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State Capitol, P.O. Box
942849
(916) 319-2083
FAX: (916) 319-2183

BACKGROUND

Wednesday, July 1, 2026
Upon adjournment of the Utilities and Energy Committee bill hearing
State Capitol Room 126
(Please note time and room change)

OVERSIGHT HEARING

The State of Electricity Reliability: Rising Demand, Shifting Reserves, and Retiring Resources

Findings:

- *This summer should be manageable. State regulators say California has enough power to get through summer 2026 safely. But the safety cushion is diminished when you take offline emergency resources or consider a worst-case, multi-event scenario that could turn a comfortable surplus into a shortfall.*
- *The gas plants that aided California for three summers are shutting down — and one may weaken even sooner than planned. Three large coastal gas plants that have stood behind the grid as paid emergency backup since January 2024 are set to retire by the end of 2026. A permit restriction means one of them, Alamitos, is already running at reduced output this summer, months before its official retirement.¹*
- *The 2027 grid configuration — an 18% margin with no strategic reserve — bears a structural resemblance to the conditions that produced California's September 2022 grid emergency, one of the most severe in state history. The 2022 emergency was narrowly averted through a statewide conservation text alert² and the first-ever activation of the Demand Side Grid Support (DSGS) program. By 2027, key parts of the state's emergency toolkit — the coastal gas plants, the DSGS program — are not slated to exist or evolve, even though demand will have grown.*

¹ Pg. 38, CERRO 2026 Draft Staff Report (California Energy Resource and Reliability Outlook, 2026), California Energy Commission, June 30, 2026;

<https://efiling.energy.ca.gov/GetDocument.aspx?tn=271113&DocumentContentId=108704>

² September 6, 2022, was marked by extremely tight grid conditions, with many experts citing a statewide emergency alert sent at 5:48 p.m. to 27 million Californians by the Office of Emergency Services as the final tool which prevented rotating outages from being called. The text alert was unexpected and unprecedented, but did seemingly result in almost 1,200 MW of demand reduction in five minutes.

- *The long-term outlook is worse. New state modeling shows the grid can meet its reliability target through 2031 only under the most optimistic growth assumptions. By 2036, every scenario tested — even the optimistic one — shows a shortfall, driven partly by explosive growth in electricity demand from data centers and electrification, which the state now expects to be far larger than it previously estimated.*
- *What replaces the SRR, and should some of it be gas? California's remaining natural gas fleet has not been given a clear long-term role. State policy is pushing toward a 2045 all-clean grid. Nothing currently guarantees these plants stay available as a deliberate bridge resource during the 2027–2032 gap, when older capacity is retiring faster than new clean firm power (offshore wind, geothermal, long-duration storage) can be built. Left undecided, the risk is that this fleet quietly declines or is redirected to other markets before the state has a replacement ready, leaving California without needed capacity at the moment it's needed most.*

On June 26, 2026, the chief executive of the nation's largest utility delivered a blunt warning to the *Financial Times*: Americans could “absolutely” lose power as soon as 2027.³ Calvin Butler, who leads Exelon — serving nearly eleven million customers across six states — said that his utility came “very close, this past winter, to having to curtail power for about 400,000 customers on some of the coldest days of the year.” Butler’s concern centers on the northeast and Midwest, where grid operator PJM recently reported a 6.5-gigawatt capacity deficit at its last capacity auction and projects a 60-gigawatt supply shortfall over the next decade. He added: “Change is hard, and legislators really do well in crisis. But right now they don’t perceive it as a crisis.”

Butler was not speaking about California. But the conditions he described — surging demand, a generation fleet not keeping pace, and a policy environment slower to respond than the problem demands — resonate in California. California has navigated its own version of this challenge since the rotating outages of August 2020, which affected hundreds of thousands of customers on consecutive evenings during a historic heat wave. The state responded with urgency: billions of dollars were committed to emergency procurement, an unprecedented Strategic Reliability Reserve was assembled,⁴ and the planning frameworks governing resource adequacy were revised. For three consecutive summers, California avoided the Flex Alerts and Energy Emergency Alerts that had signaled grid distress in prior years.⁵ The reserve held. The system performed.

