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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to
Continue Oversight of Electric
Integrated Resource Planning and
Procurement Processes.

Rulemaking 25-06-019

**ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENTS ON
ELECTRICITY PORTFOLIOS FOR THE 2027-2028 TRANSMISSION
PLANNING PROCESS AND POTENTIAL FOR GEOGRAPHICALLY-
TARGETED PROCUREMENT**

Summary

This ruling invites comments on recommended electricity resource portfolios for use in the California Independent System Operator's (CAISO's) 2027-2028 Transmission Planning Process (TPP). In addition, this ruling invites input on a CAISO proposal to address a new constraint that surfaced following the cancellation of the Serrano-Del Amo-Mesa transmission upgrade by seeking geographically-targeted storage procurement in the West Los Angeles Basin.

Comments in response to this ruling are invited to be filed and served no later than September 28, 2026, with reply comments filed and served no later than October 12, 2026.

1. Background

This section provides a short background on the TPP recommendations and the potential for geographically-targeted procurement.

1.1. Transmission Planning Process

As part of the longstanding memorandum of understanding (MOU) between the California Energy Commission (CEC), CAISO, and this Commission to collaborate on electricity resource and transmission planning, every year Commission staff develop a recommended set of portfolios to transmit to the CAISO for use in its annual TPP.

Generally, in each TPP cycle, the CAISO evaluates a reliability and/or policy-driven base case portfolio. Under the current CAISO tariff adopted by the Federal Energy Regulatory Commission (FERC), if the results of the base case analysis show the need for additional transmission development, the transmission projects are brought to the CAISO Board for approval in the spring of the second year of the TPP. If approved by the CAISO Board, under the FERC tariff, the project would receive cost recovery through the transmission access charge.

Along with the base case analysis that generally leads directly to transmission project approval, in each TPP cycle the CAISO typically analyzes one or more sensitivity portfolios recommended by the Commission. The purpose of the sensitivity portfolio analysis is to assist in future planning by identifying relevant transmission needs and potential costs.

Decision (D.) 26-02-057 included both a base case and a sensitivity portfolio that the CAISO is in the process of analyzing for the 2026-2027 TPP cycle. The base case portfolio for the 2026-2027 TPP was based on the scenario that achieves a 25 million metric ton (MMT) statewide greenhouse gas (GHG) emissions target in 2035, and includes roughly half of the long lead-time (LLT) resources determined by the Commission to be needed in D.24-08-064, with some extension of the online dates to the offshore wind components of the portfolio

compared to the previous year's assumptions, based on expected delays at the Federal level.

The 2026-2027 TPP sensitivity portfolio currently being studied by the CAISO is a Limited Wind scenario, designed to reflect the recent increased difficulty of permitting wind projects in California and the recent changes in Federal policy toward wind projects in general.

1.2. Potential for Geographically-Targeted Procurement Requirements in the West Los Angeles Basin

In the 2025-2026 TPP, the CAISO cancelled the Serrano-Del Amo-Mesa transmission project, which was previously approved by the CAISO as a policy-driven project, due to potential cost overruns and a stated lack of need for preservation of resource deliverability in the Los Angeles (LA) Basin.¹

The cancellation of this transmission project appears to have surfaced new localized constraints, particularly in the Mira Loma-Mesa area. This includes a 2035 constraint at the Mesa Banks under a P6 contingency.² To alleviate this constraint, in its analysis shared during the 2025-2026 TPP stakeholder meeting,³ the CAISO provided brief narrative descriptions of three potential solutions:

¹ For more information see the CAISO's 2025-2026 TPP results available at the following link: https://stakeholdercenter.caiso.com/RecurringStakeholderProcesses/2025-2026-Transmission-planning-process?_gl=1*uby4sz*_ga*MjAxODA2ODM5Ni4xNzg2Mzk5MDI0*_ga_NDS4B4M2WP*czE3ODYzOTkwMjQkbzEkZzAkdDE3ODYzOTkwMjQkajYwJGwwJGgw

² A North American Electric Reliability Corporation Category P6 contingency standard involves failing an assessment that considers whether the loss of two or more non-generator unit elements with system adjustment between them results in the overloading of the existing transmission infrastructure.

³ The CAISO stakeholder meeting materials are available at the following link: <https://stakeholdercenter.caiso.com/InitiativeDocuments/Presentation-2025-2026-Transmission-Planning-Process-Apr-15-2026.pdf>

- Wires alternative 1: adding a new (fourth) transformer at the Mesa substation at an estimated cost of between \$106 million and \$126 million, that would address the identified transmission constraint in the 2035 and 2040 timeframes.
- Wires alternative 2: adding a high-voltage direct current (HVDC) line into the Western LA Basin at an unknown cost that would address several reliability constraints in the 2040 timeframe.
- A non-wires alternative, that would involve procurement of storage resources, under supervision of the Commission, in the Western LA Basin. This option is discussed in more detail in Section 3 below.

