CPUC's annual RA requirements adjusted to the deliverable capacity value.

10 A Transmission Charge Access area is a designated geographical region where a single Participating Transmission Operator - an entity that manages transmission infrastructure - operates. Major examples of PTOs with their own TAC areas include, but are not limited to: Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric.

11 Developers often aim to bring projects online in advance of contractual obligations. The data underlying the expected projects can be challenging to track. A new resource can have several expected on-line date changes, multiple off-takers, several on-line dates for different tranches of a project, multiple technologies in various configurations, changes to project sizing, changes to project naming, and multiple California ISO resource identification numbers once they come online.

12 These totals are subject to change as the CPUC receives new data from LSEs, conducts field calls with developers and investor-owned utilities' (IOU's) interconnection departments, and continues to evaluate the data.

Procurement by Transmission Access Charge (TAC) Area

Table 2: Forecasted Additions in September NQC (MW) by TAC Area, 2026 through 2029

TAC Area	2026 Q1-Q2	2026 Q3-Q4	2027 Q1-Q2	2027 Q3-Q4	2028 Q1-Q2	2028 Q3-Q4	2029 Q1-Q2	2029 Q3-Q4
East Central	733	1,799	3,468	3,600	5,890	5,911	5,911	6,499
North	216	663	1,833	2,282	2,693	2,933	2,933	2,933
South	419	478	601	681	681	681	681	681
Other	1,030	1,641	2,209	2,432	4,106	4,124	4,151	4,151
Total	**2,399**	**4,581**	**8,111**	**8,995**	**13,370**	**13,649**	**13,676**	**14,264**

Source: CPUC Staff Aggregation of April 2026 LSEs' Procurement Status Reports

Procurement by LSE Type

Table 3: Forecasted Additions in September NQC (MW) by LSE Type, 2026 through 2029

LSE Type	2026 Q1-Q2	2026 Q3-Q4	2027 Q1-Q2	2027 Q3-Q4	2028 Q1-Q2	2028 Q3-Q4	2029 Q1-Q2	2029 Q3-Q4
IOU[13]	1,000	2,099	3,073	3,530	6,516	6,534	6,534	6,768
Non-IOU	1,398	2,482	5,038	5,465	6,854	7,115	7,142	7,497
Total	**2,399**	**4,581**	**8,111**	**8,995**	**13,370**	**13,649**	**13,676**	**14,264**

Source: CPUC Staff Aggregation of April 2026 LSEs' Procurement Status Reports

13 Investor-owned utility

Procurement by Resource Type

Table 4: Forecasted Additions in September NQC (MW) by Resource Type, 2026 through 2029

Resource Type	2026 Q1-Q2	2026 Q3-Q4	2027 Q1-Q2	2027 Q3-Q4	2028 Q1-Q2	2028 Q3-Q4	2029 Q1-Q2	2029 Q3-Q4
Solar	101	348	527	727	1,477	1,495	1,495	1,729
Battery	1,537	2,664	4,761	5,268	7,904	8,085	8,085	8,440
Paired / Hybrid	384	864	1,991	2,126	2,644	2,644	2,644	2,644
Wind	353	589	589	589	589	669	669	669
Geo-thermal	22	112	236	278	748	748	774	774
Biomass /Biogas	2	5	8	8	8	8	8	8
Total	**2,399**	**4,581**	**8,111**	**8,995**	**13,370**	**13,649**	**13,676**	**14,264**