But the reserve is now expiring. The power plants that anchored it are retiring. Demand is growing faster than originally projected. The federal policy environment California relied upon to accelerate clean energy deployment is shifting in ways that introduce new uncertainty into long-term planning. The question this hearing examines is both operational and existential: as California’s emergency insurance policy is unwound, what comes next?

³ Martha Muir, “Utility boss warns US faces blackouts due to power supply shortfall,” *Financial Times*, June 26, 2026, <https://www.ft.com/content/14d2e591-7cd5-4456-904f-1b7fdc5cbc1a?syn-25a6b1a6=1>

⁴ The Reliability Reserve programs were created under AB 205 (Committee on Budget, Chapter 61, Statutes of 2022), AB 178 (Ting, Budget Act of 2022, Chapter 45, Statutes of 2022), and AB 180 (Ting, Budget Act of 2021, Chapter 44, Statutes of 2022)

⁵ CEC press release, “California Energy Leaders Report Progress on Grid Reliability Ahead of Summer 2026,” May 4, 2026, <https://www.energy.ca.gov/news/2026-05/california-energy-leaders-report-progress-grid-reliability-ahead-summer-2026>

The purpose of this oversight hearing is twofold: first, to hear from the state energy entities⁶ on the readiness of the California electric grid to operate reliably through summer 2026 and beyond; and second, to examine the future of the state's emergency reliability resources as the Strategic Reliability Reserve's once-through-cooled natural gas plants retire at the end of this year, with particular attention to what role, if any, California's remaining natural gas generation fleet should play as a bridge resource during the 2027–2032 transition window.

I. From Crisis to Contingency: California's Reliability Response.

For most of the decade prior to 2020, California's reliability framework operated with reasonable confidence. Solar generation was proliferating rapidly. Battery storage was beginning to address the late afternoon and early evening hours when solar output wanes and demand peaks. New Integrated Resource Planning (IRP) orders were directing procurement of additional resources to meet California's 2045 carbon neutrality goals.

The state's planning reserve margin (PRM) – the extra cushion of energy above peak customer demand that utilities must hold – was calibrated to maintain a Loss of Load Expectation (LOLE) of 0.1, meaning involuntary outages could be expected no more than one day every ten years.

Then came August 14 and 15, 2020. A statewide heat wave – part of a regional extreme heat event spanning the western United States – pushed electricity demand beyond what available supply could meet. CAISO declared a Stage 3 Emergency, and rotating outages were implemented on both evenings: the first involuntary curtailments since California's energy crisis of 2001. The outages exposed gaps in a planning framework that had not anticipated the speed of the state's generation transition, or the degree to

The Key Players

CPUC: California Public Utilities Commission. Sets resource adequacy (RA) requirements for load-serving entities (LSEs), including the planning reserve margin (PRM) that LSEs must meet.

CEC: California Energy Commission. Provides through the Integrated Energy Policy Report (IEPR) long-term demand forecasting. Additionally conducts reliability planning, including the *Joint Reliability Planning Assessments*.

CAISO: California Independent System Operator. Manages the real-time grid, dispatches generation, and conducts forward reliability assessments for the approximately 80% of California's load within its balancing authority (BA) area. Assigns "deliverability" to RA resources.

DWR: the Department of Water Resources. Administers the Electricity Supply Strategic Reliability Reserve Program (ESSRRP), procuring emergency generation resources on behalf of the state.

LSEs: load-serving entities. Investor-owned utilities (IOUs; e.g., Pacific Gas & Electric), community choice aggregators (CCAs), and electric service providers (ESPs) that purchase power to serve customers. Required to hold RA contracts.

POUs: publicly owned utilities. (e.g., Sacramento Municipal Utility District, SMUD) Not subject to CPUC jurisdiction but sets individual PRMs, and coordinate with CAISO (especially for POU within CAISO's BA) and participate in reliability planning.

⁶ For clarity, 'state energy entities' is a simplified term used in this paper to refer to the CPUC, CEC, CAISO, and DWR; noting that the CAISO is a non-profit public benefit corporation that has a functional role supporting the state, but is not a state entity. CAISO is overseen by a board of governors and is regulated by FERC.

which the evening “duck curve” load shape, combined with a regional heat event, could overwhelm the system even during a period of apparent adequate capacity.