With respect to the third option above, the Commission already has an existing procurement framework in the resource adequacy context, for procurement of local resources, that could potentially be involved in procurement for Western LA Basin resources. Southern California Edison (SCE) serves as the central procurement entity (CPE) for its service area for these resource adequacy purposes and may have the authority to procure in this scenario.

2. Transmission Planning Process Recommendations

In general, the electricity resource portfolios transmitted to the CAISO for TPP analysis form the basis for the CAISO's consideration of transmission needs in the 10-year and 15-year planning horizon.

Base cases are designed to reflect Commission policy guidance, including meeting the reliability standard and achieving GHG reduction targets. Base cases lead to identified transmission solutions that can go directly to the CAISO Board of Governors for approval for investment.

Policy-driven sensitivities are designed to either 1) support a "least regrets" approach that provides a reasonable range of future scenarios that can

be linked to the base case or 2) gather additional information to potentially support future portfolio development and explore incremental optionality or risk. Identified transmission solutions in policy-driven sensitivities do not go directly to the CAISO Board for approval, but they often help inform future base case portfolios.

2.1. Modeling Assumption Updates

Prior to recommending a base case portfolio, as well as any sensitivity portfolios, every year Commission staff update numerous assumptions on which the analysis of the portfolios is based. Since the 2026-2027 TPP portfolios were adopted in D.26-02-057, several key updates have been made for the RESOLVE capacity expansion modeling.

First, the availability of out-of-state resources, including wind, geothermal, and enhanced geothermal systems (EGS) has been adjusted to reflect the latest status of existing, in-development, and proposed transmission projects. Stakeholder input on commercial interest in these out-of-state resources has been taken into account from informal comments of parties received after the webinar held by staff on transmission busbar mapping updates on June 16, 2026.⁴ Costs and availability of new generic transmission solutions have also been updated, reflecting a 10-15 year development timeline and the latest per-unit cost estimates.

For out-of-state wind in particular, the assumptions have been revised about resource availability prior to 2036, in response to immediate challenges facing its development, including permitting delays, local opposition, and

⁴ Webinar materials are available at the following link: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-27-irp-cycle-events-and-materials/assumptions-for-the-2027-2028-tpp>

adverse Federal actions.⁵ Wind imports to California have also been limited by a lack of transmission availability and a lack of new transmission development.

Despite these challenges, RESOLVE modeling has consistently shown that onshore wind, both within California and out of state, is a key part of a least-cost portfolio that is compliant with GHG emissions targets. For this reason, the Commission has consistently selected both in-state and out-of-state wind resources in past TPP portfolios and supported its development. D.25-02-026 transmitted the 2025-2026 TPP portfolios and asked that staff at both the CAISO and Commission investigate the benefits and risks associated with out-of-state resources (including all technology types).⁶ The results of the Commission staff analysis are summarized in the slide deck posted concurrently with this ruling at: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-27-irp-cycle-events-and-materials/assumptions-for-the-2027-2028-tpp>.

Commission staff assume that 3 gigawatts (GW) total of out-of-state wind that was previously assumed to be deliverable on the TransWest HVDC and RioSol transmission lines will no longer be available to the CAISO. Staff removed 1.5 GW of New Mexico wind from the portfolio upon learning that RioSol is interconnecting in Arizona.⁷ 1.5 GW of Wyoming wind was removed from the portfolio previously assumed to be delivered on a TransWest HVDC line, because no evidence was found of any plans to deliver that resource to the

⁵ See American Clean Power 2026 Q1 Market Report, at 23, available at https://cleanpower.org/wp-content/uploads/2026/06/26Q1_MarketReport_Public.pdf

⁶ See D.25-02-026 at 62.

⁷ A Certificate of Environmental Compatibility was granted in November 2025 to the Saguaro Interconnect Project, which will connect RioSol to an Arizona Public Service substation. More information is available at the following link: <https://riosol.energy/sic/>

CAISO. In addition, both EGS and conventional geothermal resources and wind resources are allowed to be selected to be delivered on the Southwest Intertie Project-North (SWIP-N). RESOLVE was not allowed to select generic out-of-state wind until 2037. These changes are meant to create a portfolio that reflects demonstrated commercial interest in out-of-state resource development.

Commission staff will continue to engage with stakeholders to solicit information about commercial interest in out-of-state resource development, both as inputs to this TPP cycle, as well as particularly to support the development of the next Preferred System Plan (PSP) and subsequent transmission planning cycles. Commission staff is also participating in inter-regional planning efforts. Stakeholders are encouraged to suggest any further actions in their responses to this ruling and questions in Section 5 below.

In addition, the following specific transmission project assumptions have been updated:

- The SunZia project is energized and 3,167 MW of New Mexico wind and 2,131 MW of transmission plan deliverability (TPD) attributable to the SunZia project are now in the IRP modeling baseline. Since the June 2026 webinar on busbar mapping, Commission staff have updated previous representations of SunZia in RESOLVE based on stakeholder feedback. Due to insufficient in-state transmission capacity to allocate full capacity deliverability status to the SunZia Wind project prior to 2034, SunZia will initially operate under energy-only deliverability status. During this period, SunZia's capacity value will be represented implicitly within the existing 4 GW firm import limit. After 2034, transmission upgrades will render SunZia generation fully deliverable up to its TPD allocation (2,131 MW) and SunZia will be eligible to receive resource adequacy attributes for this amount.