Source: CPUC Staff Aggregation of April 2026 LSEs' Procurement Status Reports

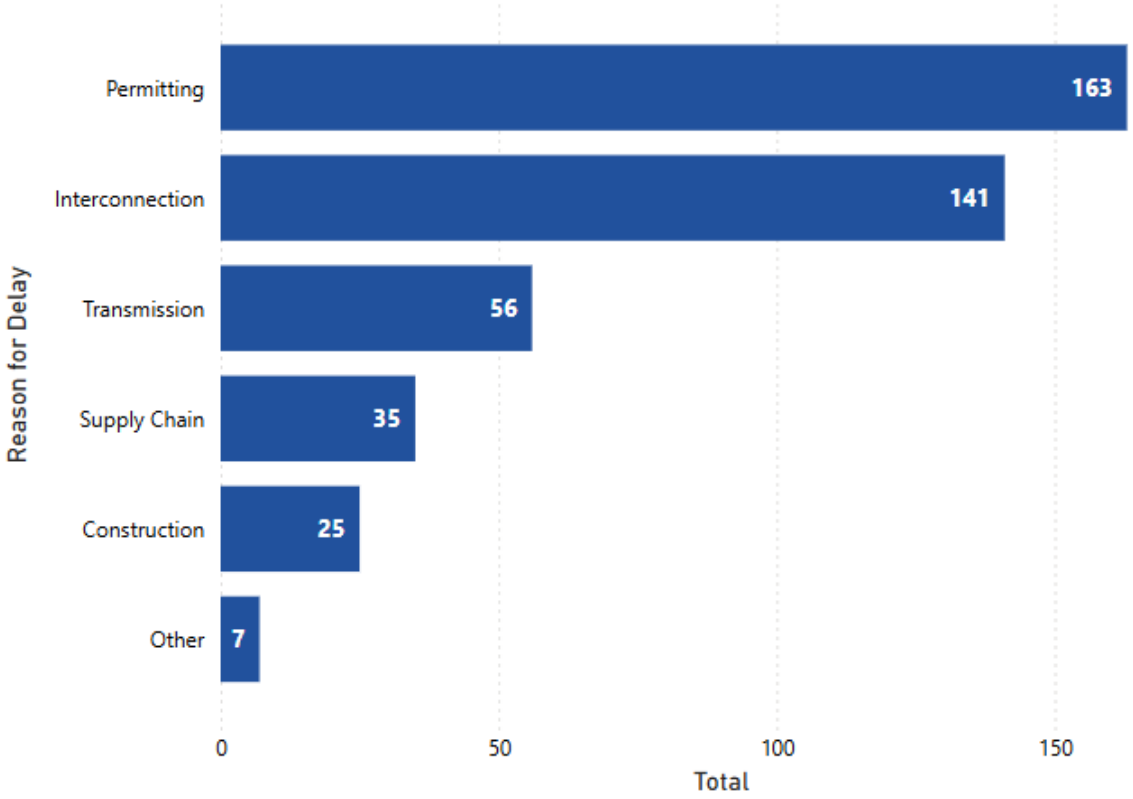
Tracking Project Development

The Tracking Energy Development (TED) Task Force, comprised of the CEC, CPUC, Governor's Office of Business Development (GO-Biz) and California ISO, continues to track energy projects under development and provide assistance to challenges and barriers where appropriate. As of June 1, 2026, the team is tracking about 200projects that could come online over the next several years. Of these projects, approximately 23,000 MW nameplate capacity are under contract, or have signed a power purchase agreement.

Clean Energy Project Development Successes and Challenges

TED Task Force maintains regular communication with developers and tracks information on issues that delay or potentially will delay a project reaching commercial operation. A large-scale project takes years from the start of development to reach commercial operation and may encounter more than one issue that could delay their project reaching COD. Additionally, some of the issues are interdependent. For example, the network upgrade needed for transmission may be delayed by procurement of critical equipment such as a circuit breaker. Figure 5 shows the number of times each reason was cited by developers as contributing to a project being delayed.