The Legislature and the Governor responded. The CPUC accelerated its Mid-Term Reliability proceeding, directing procurement of thousands of megawatts of new resources. Then, in September 2022, an historic heat wave⁷ drove CAISO to issue some of the most severe Energy Emergency Alerts in the state’s history, again coming close to mandatory rotating outages. Emergency imports, demand response, and voluntary conservation appeals held the system together, but the margin was uncomfortably narrow.^{8,9}

AB 205 (Committee on Budget, Chapter 61, Statutes of 2022) established the Electricity Supply Strategic Reliability Reserve Program (ESSRRP) within the Department of Water Resources (DWR). Subsequent legislation appropriated approximately \$2.95 billion to fund DWR’s acquisition and operation of emergency generation resources.¹⁰ The logic was explicit: the RA market, even with aggressive procurement orders, could not guarantee that sufficient capacity would be physically present and dispatchable in a true emergency. A backstop was needed – generation that existed outside the market, available to the CAISO as a last resort, that no amount of market dysfunction could undermine.

A. The Strategic Reliability Reserve: Three Programs, One Safety Net.

The strategic reserve that emerged from the 2022 budget is not a single program but an umbrella of three distinct initiatives, each addressing a different dimension of reliability risk.

The ESSRRP, administered by DWR, consists of generation facilities either owned outright by DWR or contracted through long-term agreements. These resources total approximately 3,149.8 MW in capacity. A set of smaller peaking and backup facilities forms the non-once-through cooled (OTC) component: 60 MW at Roseville, 60 MW from Calpine Greenleaf, 48 MW from the Lodi gensets, 48 MW from the Modesto gensets, 47 MW from the Turlock gensets, and 27.5 MW from CSU Channel Islands – approximately 290 MW of dispatchable peaking generation. But the bulk of the ESSRRP is three OTC natural gas power plants along the Southern California coastline: AES Alamitos (1,141.2 MW), AES Huntington Beach (226.8 MW), and GenON’s Ormond Beach Generating Station (1,491.3 MW).¹¹

These plants – old, coastal, and long scheduled for retirement under State Water Resources Control Board regulations prohibiting OTC technology – were retained precisely because no other resource of comparable size and dispatchability could be brought online within California’s reliability timeline. Each is a large-frame facility capable of sustained output for extended periods. During the August 2020 and September 2022 events, what the grid needed were resources that could produce power for hours on end under adverse conditions. Battery storage, while increasingly important for the first several hours of evening peak demand,

⁷ Powell, M. and Hubler, S., “California swelters through a Labor Day heat wave, stretching its electricity resources.” *New York Times*, September 5, 2022; <https://www.nytimes.com/2022/09/05/us/california-heat-wave-record-labor-day.html>

⁸ Justine Calma, “Why a text alert might have helped California keep the lights on,” *The Verge*, September 7, 2022; <https://www.theverge.com/2022/9/7/23340821/california-electricity-grid-power-outage-text-phone-alert>

⁹ Murtaugh, D. and Eckhouse, B., “A Text Alert May Have Saved California From Power Blackouts,” *Bloomberg*, September 6, 2022, <https://www.bloomberg.com/news/articles/2022-09-07/a-text-alert-may-have-saved-california-from-power-blackouts?leadSource=verify%20wall>

¹⁰ Beginning with AB 178 (Ting, Budget Act of 2022, Chapter 45, Statutes of 2022), and AB 180 (Ting, Budget Act of 2021, Chapter 44, Statutes of 2022).

¹¹ California Department of Water Resources, Statewide Energy Office. *Electricity Supply Reliability Reserve Fund Progress Report*. August 1, 2025. Submitted to the Joint Legislative Budget Committee pursuant to Water Code Section 80730. <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Electricity-Supply-and-Strategic-Reserve-Office/DWR-August-2025-JLBC-Report-1212.pdf>.

cannot provide that kind of sustained capacity at gigawatt scale. The OTC plants theoretically could.