- The High West and Greenlink West projects were modeled for the first time this cycle for the delivery of out-of-state EGS. In addition, RESOLVE was allowed to select Nevada EGS resources on SWIP-N for the first time this cycle. In previous cycles, Idaho wind was the only resource selectable for delivery on SWIP-N.
- CAISO's 2026 transmission capability estimates⁸ were not released in time to be modeled in RESOLVE this cycle. The 2024 estimates⁹ were used to run RESOLVE and the 2026 estimates will be input into the dashboard for busbar mapping.

Next, the availability of in-state wind, geothermal, and EGS has been adjusted to reflect a longer timeline (seven years, with an online assumption of 2034), for projects that are not identifiable from interconnection queue data or stakeholder commercial interest data.

Due to the above changes, all of the potential portfolios are forced to rely more heavily on solar and storage resources in the near term. In addition to the changes described above, the RESOLVE model was also updated to account for the following:

- Baseline resources: updated with CAISO and Western Electricity Coordinating Council (WECC) data as of September 2025, as well as thermal resource classifications, including combined heat and power;
- Minimum builds: updated to the June 2025 LSE procurement data filings, incremental to the updated baseline;

⁸ See "Transmission Capability Estimates for use in the CPUC's Resource Planning Process," Version 2026, July 15, 2026. Available at: <https://www.caiso.com/documents/transmission-capability-estimates-white-paper-2026.pdf>

⁹ See "Transmission Capability Estimates for use in the CPUC's Resource Planning Process," Version 2024, August 28, 2024. Available at: <https://www.caiso.com/documents/transmission-capability-estimates-white-paper-2024.pdf>

- External region resources: updated with new non-CAISO utility IRPs data;
- Minimum gas retention: updated with more recent CAISO data. The quantity of capacity of natural gas resources with a higher likelihood of potential to retrofit with carbon capture and storage (CCS) were excluded from gas capacity allowed not to be retained by the model;
- In-state resource potential: minor increases to Northeast California and Baja California wind potential;
- Out-of-state resource potential: specific in-development, proposed, and generic transmission options and tie-in locations were used as the basis for revising out-of-state wind, geothermal, and EGS resource potential. Utah hydrothermal resource potential was removed and Utah EGS potential was increased to 2,000 MW;
- First available years: lead-time assumptions were adjusted for generic in-state wind (2034), geothermal and EGS (2034), and generic out-of-state wind and geothermal (2037/2042). Offshore wind availability was also adjusted for Federal permitting delays;
- Near-term build limits: wind and geothermal limits updated based on queue analysis and stakeholder feedback. Solar near-term build limit was adjusted to 13 GW by 2028;
- Out-of-state transmission costs: specific transmission options studied by the CAISO are assigned costs based on per-unit estimates for HVDC and HVAC options;
- SunZia wind representation: modeled as a baseline resource, with a 2,131 MW limit for delivery into the CAISO enforced. As discussed above, upgrades in 2034 will allow for SunZia to count for resource adequacy purposes;
- CAISO transmission constraints and upgrades: added an approved policy-driven project from the 2025-2026 TPP (Trout Canyon-Lugo), as well as a second generic upgrade

in East of Pisgah and a new constraint affecting Arizona solar and storage;

- North-South transmission path expansion: incorporated Busbar Mapping Working Group feedback to refine Path 15/Path 26 expansion options;
- Cap-and-Trade (carbon) price: updated from the 2023 to the 2025 forecast;
- Modeling of reliability procurement orders: D.26-02-057 requirements are modeled as an adder to the RESOLVE planning reserve margin (PRM) target;
- Forced outage rates and static effective load carrying capability (ELCC) values: forced outage rates were incorporated as a derate to the monthly Pmax of thermal and storage resources for RESOLVE's operational dispatch, for calibration with the SERVM production cost model and better representation of resource availability. The latest forced outage rate data was also incorporated to inform ELCCs for thermal resources;
- Long-duration energy storage (LDES) ELCC multipliers: Estimates of LDES ELCCs were improved based on SERVM analysis of the 2025 LSE Plan Filing Requirements resource portfolio; and
- Historical weather-varying profiles: 2023 and 2024 weather years were added. Solar profiles were calibrated with 30-min data and CAISO historical settlement data.

Much more detail on the updates described above is included in the slide deck that accompanies this ruling, available at the following link:

<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-27-irp-cycle-events-and-materials/assumptions-for-the-2027-2028-tpp>.