Figure 5: Project Delay Reasons Cited



Source: GO-Biz staff

Each project delay category includes different underlying causes reported by developers:

- Permitting: common causes of permitting delays cited include submission and review of environmental permits and challenges complying with requirements of local jurisdictions and obtaining permits.
- Interconnection: this process is technically complex and involves the participating transmission owner (publicly owned utility or IOU) and the grid operator. The most cited drivers of interconnection delays involve preparing, submitting, reviewing, and correcting required documentation. Developers also cited needing transmission upgrades to be completed before they can interconnect and additional study time required to amend interconnection studies due to modification of project scope.
- Supply chain: delays in obtaining transmission equipment such as circuit breakers.

Activities Supporting Clean Energy Executive Order N-33-25

In August 2025, Governor Newsom issued Executive Order N-33-25 in response to passage of the One Big Beautiful Bill Act, House of Representatives 1 (119th Cong. 2025, Pub. L. No. 11921) and the acceleration of the phase out of federal tax credit for

solar and wind projects. Executive Order N-33-25 directed the Energy Working Group of the Infrastructure Strike Team and relevant state agencies to take necessary actions to assist eligible projects capture the expiring tax credits.

Energy Working Group held a series of convenings with stakeholders:

- In February 2026, CPUC held a roundtable with the three IOUs to present and discuss potential actions that can be taken by IOUs and state agencies to accelerate the interconnection of new resources that will be impacted by the loss of IRA tax credits, and discuss cost-effective longer-term solutions to accelerate interconnection and speed up transmission development to meet California's rising electricity demand. While the roundtable covered a range of topics, the focus was on actions and responses described in President Alice Reynolds' letters to the IOUs and other ideas to improve transmission and interconnection raised by IOUs, GO-Biz, California ISO, CEC, and CPUC.
- In March 2026, the CEC hosted a convening with public utilities and balancing authorities to understand specific issues and challenges with clean energy project deployment within their jurisdictions. The discussion included affected system studies[14], interconnection processes and timelines and long lead-time equipment procurement. With the expected number of projects that will come online in the next few years, many of which are also eligible for the expiring tax credits, the state explored potential pathways to work with public utilities to accelerate project deployment.
- In late April 2026, the Energy Working Group pulled together a convening with the electric utilities, developers and state agencies to discuss the top issues and common themes that arose among the individual stakeholder meetings, including process improvements to meet timelines and potential solutions to address procurement for long-lead time equipment. The participating entities agreed to continue communication among each other that will increase transparency and identify actionable next steps for further collaboration.

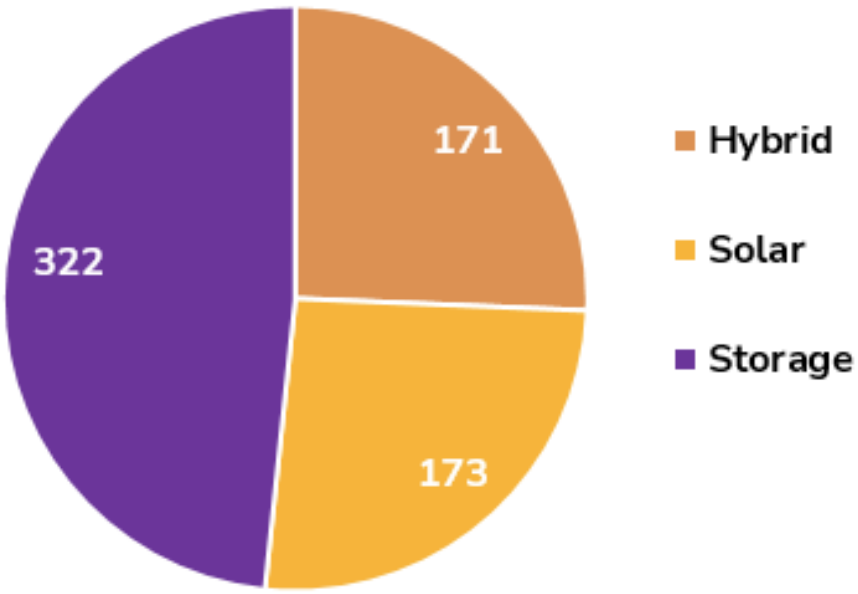
To maintain momentum and build on the state's current success, it is critical for state agencies, energy developers, and utilities to continue to work together to develop electric infrastructure needed to support California's electric reliability and clean energy needs. Stakeholders can utilize existing forums such as TED Task Force and Transmission Developer Forum to work on project-specific issues. And the Energy Working Group is examining formal pathways to organize the stakeholders for more focused discussions on solutions to systemic and industry-wide issues.