That said, California's broader fossil gas fleet has a documented vulnerability during exactly the conditions the reserve exists for. CEC's fleet-wide derate analysis (2021–2025) finds combined-cycle gas plants lose an average of 5 percent of nameplate capacity during summer net-peak hours to ambient heat (up to 8 percent in SCE territory), while combustion turbines lose an average of 7 percent, spiking as high as 13 percent in SDG&E territory.¹² It is unclear how the three ESSRRP OTC plants specifically performed during past heat waves, but the fleet-wide pattern is a reminder that gas generation, including the plants anchoring the ESSRRP, is itself heat-vulnerable at the moments reliability matters most.

The two other programs are smaller and demand-side. DSGS, administered by the CEC, aggregates commercial and industrial customers willing to curtail load during emergencies (~710 MW available for summer 2025); Distributed Electricity Backup Assets (DEBA) aggregates distributed generation, though a substantial share of its \$500 million appropriation remained undeployed as of early 2024. Together these three programs constitute the Strategic Reliability Reserve (SRR). For the summers of 2023, 2024, and 2025, it performed as intended – California avoided Flex Alerts, and the Energy Emergency Alerts (EEA) system never reached the severity seen in 2022.

But that record should be read carefully: the absence of Flex Alerts is not the same as evidence the SRR was fully tested. For instance, the CEC's own tracking for the 2025 summer shows zero Flex Alerts, zero Restricted Maintenance Outage notices, and zero restrictions of any kind that year, the only such year in the 2021–2025 record. This coincided with the second-mildest average summer temperature of that period. In other words, 2025's calm reflects favorable weather more than the reserve's performance.

Yet performance during the three relatively mild summer seasons has come at significant cost. The Ormond Beach Generating Station alone has been under contract with DWR at approximately \$8.37 per kilowatt-month since March 2024; a rate producing roughly \$13 million per month, or more than \$150 million per year. Ormond Beach's actual capacity factor over this period has been approximately 0.28 percent: the plant has operated at essentially zero output, sitting idle. In 2025, it was mobilized in anticipation of a potential summer emergency event but ultimately did not deliver electricity to the grid. Whether that expenditure represents prudent reliability insurance or an expensive consequence of a planning framework stood up during crisis is a legitimate policy debate. What is not subject to debate is that the insurance is about to expire.

II. California's Reliability Outlook: Summer 2026.

The state's official reliability assessment for summer 2026 presents a picture that is, at first glance, reassuring. The CEC's newest analysis, *CERRO 2026* (released yesterday, June 30, 2026),¹³ is more optimistic than the assessments that preceded it. *CERRO 2026*'s statewide analysis finds the grid should have enough electricity to avoid any outages, no matter how demand behaves (within reason). Under every growth scenario the state tested, supply comes out ahead of demand by a comfortable margin: somewhere between 5,000 and 7,000 extra

¹² Table 33: "Ambient Derate by Gas Plant Technology Type, During Net-Peak Hours," *CERRO 2026 Draft Staff Report* (California Energy Resource and Reliability Outlook, 2026), California Energy Commission, June 30, 2026, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=271113&DocumentContentId=108704>

¹³ *CERRO 2026 Draft Staff Report* (California Energy Resource and Reliability Outlook, 2026), California Energy Commission, June 30, 2026;

<https://efiling.energy.ca.gov/GetDocument.aspx?tn=271113&DocumentContentId=108704>

megawatts,¹⁴ depending on how fast demand grows. Since January 2019, California has added more than 30 gigawatts of new clean power — including nearly 14 gigawatts of large-scale batteries and over 13 gigawatts of solar. That build-out is the main reason regulators now expect the grid to clear its reliability target more comfortably than earlier assessments suggested.¹⁵

The caution is in the details, however. California's generation fleet can be understood through three layers. *Layer One* consists of resources with contracted RA obligations and a Must-Offer Obligation: these are contractually required to offer capacity into the CAISO market during tight grid conditions. This is the only layer the system can genuinely count on. *Layer Two* consists of RA-eligible resources that hold no contracted RA obligation and no Must-Offer Obligation, therefore facing no penalty for failing to offer capacity during a grid emergency, and economically incentivized to participate only when market prices reach the \$2,000 per megawatt-hour scarcity cap. *Layer Three* is the SRR itself, which was never meant to be part of the everyday margin, but rather serve as a last-resort backstop.