2.2. Recommended 2027-2028 Base Case Portfolio

In order to arrive at a recommendation for a base case portfolio for the 2027-2028 TPP, Commission staff began by analyzing an updated base case portfolio that was based on the 2026-2027 base case portfolio, which included GHG targets of 30 MMT by 2030 and 25 MMT by 2035, and used the demand forecast from the 2024 Integrated Energy Policy Report (IEPR), as agreed upon between the CEC, CAISO, and the Commission leadership, as part of the MOU.¹⁰

In this initial updated base case scenario, the GHG targets, along with the above-described limited geothermal and wind availability through 2035, combined to drive the need for very high solar and storage build rates in the near term, compared to historical rates. The annual solar buildout since 2023 has averaged around 3,000 megawatts (MW) per year. However, in order to meet the 30 MMT GHG target by 2030 and the 25 MMT GHG target by 2035, the initial potential base case portfolio analyzed by staff would have required a solar build rate that is more than twice the historical average, or around 8,000 MW per year from 2027 through 2030, with solar build rates persisting well above the historical level through 2035. Large amounts of battery storage would also be required through at least 2030.

It is also important to know that these high and likely unrealistic build rates are driven by the intermediate-term (2030 and 2035) GHG targets. The build rates are not driven by a system reliability need, and the portfolios generated by RESOLVE to meet the GHG targets are more reliable than necessary to meet the Commission's standard reliability planning requirement, which is a loss of load

¹⁰ The Single Forecast Set Agreement is available at the following link:
<https://efiling.energy.ca.gov/GetDocument.aspx?tn=269506&DocumentContentId=106596>

expectation (LOLE) that is less than 0.1 (meaning, less than one reliability event in ten years is expected). The initial portfolio analyzed also exceeded the requirements for the renewables portfolio standard (RPS) by a large margin.

Achieving the intermediate (2030 and 2035) GHG constraints leads to a more expensive portfolio than necessary for system reliability purposes, based on the modeled costs of the resources, using updated assumptions. Keeping the intermediate-term GHG targets at 30 MMT in 2030 and 25 MMT in 2035 would result in at least \$1 billion in higher costs by 2030 and at least \$2 billion by 2035.

The cost of such a portfolio may actually be even higher than those assumed by the model, because in order to achieve the solar build rates required by the GHG targets, approximately 95 percent of the solar projects currently in the CAISO interconnection queue would need to be built by 2035, which would create a tight market for power purchase agreements and put upward pressure on costs to load-serving entities (LSEs) and ultimately ratepayers.

These results may be surprising to some because the 2026-2027 base case portfolio was based on a similar set of assumptions. However, this year, the 2030 and 2035 GHG targets have one less year for resources to be built to meet the targets compared to last year, and although the recent build rate has been record-breaking, it has not kept pace with the planned trajectory. In addition, generic in-state geothermal projects were initially available to the model in the ten-year timeframe instead of the five-year timeframe. Solar and storage capacity factors have been reduced somewhat, and forced outage rates have been incorporated into RESOLVE based on production cost modeling assumptions, reducing the availability of some GHG-free energy. Finally, less out-of-state wind is available by 2035.

Taken together, all of these factors resulted in an initial potential base case portfolio that was both unnecessarily expensive to ratepayers and likely unrealistic in its build rates for solar and storage in the near term.

Having analyzed the initial portfolio, Commission staff then began to consider what variables could be adjusted to construct a more reasonable base case portfolio. Two of the variables are within the Commission's control completely:

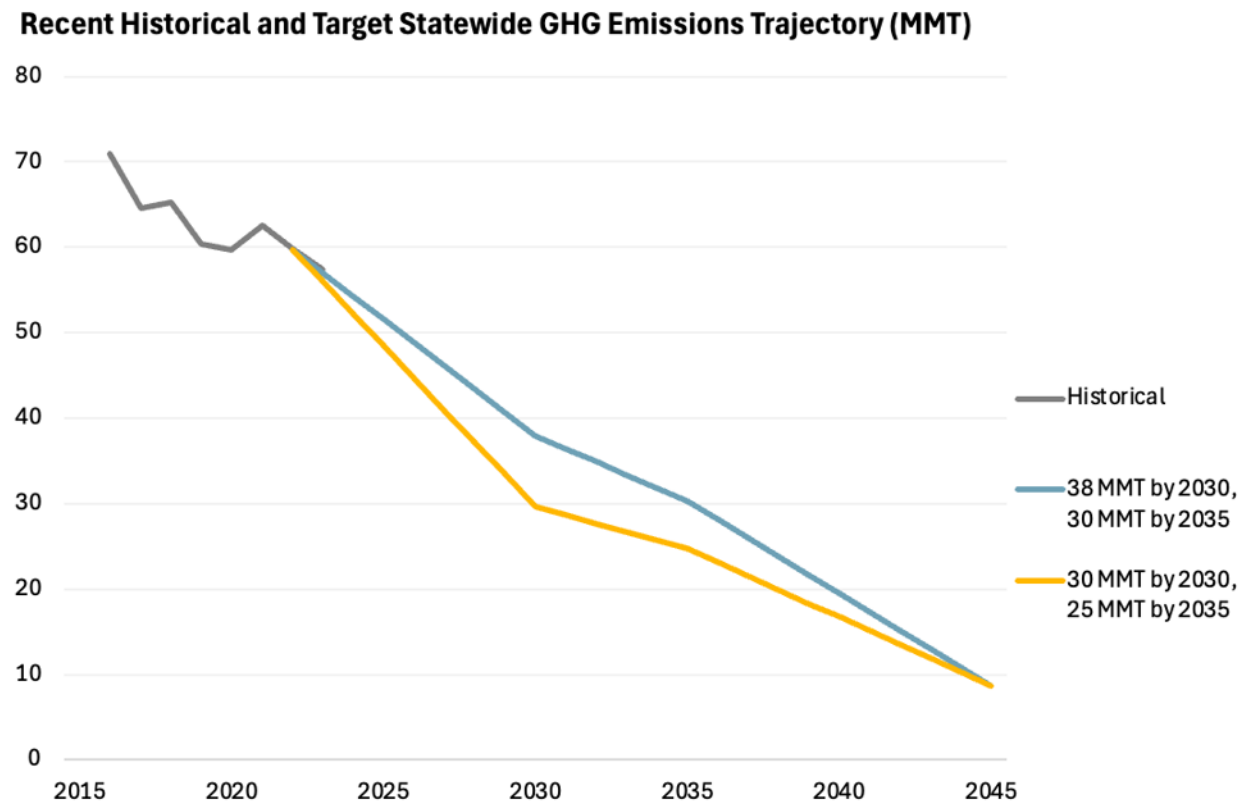
1. The assumptions for generic in-state wind and geothermal projects can be adjusted to be available online earlier (on a seven-year timeline, before 2035) and those changes are consistent with stakeholder input received thus far.
2. The intermediate-term GHG targets for 2030 and 2035 can be adjusted without sacrificing commitment to the ultimate GHG targets in 2045 in California's clean energy future as required by law (specifically, Senate Bill 100 (Stats. 2018, Ch. 312) and Assembly Bill 1279 (Stats. 2022, Ch. 337)) and the California Air Resources Board (CARB) Scoping Plan.¹¹