[14] An affected system study is an engineering analysis conducted to evaluate whether a large generator resource may impact neighboring transmission system(s) to ensure that neighboring regions remain safe and compliant with reliability standards.

Clean Energy Projects Deployed

Despite the challenges cited above, about 6,800 MW nameplate capacity came online in 2025. For 2026, there are more than 8,500 MW nameplate capacity expected to come online. Figure 6 shows the new MW online by resource type and Figure 7 shows a map, as well as a listing of the top 10 counties by MW added to the grid and where these projects were deployed in this calendar year through April 30, 2026.[15]

Figure 6: 2026 Megawatts Deployed by Resource Type



Source: GO-Biz
*As of April 30, 2026

15 Rather than developing a Gantt chart, as required by the legislation, staff have developed figures that better depict this information.

Figure 7: 2026 Top 10 Counties by MW Deployed

County	Online MWs	Online Projects
Tulare	120	3
San Diego	100	3
Kern	92	2
Kings	40	2
Santa Barbara	10	2
Fresno	5	2
Los Angeles	3	4
Merced	1	2

Source: GO-Biz
*As of April 30, 2026

Reliability Assessment

The CEC staff reliability assessment approach used for this report is consistent with the Near-Term Reliability Assessment published by the CEC in the *2026 Second Quarterly Joint Agency Reliability Planning Assessment (Second Quarterly Report for 2026).* This assessment is based on nameplate capacity rather than RA showings. The CEC staff assessment compares an hourly projection of anticipated supply against the projected hourly demand plus the 18 percent planning reserve margin, for the peak day of each month (July through September). An 18 percent planning reserve margin is the current CPUC resource adequacy planning standard, while 22.5 and 26 percent planning reserve margins are comparable to elevated conditions experienced during the 2020 and 2022 heat events, respectively. The 2020 and 2022 equivalent scenarios reflect the drought and heat conditions experienced during those events, with the 2022 scenario also reflecting record-breaking heat.

The resource stack analysis continues to conservatively identify the maximum hourly contingency need for summer 2026 under various planning reserve margin scenarios. There is no projected need for contingency resources[16] in July and August. As a result, this section focuses on September, which typically presents the greatest reliability challenges during the summer months.

16 Contingency resources are additional resources that may be available to address projected supply shortfalls beyond the baseline resource stack.

California ISO Area: Updated Resource Stack Analysis Results for Summer 2026

This resource stack analysis continues to focus on hour ending 18 (5:01-6:00pm) of September. This period has historically high demand coupled with lower supply due to the reduction of solar PV generation, making it the most critical time for evaluating potential shortfalls. Several changes have been made to the resource stack since the release of the *Second Quarterly Report for 2026.* The resource stack analysis in this report uses data from June 1, 2026.

Existing Resources

Existing resources consist of firm or dispatchable energy capacity currently available on the grid. The most notable update in the stack is the addition of over 400 MW to existing resources since the last report. This increase reflects projects that were previously included in the expected new resources category but have since achieved commercial operation and are now reflected as existing resources.

Expected New Resources

New resources represent generation capacity expected to come online by June 30, 2026. This analysis continues to apply a conservative approach to counting new resources by including only projects that show clear progress toward commercial operation.

As shown in Table 5, the *Second Quarterly Report for 2026* included 897 MW of expected new resources. In this report, 556 MW of those resources had achieved commercial operation and were reclassified into the Existing Resources, Solar, and Wind categories, leaving 341 MW still expected to come online. An additional 154 MW of qualifying resources were added to the expected new resource list, bringing this quarter's total to 495 MW.