A recent reliability analysis by the California Coalition of Large Energy Users raised a more cautious tone than the joint entity framing; namely, that all the modeling results arise from modelling the entire system of possible resources (Layer 2), not the specific RA resources known to be deliverable. In other words, CAISO's own analysis demonstrates when counting only power plants contractually required to show up in an emergency (*Layer 1*, RA), California was about 3,250 megawatts short of its reliability target. Today's comfortable-looking margin therefore holds up only until conditions get genuinely difficult. That margin will matter far more in 2027, when the state's emergency backup plants are no longer there to fall back on.

As has been noted in years past, wildfire damage to transmission lines can also eat into these surpluses fast. If a fire knocks out 4,000 megawatts of transmission capacity (as happened during the 2021 Bootleg Fire) the numbers still hold up under most conditions: a normal summer keeps a 2,635-megawatt cushion, and even a 2020-level heat wave keeps a significantly thinner 540-megawatt cushion. But a 2022-level heat wave starts from a smaller cushion to begin with and losing that much transmission tips it over — turning a surplus into a shortfall of roughly 1,089 megawatts. In other words, according to the CEC's recent analysis, it will take both a severe heat wave and a major wildfire hitting the grid at the same time to cause a problem in summer 2026.

III. The Mid-Term Outlook: 2027 to 2036.

The *CERRO 2026* is the first time the state's annual reliability report has looked past next summer to examine how the grid performs in 2031 and 2036, and the news isn't as good further out. Based on power plants already planned or under construction, the grid holds up fine through 2031, but only in the best-case demand scenario, with a decent cushion. In every other scenario the state tested — including faster electricity growth or more electrification of cars and buildings — the grid already comes up short by 2031. By 2036, it falls short under every scenario tested, including the best-case scenario. In that rosy outlook, the state would still be millions of megawatt-hours short of what it needs, and in the higher-demand scenarios the shortfalls get much worse. In February 2026, regulators ordered utilities to buy 6,000

¹⁴ Pg.3 of CERRO 2026 Executive Summary, or pg. 29 CERRO 2026 Staff Report; *Ibid*. Note: the "5-7 GW" language in the Executive Summary and the "6-7 to 7-8 GW" detail in Table 3 don't line up exactly — the Exec Summary appears to round down slightly.

¹⁵ California Department of Water Resources, Statewide Energy Office. *Electricity Supply Reliability Reserve Fund Progress Report*. August 1, 2025. Submitted to the Joint Legislative Budget Committee pursuant to Water Code Section 80730. <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Electricity-Supply-and-Strategic-Reserve-Office/DWR-August-2025-JLBC-Report-1212.pdf>.

more megawatts of clean power in stages between 2030 and 2032, which should help close the 2031 gap.¹⁶

A. The Reserve Goes Offline: What Happens After December 31, 2026?

By year's end, the three OTC power plants that anchor the ESSRRP are scheduled to retire. Under the State Water Resources Control Board's OTC policy, AES Alamitos, AES Huntington Beach, and Ormond Beach Generating Station must cease operations as OTC facilities. Combined, these three plants represent 2,859.3 MW of the 3,149.8 MW ESSRRP fleet. When they retire, the overwhelming bulk of California's strategic reserve disappears with them. *CERRO 2026* also flags a nearer-term wrinkle: the Time Schedule Order tied to Alamitos' NPDES discharge permit expired December 31, 2025, so the plant's maximum output may already be constrained. Separately, *CERRO 2026* notes that California's broader OTC fleet, since January 2024, has generally been permitted to operate only for maintenance, air permit testing, and ESSRRP-related extreme events, and has run at annual capacity factors of only 5% to 10% as a result.