The first change in assumptions about wind and geothermal online dates is easy to implement and likely uncontroversial, because it simply makes both resources available one year earlier than was assumed previously. The second assumption related to the GHG targets in 2030 and 2035 is more complex. The Commission originally set the 2030 and 2035 GHG targets of 30 MMT and 25 MMT, respectively, in D.23-02-040, in a more favorable policy environment where, among other things, Federal tax credits for renewables were available and there were more limited import tariffs on overseas goods.

¹¹ The 2022 CARB Scoping Plan is available at the following link: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan>

In addition, it is possible to adjust the intermediate-term GHG targets while still converging on an 8 MMT GHG target in 2045, consistent with the CARB Scoping Plan target emissions range for the electricity sector. Figure 1 below shows the Commission's current targets of 30 MMT and 25 MMT by 2030 and 2035, respectively, in yellow and the earlier GHG targets of 38 MMT and 30 MMT by 2030 and 2035, respectively, in blue. Figure 1 makes clear that the 38 MMT by 2030 and 30 MMT by 2035 GHG targets in the intermediate term are more closely aligned with a straight-line projection of reductions over time. This should also result in significant cost savings to consumers, as already noted, with no detrimental effect on the ultimate GHG goal by 2045.

Figure 1. Recent and Historical Target Statewide GHG Emissions Trajectory (MMT)



In addition, achieving a 30 MMT emissions target in 2030 represents roughly a 50 percent reduction from GHG levels during the period 2019-2023, whereas a 38 MMT target in 2030 still represents significant development, but a slightly more gradual and achievable emissions trajectory, with an approximately 40 percent emissions reduction from 2020 through 2030.

Using the 38 MMT GHG target in 2030 and 30 MMT in 2035 also results in less pressure on the CAISO interconnection queue, with approximately 50 percent of the solar projects in the queue needing to be built by 2030 and approximately 75 percent by 2035, while the majority of the wind projects would still also be needed. This also should ease the potential for upward pressure on projects costs, creating additional ratepayer cost savings.

Solar build rates under a 38 MMT GHG target by 2030 and 30 MMT by 2035 would still be ambitious, about two times higher than the historical average, with storage build rates in line with historical rates. Table 1 below gives the historical build rates from 2018 through 2026, and includes estimated required projects through 2035 if the GHG targets are raised.

Table 1. Historical and Future Solar and Battery Storage Build Rates, Under GHG Targets of 38 MMT by 2030 and 30 MMT by 2035

Year	Solar (GW)	Battery Storage (GW)	Year	Solar (GW)	Battery Storage (GW)
Historical (RESOLVE Baseline) ¹²			Future (RESOLVE Selections) ¹³		
2018	0.7	0.0	2027	7.2	4.2
2019	1.5	0.0	2028	6.5	4.7
2020	1.4	0.1	2029	6.0	2.2
2021	1.2	1.8	2030	6.0	2.0
2022	1.7	2.4	2031	6.3	2.8
2023	2.9	2.7	2032	5.5	3.0
2024	2.9	4.1	2033	4.4	2.4
2025	2.3	5.0	2034	3.4	1.7
2026 ¹⁴	3.5	5.1	2035	2.2	1.2