Because this analysis uses a conservative methodology and only includes projects expected to be online by June 30, 2026, additional resources anticipated later in 2026 are not reflected. The next report is expected to show higher expected new resource capacity as those projects advance toward commercial operation and are incorporated into the analysis.

Resource Stack Analysis Results

The baseline resource stack analysis in this report shows a positive supply margin for summer 2026 of 6,789 MW under planning standard conditions, 4,694 MW for a 2020 equivalent event, and 3,065 MW for a 2022 equivalent event. These surpluses represent a small improvement compared to the *Second Quarterly Report for 2026,* with an increase of 154 MW under all scenarios.

Table 5: Comparison of Summer Assessment Results for September 2026 – Hour 18

	2026 2nd Quarter Report (MW)	2026 3rd Quarter Report (MW)	Change Since Last Update (MW)
Supply			
Existing Resources	50,988	51,443	▲**455**
Solar	1,766	1,800	▲**34**
Wind	1,307	1,374	▲**67**
RA Imports	5,807	5,807	**0**
Demand Response	794	794	**0**
Expected New Resources	897	495	▼**402**
Total (MW)	**61,559**	**61,713**	▲**154**
Demand			
Sept. Peak Demand	**46,546**	**46,546**	**0**
Surplus/Shortfalls			
Planning Standard	6,635	6,789	▲**154**
2020 Equivalent Event	4,540	4,694	▲**154**
2022 Equivalent Event	2,911	3,065	▲**154**

Source: CEC staff with California ISO data

Resource Stack Analysis Results with Known Loads

Table 6 shows the impact of known loads[17] on system reliability across different scenarios. If these known loads materialize as expected, the available supply margin would decrease from 6,789 MW to 5,596 MW under planning standard conditions, from 4,694 MW to 3,440 MW under a 2020 equivalent extreme heat event, and from 3,065 MW to 1,764 MW under extreme heat similar to a 2022 equivalent event.

17 Known loads are energization requests made to investor-owned utilities at the distribution system level. The utilities submit this data to the CPUC as part of their distribution system planning and the data are shared with CEC forecasters.

Table 6: Impact of Known Loads on Reliability

Scenario	Baseline Demand (MW)	Known Loads (MW)	Demand with Known Loads (MW)	Supply Margin with Known Loads (MW)	Changes in Supply Margin (MW)
Planning Standard	54,924	▲1,609	56,533	5,596	▼1,193
2020 Equivalent Event	57,019	▲1,670	58,689	3,440	▼1,254
2022 Equivalent Event	58,648	▲1,718	60,366	1,764	▼1,301

Source: CEC staff

Risk Scenarios

While the current assessment projects positive supply margins, several factors could reduce available supply margins. This section evaluates the potential impacts of delays in new resource development and wildfire-related transmission outages.

Delays in New Projects

The resource stack analysis includes 495 MW of new resources expected to be online by June 30, 2026. These projects are currently being tested or are close to completion. However, new projects can be delayed due to equipment shortages, permitting issues, or interconnection problems.

Table 7 shows the impact of project delays under a 2022 equivalent heat event. If 40 percent of new projects are delayed, the system would lose up to 294 MW of new resource capacity. However, the system has sufficient existing supply to absorb the impact of delayed new resources. Even if all currently forecasted new resources are delayed, the grid would still maintain positive supply margins under this extreme heat scenario, assuming no other coincident events.

Table 7: Impact of New Project Delays – 2022 Equivalent Heat Event

Delay Scenario	Expected New Resources (MW)	Delayed Capacity Difference (MW)	Supply Margin Result (MW)
No Delays	495	0	3,065
20% of New Projects Delayed	495	▼99	2,966
40% of New Projects Delayed	495	▼198	2,867

Source: CEC staff

Wildfire Impact

Wildfire remains a major source of uncertainty, with the potential to reduce available capacity primarily through impacts on major transmission lines. For example, the 2021

Bootleg Fire caused the loss of 4,000 MW of import capability on the California-Oregon Intertie.