The Demand Side Grid Support program faces a parallel, if more complicated, expiration — though a budget action approved this week resolves at least the immediate question for this summer. Total DSGS enrollment has grown substantially: to more than 1,145 MW as of October 2025, spread across four program options and roughly 448,400 enrolled participants, up from the approximately 710 MW available for summer 2025. The state's formal 2026 contingency-resource accounting had counted only 325 MW of DSGS toward available emergency capacity, and DSGS's funding for this summer was itself in question. That immediate gap has now been closed: the enacted budget redirects roughly \$22 million in unspent Distributed Electricity Backup Assets (DEBA) funding to DSGS, bringing its total available funding for summer 2026 to over \$55 million. But this fix only covers summer 2026. Taken together, the strategic reserve capacity remains at risk of being offline or unfunded by the time California enters the 2027 reliability season. This is not a gradual phase-down. It is a cliff—one whose 2026 edge just got a temporary guardrail, while the 2027 drop remains unaddressed.

What replaces the strategic reserve is not yet clear. CAISO's backstop mechanisms — Reliability Must-Run (RMR) contracts and Capacity Procurement Mechanism (CPM) designations — exist to address locational or system-wide reliability needs and can be used to contract for resources the market would otherwise not provide. But these mechanisms are designed to address gaps at the margin, not to replace roughly 3 GW or more of emergency capacity disappearing simultaneously. Whether the existing procurement order trajectory is sufficient to fill that gap — given project delays, interconnection backlogs, and transmission constraints — is an open question.

B. Emerging Technical Risks: Grid Strength and Wildfire-Driven Transmission Loss.

CERRO 2026 introduces two new lines of analysis that legislative oversight should track even though neither is complete. The first is about wildfires reducing the transfer capability of the power lines California uses to import electricity from the Pacific Northwest. Analysts found that even smaller wildfires — not just the big, catastrophic ones — can significantly cut how much power those lines can carry. In other words, it's not just a rare worst-case scenario, it's a risk that shows up more often than expected.

The second is a more technical, longer-term concern about the makeup of the grid itself. California is increasingly relying on solar, wind, and batteries instead of traditional power

¹⁶ California Public Utilities Commission, Decision (D.) 26-02-057, *Decision Requiring 2029-2032 Electric Resource Procurement and Transmitting Portfolios for 2026-2027 Transmission Planning Process*, Rulemaking (R.) 25-06-019, issued February 26, 2026.

plants that spin turbines. Traditional plants help naturally keep the grid's voltage and frequency stable; solar, wind, and battery systems don't do this the same way by default, and right now California's clean resources are set up in a mode that doesn't provide that stabilizing support. If too much of the grid ends up running on these newer resources in one area, it could create pockets where the system struggles to stay stable. Both studies are expected to wrap up by the end of 2026 and should help state regulators decide whether new rules are needed to fix the issues identified.

C. Rising Demand in a Changing Economy.

Whatever California's supply trajectory, the demand side of the reliability equation is moving in a direction that makes every megawatt of lost capacity more consequential. California's peak electricity demand, which had been modestly declining or flat for more than a decade as energy efficiency standards took effect, has turned upward, and the revision to demand forecasts has been consistent. Since 2018, demand forecasts for the CAISO system have been revised upward by more than 5,000 MW.¹⁷ More broadly, the *2025 IEPR Forecast* shows statewide annual peak demand climbing from approximately 61 GW in 2026 to 83 GW by 2045, a 36% increase.¹⁸

Data centers have become a significant and growing component of that revision. Where the CEC previously estimated data center load would add approximately 3,500 MW to California's peak demand by 2040, *CERRO 2026* now projects that data center load could grow to 5.7 to 8.3 times its current baseline by 2040 reaching 9% to 11% of CAISO peak demand under the report's scenarios.¹⁹ Utilities have separately reported significant data center interconnection-queue requests, though the CEC warns most of that is speculative and excluded from the forecast. Unlike the gradual, predictable demand growth associated with residential electrification, data center load can arrive rapidly, concentrated in specific geographic areas, and require transmission and distribution upgrades that themselves carry long lead times.

The broader electrification of the California economy – mandated for buildings and vehicles under state law – adds further to long-run demand projections. The penetration of electric vehicles, heat pumps, and electric appliances creates load that can coincide with system peak periods in ways that are less flexible than industrial demand. Demand growth is not a theoretical concern in California's reliability planning; it is a quantified and material driver of the capacity gap that planners must close.