When starting with the 2026-2027 TPP base case portfolio to develop this year's recommended portfolio, Commission staff also noted that the continued inclusion of offshore wind in the portfolio has numerous impacts. As a reminder, the 2026-2027 TPP base case portfolio included 2.9 GW of offshore wind at Morro Bay, and another 1.6 GW at Humboldt on the North Coast of California. These amounts of offshore wind were forced into the base case, and would not

¹² "Historical" numbers are based on resources in the RESOLVE modeling baseline. They closely align with the CAISO's Master Control Area Generating Capability List (MGC), but differ in some cases because hybrid solar and storage resources have been broken out here, whereas they are reported as a separate combined category in the MGC. The MGC is available at the following link: <https://oasis.caiso.com/mrioasis/logon.do>

¹³ These future numbers are outputs from RESOLVE and have been interpolated and smoothed between RESOLVE model years.

¹⁴ The 2026 "historical" build is a combination of resources that have already come online this year, plus a list of resources provided by the CAISO with high-confidence online dates later this year.

otherwise be selected by RESOLVE because they are higher cost than other alternative resources. This continues to be the case this year, and although investment in offshore wind after 2035 has some impact on the other resources chosen for the portfolio, it has no impact on the build rates required for solar and storage in the near term because of its LLT nature. Offshore wind also does not displace significant amounts of other onshore transmission upgrade needs, and the transmission development identified several years ago to deliver North Coast offshore wind to load may not be needed or fully used if the offshore wind failed to materialize.

In addition, an initial review by staff of the LSE individual IRPs filed on or about August 10, 2026 indicates that LSEs are moving away from offshore wind in their planning. LSE plans included 496 MW of offshore wind this year, compared to 4,642 MW in the 2022 LSE plans. For example, Pacific Gas and Electric Company (PG&E)¹⁵ and SCE¹⁶ did not include offshore wind in their most recent portfolios, despite having 826 MW and 1,799 MW in their 2022 plans, respectively. WestLight Energy, formerly Peninsula Clean Energy, noted that, even when onshore wind and geothermal were unavailable, their model selected an overbuild of solar and storage instead of offshore wind at its currently forecasted prices.¹⁷ Some LSE IRPs did include offshore wind as their prorated share of potential centralized procurement, but this inclusion in the portfolios is

¹⁵ See PG&E's 2026 Integrated Resource Procurement Plan at 93. Available at <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M614/K483/614483595.PDF>.

¹⁶ See SCE's 2026 Integrated Resource Plan at 133-134. Available at <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M613/K859/613859311.PDF>.

¹⁷ See WestLight Energy 2026 Integrated Resource Plan at 74. Available at <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M613/K727/613727768.PDF>.

likely not indicative of commercial interest on its own, but rather reflective of prior planning assumptions.

It is also important to note that omitting offshore wind from planning forecasts does not necessarily mean it will not be procured, any more than it being included in planning forecasts meant that it would definitely be procured.

Ultimately, the question of how much offshore wind to assume in the portfolio is a difficult one. For many years, California has been pursuing the development of offshore wind to potentially serve future clean energy needs. There is no question that from a policy standpoint, the Commission, the CEC, and the CAISO have supported and championed progress in offshore wind development as beneficial in the long run.¹⁸ It is likely that if offshore wind projects were available today at reasonable prices, the Commission would require it to be procured to meet current and future clean energy needs.

There is also no question that Federal policy beginning in 2025 has created barriers and delays for offshore wind development. In January 2025, an Executive Order was issued halting offshore wind leasing. In April and August 2025, the U.S. Department of Interior ordered a halt to construction of Eastern offshore wind projects already under construction, even though later Federal court orders granted injunctions to allow construction to restart. Litigation continues over ongoing activities for numerous East Coast offshore wind projects.

¹⁸ See, for example, D.24-08-064, CAISO TPP approval of transmission projects to support North Coast offshore wind, and CEC work on offshore renewable energy, available at the following link: <https://www.energy.ca.gov/programs-and-topics/topics/renewable-energy/offshore-renewable-energy>

Then, in April 2026, the U.S. Department of Interior announced an agreement with Golden State Wind to end its offshore wind lease in exchange for investment in oil and gas assets. In June 2026, a similar agreement was announced with Invenergy (California Offshore LLC) with funding for natural gas and geothermal investments. In August 2026, an agreement was reached to end the lease of RWE (Canopy Offshore Wind Farm). To date, these agreements to end leases were entered into with developers representing three of the five original leaseholders for West Coast offshore wind development. In June, July, and August 2026, the California Attorney General announced intent to sue the Federal government regarding each of the offshore wind lease buyouts.

While litigation is likely to continue on these and other issues, the Commission's planning processes must adjust to the changing set of facts. At the very least, these activities appear likely to result in a delay to the development of offshore wind to serve California. The likelihood of some delay was already acknowledged in the 2026-2027 TPP base case portfolio, which assumed up to a six-year delay in offshore wind development compared to previous assumptions.