Modeling results from a similar transmission outage scenario show that under typical conditions, the system would remain reliable. However, if a wildfire related transmission outage were to occur during extreme heat, California could face reliability challenges. Table 8 and Table 9 shows the combined impact of potential wildfires and extreme heat conditions. Table 8 presents results against the baseline forecast, while Table 9 incorporates Known Loads demand projections. If a transmission outage coincides with a 2022 equivalent heat event, the baseline analysis indicates a potential contingency need exceeding 900 MW. When Known Loads demand is included, there may be a contingency need of over 300 MW in a 2020 equivalent heat event, and over 2,200 MW under a 2022 equivalent heat event.

Table 8: Impact of Wildfire Transmission Outages on Reliability – Baseline Analysis

System Condition	Baseline Supply Margin (MW)	Loss of Transmission (MW)	Supply Margin Result (MW)
Planning Standard	6,789	▼4,000	2,789
2020 Equivalent Event	4,694	▼4,000	694
2022 Equivalent Event	3,065	▼4,000	**-935**

Source: CEC staff

Table 9: Impact of Wildfire Transmission Outages on Reliability with Known Loads

System Condition	Baseline Supply Margin (MW)	Loss of Transmission (MW)	Supply Margin Result (MW)
Planning Standard	5,596	▼4,000	1,596
2020 Equivalent Event	3,440	▼4,000	**-560**
2022 Equivalent Event	1,764	▼4,000	**-2,236**

Source: CEC staff

Contingency Resources

The agencies and California ISO are continuing to track contingency resources, which are resources beyond those included in the stack analysis, and which the state can draw on for extreme events. These are a mix of load reduction and generation resources, with a general emphasis on drawing on load reduction resources before generational resources. The updated contingency list for 2026 identified in Table 10 is expected to provide between 4,473 MW and 4,683 MW during extreme events and may be called upon to cover contingency needs identified in real time grid operations.

Table 10: Contingency Resources for Summer 2026

Type	Contingency Resource	Available MW July	Available MW August	Available MW September
SRR, SPAP[18]	DWR Electricity Supply Strategic Reliability Reserve Program and State Power Augmentation Program[19]	3,079	3,079	3,079
SRR	Demand Side Grid Support (DSGS)[20]	452	657	657
SRR	Distributed Electricity Backup Assets (DEBA) (under development)	0	0	0
CPUC	Ratepayer Programs (Emergency Load Reduction Program, Smart Thermostats, etc.)*	114	115	113
CPUC	Imports Beyond Stack*	0	0	0
CPUC	Capacity at Co-gen or Gas Units Above Resource Adequacy*	504	504	509
Non-Program	Balancing Authority Emergency Transfers	300	300	300
Non-Program	Thermal Resources Beyond Limits: Gen Limits Needing 202c [21]	25	25	25
	Total	4,474	4,680	4,683

Source: CEC staff with California ISO, Department of Water Resources, and CPUC data

*Note: September estimates are derived from the 2025 IOU excess procurement reports, with the exception of San Diego Gas and Electric, which provided full Summer 2026 projections in its August report. Capacity at Co-gen or Gas Units Above Resource Adequacy for July includes

18 Strategic Reliability Reserve and State Power Augmentation Program, MW amounts reflect expected maximum capability

19 The Time Schedule Order associated with Alamitos Generating Stations' National Pollutant Discharge Elimination System permit expired on December 31, 2025. As such, maximum generation from the Alamitos 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.

20 DSGS capacity estimate reflects current authorized funding levels; actual enrolled capacity may vary with future funding decisions and program participation.