D. Federal Headwinds and Project Delays.

California's reliability planners have long relied on an aggressive trajectory of new renewable energy and storage development to bridge the gap between retiring fossil capacity and future demand. That trajectory now faces headwinds from two directions: federal policy changes and project development delays that have already accumulated in the pipeline.

HR 1, the federal budget reconciliation bill, substantially curtails the investment and production tax credits that have been a financial cornerstone of the solar, wind, and battery storage industries. Specifically, HR 1 eliminates these credits for new solar and wind projects that are not under construction by July 4, 2026, or placed in service by December 31, 2027. The rapid and uncertain implementation of these timelines has created significant financing risk for projects in development. Governor Newsom issued Executive Order N-33-25 in late

¹⁷ California Energy Commission, Final Adopted 2023 Integrated Energy Policy Report (IEPR), Figure ES-2, February 14, 2024, Docket 23-IEPR-01.

¹⁸ pgs. 4 and 40, California Energy Commission, *California Energy Resource and Reliability Outlook, 2026* (CERRO 2026 Draft Staff Report), (citing the CEC's 2025 Integrated Energy Policy Report Update Forecast). TN 271113, Docket No. 21-ESR-01. June 30, 2026.

¹⁹ 2026 CERRO, *Ibid.*

August 2025²⁰ to help projects capture expiring federal tax credits – but the window is narrow and the market uncertainty is real.

Project development delays that have already accumulated in California’s pipeline compound this concern. The *Q4 2025 Joint Reliability Planning Assessment* tracked 177 active projects contracted or in development to meet California’s reliability needs.²¹ Of those 177, 92 have experienced at least one Commercial Operation Date extension, with an average delay of 22 months. The top reasons cited are interconnection queue processing, permitting, transmission constraints, and supply chain issues. A pipeline of contracted projects with an average delay of nearly two years cannot be confidently relied upon to arrive on schedule, particularly when the schedule itself is already tight.

IV. The Future Role of Natural Gas Generation.

The Strategic Reliability Reserve that California assembled between 2022 and 2026 was, at its core, a natural gas program. The resources that provided the bulk of its capacity – the three OTC plants along the Southern California coast – are fossil fuel facilities that California has been working to retire for legitimate environmental and public health reasons. The OTC they employ has documented impacts on marine ecosystems. They are sited in communities that have borne disproportionate air quality burdens. Their retirement is consistent with California’s clean energy goals and with the Water Resources Control Board’s OTC policy.

And yet the retirement of these plants raises a question the state’s energy policy community has not yet fully answered: what is the plan for firm, dispatchable capacity during the years between the expiration of the Strategic Reserve and the buildout of the clean firm resources – offshore wind, geothermal, long-duration storage – that the CPUC identifies as the eventual resource need? Battery storage has transformed the grid’s ability to manage the evening hours; a four-hour battery charged by midday solar can provide substantial relief during the steepest portion of the demand curve. But battery storage at current durations does not provide the multi-day, extreme-event resilience that the OTC plants theoretically offered. A 72-hour heat dome coinciding with regional wildfire smoke reducing solar output – a scenario bearing meaningful resemblance to conditions California experienced in both 2020 and 2022 – creates a sustained demand on firm generation capacity that battery storage cannot fully satisfy at present.

California currently holds more than 40 GWs of natural gas capacity in its generation fleet,²² much of it in combined-cycle facilities that are not OTC-constrained and that currently provide firm capacity during peak and emergency periods. These plants are not subject to the same retirement pressures as the OTC units; their continued operation is not prohibited by existing regulations. But state policy – including SB 100’s 2045 clean electricity goal, the CPUC’s resource planning framework, and the signals embedded in CPUC procurement orders – may not provide these plants with the long-term market certainty needed to support reinvestment. The risk is that this fleet might decline, or its capacity might be contracted to out-of-state buyers, rather than continue, through deliberate decision-making, to provide a bridge. This would leave California without firm backup capacity at precisely the moment it is most needed. *CERRO 2026*’s new fossil gas plant derate analysis, covering 2021 through 2025, adds evidence for this concern: fossil gas plants lose an average of 5% (combined-cycle units) to 7% (combustion turbines) of nameplate capacity to ambient-temperature derates, and total ambient-derated energy, while down 30% in 2025 relative to 2024, remains