Ultimately, for the 2027-2028 TPP base case, the staff recommendation is for offshore wind not to be forced into the portfolio. It is important to emphasize that this should not be interpreted in any way as the Commission turning away from the potential of offshore wind as a renewable energy resource. It is likely that the Commission will continue to consider the role of offshore wind development for its grid and diversity benefits, as long as there is a path to reasonable long-term costs for ratepayers. However, given the uncertainty in the timing and cost of development at this time, the recommendation is not to force it into the portfolio for this TPP base case due to the current uncertainty associated with the resource. This ruling emphasizes that the assumption of zero

offshore wind in the base case portfolio should not be confused with a preference for not having offshore wind available as a resource.

This ruling also recognizes that, should the Commission adopt the staff recommendation, this could have a significant impact on the two Humboldt transmission projects, to which the CAISO awarded contracts to CalGrid, a wholly-owned subsidiary of Viridon Holdings, LLC, as the approved project sponsor. However, given the uncertainty about offshore wind development and the impact of Federal policy changes, it does not seem prudent to continue to risk ratepayer funding for uncertain offshore wind benefits and timing at this juncture. The hope would be that the projects could be reconfigured and/or restarted in the future when other aspects of the offshore wind development environment are again more favorable.

Finally, this ruling notes, with respect to the considerations impacting the potential base case portfolio recommendation, that the Commission is still required by law¹⁹ to consider the Diablo Canyon Power Plant (DCPP) as fully offline as of 2025, even though it is operating at least through 2030 and under consideration for a potential extension to operate beyond 2030 by the Legislature. This factor also creates upward pressure on the cost and near-term solar build rate of any potential base case portfolio recommended. Importantly, the model chooses resources to replace DCPP not for reliability purposes, but for their GHG-free attributes. As noted previously, the resource build rates are not driven by a system reliability need or an RPS need, and that remains true even in the absence of DCPP capacity. Instead, the portfolios generated by RESOLVE are needed to meet the GHG targets.

¹⁹ See Senate Bill 846 (Stats. 2022, Ch. 239) requirements, specifically Public Utilities Code Section 454.52(f)(1).

Having assessed all of the issues summarized above, Commission staff considered the three potential portfolios listed below in Table 2 that could be recommended as a base case portfolio for the 2027-2028 TPP. The recommended base case is highlighted. This ruling seeks party comments on whether this is the correct choice or whether one of the other portfolio options would be more appropriate to select as the 2027-2028 TPP base case.

Table 2. Assumptions for Potential 2027-2028 TPP Base Case Portfolios, including Recommended Base Case

Component	30MMT+ Offshore Wind	38 MMT+ Offshore Wind	Recommended Base Case
Minimum Builds	• LSE Contracts • Reliability Procurement Orders²⁰ • Partial LLTs²¹	• LSE Contracts • Reliability Procurement Orders • Partial LLTs	• LSE Contracts • Reliability Procurement Orders • Partial LLTs
Load Forecast	2024 IEPR	2024 IEPR	2024 IEPR ²²
Out-of-State Resources	Default (updated for 2027-2028 TPP)	Default	Default
Offshore Wind	2.9 GW Morro Bay (2037)	2.9 GW Morro Bay (2037)	None forced-in

²⁰ The amounts included are the cumulative procurement requirements from D.21-06-035, D.23-02-040, D.24-02-047, and D.26-02-057, cumulatively known as the mid-term reliability (MTR) orders.

²¹ The LLTs forced into the portfolio include half of the maximum non-off-shore-wind amounts in D.24-08-064, including 0.5 GW of geothermal, 0.5 GW of 12-hour LDES, and 0.5 GW of multi-day LDES. This is the procurement associated with procurement authorized under AB 1373 (Stats. 2023, Ch. 367).

²² By the terms of the 2025 IEPR Single Forecast Set Agreement, 2024 IEPR planning forecast assumptions are to be used for the CAISO TPP economic studies and CAISO TPP policy studies and bulk system studies. For more information, see the 2025 IEPR forecast-Single Forecast Set Agreement (updated April 15, 2026), available in the CEC's 2025 IEPR docket (25-IEPR-03) at <https://efiling.energy.ca.gov/GetDocument.aspx?tn=269506&DocumentContentId=106596>

Component	30MMT+ Offshore Wind	38 MMT+ Offshore Wind	Recommended Base Case
	1.6 GW Humboldt (2042)	1.6 GW Humboldt (2042)	
DCPP	Offline in 2025	Offline in 2025	Offline in 2025
GHG Targets	30 MMT by 2030, 25 MMT by 2035	38 MMT by 2030, 30 MMT by 2035	38 MMT by 2030, 30 MMT by 2035

As mentioned above, the recommended base case makes two significant changes to policy assumptions from the 2026-2027 TPP base case. First, the GHG targets for 2030 and 2035 are modified to 38 MMT and 30 MMT, respectively. Second, unlike the previous three TPP cycles, offshore wind is no longer forced into the portfolio.