21 Federal Power Act (FPA) section 202(c) (authorizes the Department of Energy to temporarily waive federal, state, or local environmental regulations during emergency conditions to maintain electric reliability).

Near-Term Reliability Requirements from CPUC Resource Adequacy Program

On July 2, 2026, the CPUC adopted *Decision Adopting Local Capacity Obligation for 2027-2029, Flexible Capacity Obligations, and Program Refinements* in Track 1 of the RA proceeding, Rulemaking 25-10-003.[22] That decision establishes near-term reliability requirements for system, local, and flexible capacity for CPUC-jurisdictional LSEs and refinements to the CPUC's RA program. The Proposed Decision adopts:

- Local Capacity Requirements of 23,618 MW for 2027, 24,545 MW for 2028, and 25,480 MW for 2029, representing an increase of approximately two percent relative to the prior year's study.
- Flexible Capacity Requirements for 2027 ranging from 23,824 MW in December to 29,063 MW in March, an increase of approximately ten percent relative to 2026. This increase reflects a shift in the largest three-hour monthly ramp from June to March, as identified in the California ISO's annual flexible capacity study.
- Significant reforms to RA resource counting, including:
    - An unforced capacity[23] (UCAP) framework, which is to be implemented beginning with the 2028 RA compliance year. Under the UCAP framework, nuclear, dispatchable natural gas, and storage units with at least four years of historical data receive unit-specific UCAP values. Values for resources with less than four years of historical data are blended with class average values.
    - For the 2027 RA compliance year, refines the qualifying capacity methodology for energy storage to better reflect the four-hour constant and continuous discharge rate requirement and remove the impact of foldback constraints.[24]
    - A definition for long-duration energy storage (LDES) as a resource capable of continuous discharge at maximum capacity for at least eight hours. This allows LSEs with LDES resources to count their capacity across the 24-hour Slice-of-Day period up to the resources' capabilities based on a Forward Charge Period multiplier framework, in order to comply with storage charging sufficiency requirements.

22 See the CPUC R2520003 docket page under the tab Decisions.
23 Unforced Capacity is the expected availability of a resource after considering its forced outage rate. For example, a 100-MW resource with a 10 percent forced outage rate would have an unforced capacity value of 90 MW.
24 The term foldback refers to the non-linear discharge rate that occurs when lithium-ion batteries reach a low state of charge. There is also a non-linear charge rate that occurs during a high state of charge. When foldback occurs the charge or discharge rate is reduced.

- A modification of the charging sufficiency rules to allow excess energy produced by a co-located energy only resource to count towards charging sufficiency requirements up to the Point of Interconnection limit.[25]
- A modification of qualifying capacity counting for demand response resources on an interim basis to address misalignment issues when the time of the peak in the CEC forecast occurs outside the California ISO's availability assessment hours.

The Decision did not change the planning reserve margin, which was set by Decision 25-06-048.[26]

CPUC 2028 Reliability Study

CPUC staff are producing a reliability study, focused on the 2028 year. This study will review the expected resource portfolio against demand to review the "loss of load expectation" (LOLE) of the electric grid to ensure it meets the adopted planning standards. In preparation for the 2028 Reliability Study (aka "the 2028 LOLE study"), CPUC staff released a "Revised Inputs & Assumptions" document in June, 2026, describing the methodological updates to SERVM, the tool CPUC uses to model reliability. CPUC staff are planning to hold a workshop on the study in the third quarter of 2026 and release the study in the fourth quarter of 2026. Additionally, the study is expected to be used in the CPUC's Resource Adequacy proceeding in 2027 as part of the CPUC's review of the planning reserve margin and other related issues.

CPUC Procurement Order ELCCs' Release

Following the CPUC's February 2026 procurement order for 6,000 MW of NQC, the CPUC will be issuing in the third quarter of 2026 effective load carrying capability (ELCC) values for compliance with the order. The ELCC values are used to establish the NQC equivalent of resources.