²⁰ https://www.gov.ca.gov/wp-content/uploads/2025/08/Clean-Energy-EO_8.29.25_FINAL.SIGNED.pdf

²¹ Saephan, Xieng (California Energy Commission) and Brendan Burns (California Public Utilities Commission). January 2026. *Joint Agency Reliability Planning Assessment: SB 846 Fourth Quarterly Report*. California Energy Commission. Publication Number: CEC-200-2025-026.

²² U.S. Energy Information Administration, California Electricity Profile 2024, Table 1 ("2024 Summary Statistics"), data released November 10, 2025. eia.gov/electricity/state/california

a drag on availability precisely during the hottest, highest-demand hours when the fleet is needed most.

The state will need to have an honest discussion about the role of existing natural gas generation – not as a permanent fixture of California’s energy future, but whether it should continue to act as a bridge resource in the 2027-2032 window when clean firm capacity is still being developed and scaled and the grid’s margin for error is looking thin. That discussion need not prejudice the outcome. It may be that the resource procurement pipeline, if accelerated and freed from development delays, can fill the gap without meaningful reliance on extended gas operation. It may be that CAISO can use CPM and RMR mechanisms creatively to retain key gas units on an as-needed basis without compromising the state’s decarbonization trajectory. But the discussion should happen explicitly – in planning documents, in CPUC proceedings, and even in legislative oversight hearings – rather than being deferred until a crisis demands it.

V. Questions for the Panelists.

- *When the OTC plants retire at the end of 2026 and the SRR’s funding runs out, what will replace that lost capacity? Is there a real plan for 2027?*
- *Regulators require utilities to hold power in reserve equal to 18% above expected peak demand. But earlier analysis found the state actually needs 21 to 22.5 percent to keep the risk of outages low enough. Is that still true, and will regulators revisit the requirement now that the SRR is going away? What is the affordability trade-off of doing this?*
- *Congress eliminated key tax credits for solar and wind projects. How is the state accounting for that financial uncertainty in its planning, and what’s being done to keep new clean energy projects on track through 2030?*
- *What’s the long-term role for natural gas? Retiring the old coastal gas plants seems near definitive, but California still has a lot of newer gas plants. Should some of them be prioritized as backup until cleaner alternatives get built out?*
- *If a bad heat wave hits at the same time wildfires knock out major power lines, the state’s models now show a shortfall of over 1,000 megawatts, worse than earlier estimates. What’s being done to protect those power lines from wildfires, and how is this combined risk being planned for?*
- *State modeling shows that by 2036, California will fall short of its reliability target no matter how demand grows, even in the best case. Regulators have already ordered utilities to buy more clean power to help close this gap. Is that enough, or does more need to be done?*
- *As California relies more on solar, wind, and batteries and less on traditional power plants, some parts of the grid could become less stable. What near-term fixes are being considered, and when will the state’s ongoing research be finished and acted on?*

VI. Conclusion.

California’s grid is poised to get through summer 2026 without incident, but the SRR buffer that has existed for the past three years is retiring or evolving. The retiring OTC plants, the still-unresolved funding picture for demand response, the widening gap between the state’s mid-term procurement orders and its mid-term reliability targets, the accelerating and

understated growth demand, a federal policy environment actively working against the clean energy buildout the state is counting on, and two new categories of technical risk the CEC itself has not finished studying — none of these individually threatens grid reliability. Collectively, they describe a system with progressively less room for error. The questions this hearing seeks to raise — about the adequacy of the state's planning margin, the durability of its procurement pipeline, the role of its existing gas fleet, and the pace of its research into emerging grid risks — are answerable now, well before the 2027 reliability season begins. The state has navigated comparable uncertainty before, and the same combination of legislative attention and agency coordination that built the current reserve can just as deliberately shape what replaces it.

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