25 A co-located resource is typically a solar photovoltaic that shares the same point of interconnection with a battery resource, but each resource is separately metered and bid into the California ISO market.
26 California Public Utilities Commission. Fact Sheet on the Decision in Track 3 of the Resource Adequacy Proceeding (R.23-10-011). Available at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/resource-adequacy-homepage/oga-fact-sheet-on-track-3-decision-final.pdf.

APPENDIX A:
Acronyms and Abbreviations

Acronym	Definition
California ISO	California Independent System Operator
CEC	California Energy Commission
COD	Commercial Operation Date
CPUC	California Public Utilities Commission
DEBA	Distributed Electricity Backup Assets
DSGS	Demand Side Grid Support
DWR	Department of Water Resources
ELCC	Effective Load Carrying Capability
GO-Biz	Governor's Office of Business and Economic Development
IOU	Investor-owned Utility
IRP	Integrated Resource Planning
ISO	Independent System Operator
LDES	Long-Duration Energy Storage
LSE	Load-serving Entity
MTR	Mid-Term Reliability
MW	Megawatt
NPDES	National Pollutant Discharge Elimination System
NQC	Net Qualifying Capacity
PG&E	Pacific Gas and Electric
PRM	Planning Reserve Margin
PTO	Participating Transmission Owner

Acronym	Definition
PV	Photovoltaic
RA	Resource Adequacy
SB	Senate Bill
SDG&E	San Diego Gas & Electric
SMTR	Supplemental Mid-Term Reliability
SPAP	State Power Augmentation Program
SRR	Strategic Reliability Reserve
TAC	Transmission Access Charge
TED	Tracking Energy Development
TPP	Transmission Planning Process
UCAP	Unforced Capacity

APPENDIX B: Glossary

Term	Definition
Commercial Operation	The point at which a power plant or energy resource has completed testing and begins generating electricity under normal operating conditions.
Contingency Resources	Additional electricity resources that can be called upon during emergencies or extreme conditions to help maintain electric grid reliability when normal resources are insufficient.
Existing Resources	Electricity generation and storage resources that are already operating and available to supply power to the electric grid.
Known Loads	Anticipated future electricity demand from customers or projects that have requested service from a utility and are expected to connect to the electric grid.
Load-Serving Entity (LSE)	A load-serving entity is defined by the California Independent System Operator as an entity that has been "granted authority by state or local law, regulation or franchise to serve [their] own load directly through wholesale energy purchases."
Nameplate Capacity	The maximum electrical output a generating resource is designed to produce under specified operating conditions, as rated by the manufacturer.
Net Qualifying Capacity (NQC)	The amount of capacity that can be counted towards meeting resource adequacy requirements in the CPUC's resource adequacy program. It 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.
Peak Demand	The highest level of electricity demand occurring during a specific period of time.

Term	Definition
Planning Reserve Margin (PRM)	The amount of electricity supply maintained above expected peak demand to help ensure reliable electric service during unexpected outages or periods of unusually high demand.
Resource Adequacy	California's regulatory program that requires load-serving entities to procure sufficient electricity resources to reliably meet customer demand and maintain electric grid reliability.
Resource Stack Analysis	An assessment that compares projected electricity supply with projected electricity demand under different scenarios to evaluate electric system reliability and identify potential supply shortfalls.
Supply Margin	The difference between available electricity supply and projected electricity demand under a given scenario. A positive supply margin indicates available surplus capacity, while a negative margin indicates a potential shortfall.
Transmission Access Charge (TAC) Area	A designated geographical region where a single Participating Transmission Operator - an entity that manages transmission infrastructure - operates. Major examples with their own TAC areas include but are not limited to: Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric.
Wildfire Transmission Outage	A reduction or loss of electricity transmission capability caused by wildfire damage or wildfire-related operating restrictions that can reduce the amount of electricity available to serve demand.