Similar to the 2026-2027 TPP base case, the recommended base case for the 2027-2028 TPP incorporates a partial (roughly half) buildout of the maximum procurement volumes, excluding offshore wind, included in the Commission's need determination for LLT resources in D.24-08-064.

The results of the recommended base case scenario are presented below. General takeaways are that geothermal, both conventional and enhanced, is selected once it becomes available, both for its reliability and high-capacity-factor, GHG-free energy. Most geothermal potential is selected by 2037, in order to capture Federal tax credits that are still available, before they expire.

Small amounts of onshore wind are selected in the next decade, with more rapid development after 2040. In-state wind development is constrained in the next decade by competition for transmission headroom with other resources, while out-of-state wind development takes longer due to the long lead times for out-of-state transmission deliverability.

Solar and storage resources, as discussed extensively above, are the main scalable set of resources available to meet GHG reduction and reliability needs through 2035, while alternative resources become available and start being selected by 2035. Solar and storage build rates therefore slow into the 2040 timeframe.

On an economic basis, no offshore wind is selected in the portfolio, nor is any multi-day storage selected beyond the amounts forced in as part of the D.24-08-064 LLT need determination. RESOLVE selects more than the D.24-08-064 amounts of geothermal and location-constrained 12-hour storage. Finally, small amounts of gas capacity with high fixed costs are not retained by 2045.

Figure 2 and Table 3 below show graphical and numerical representations of the new resources selected by RESOLVE to make up the recommended 2027-2028 TPP base case portfolio.

Figure 2. Selected New Resources in Recommended Base Case by Resource Type

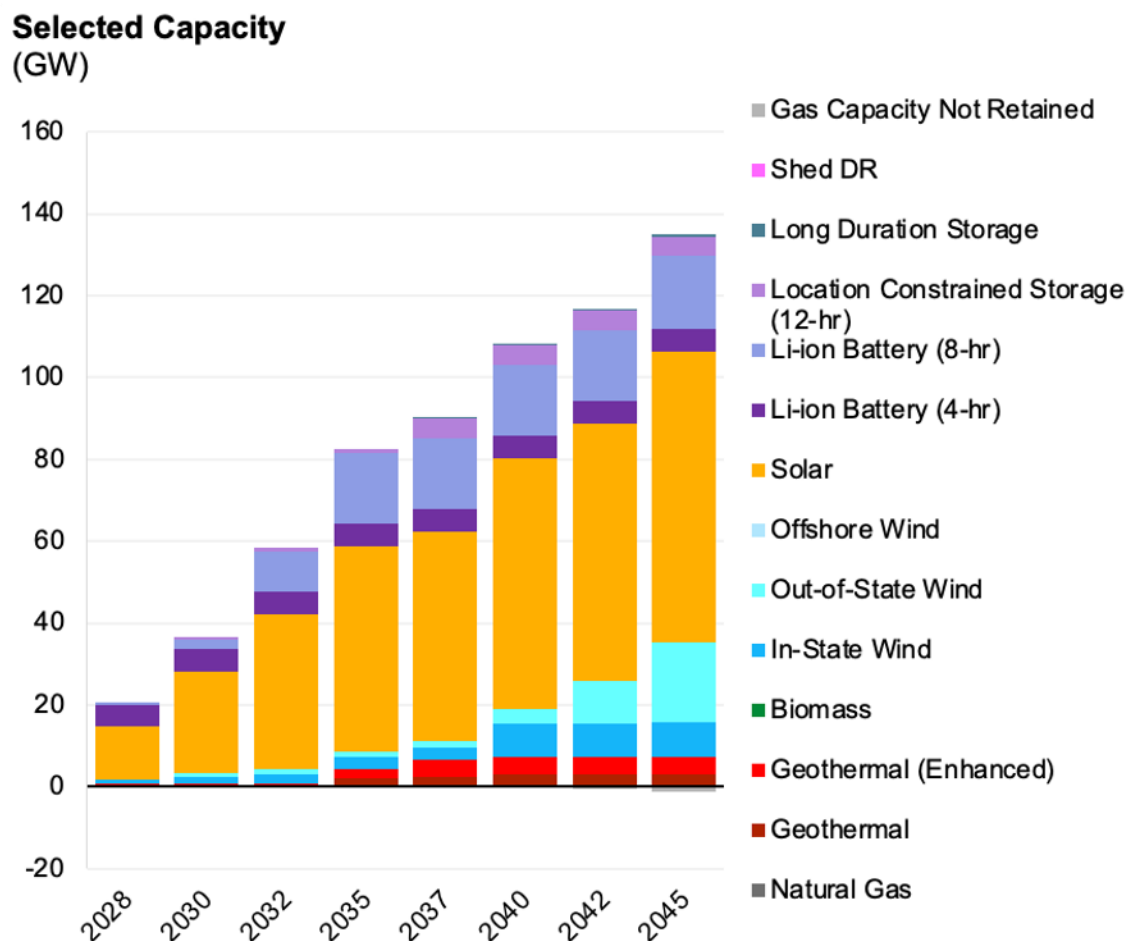


Table 3. Selected New Resources in Recommended Base Case by Resource Type (GW)

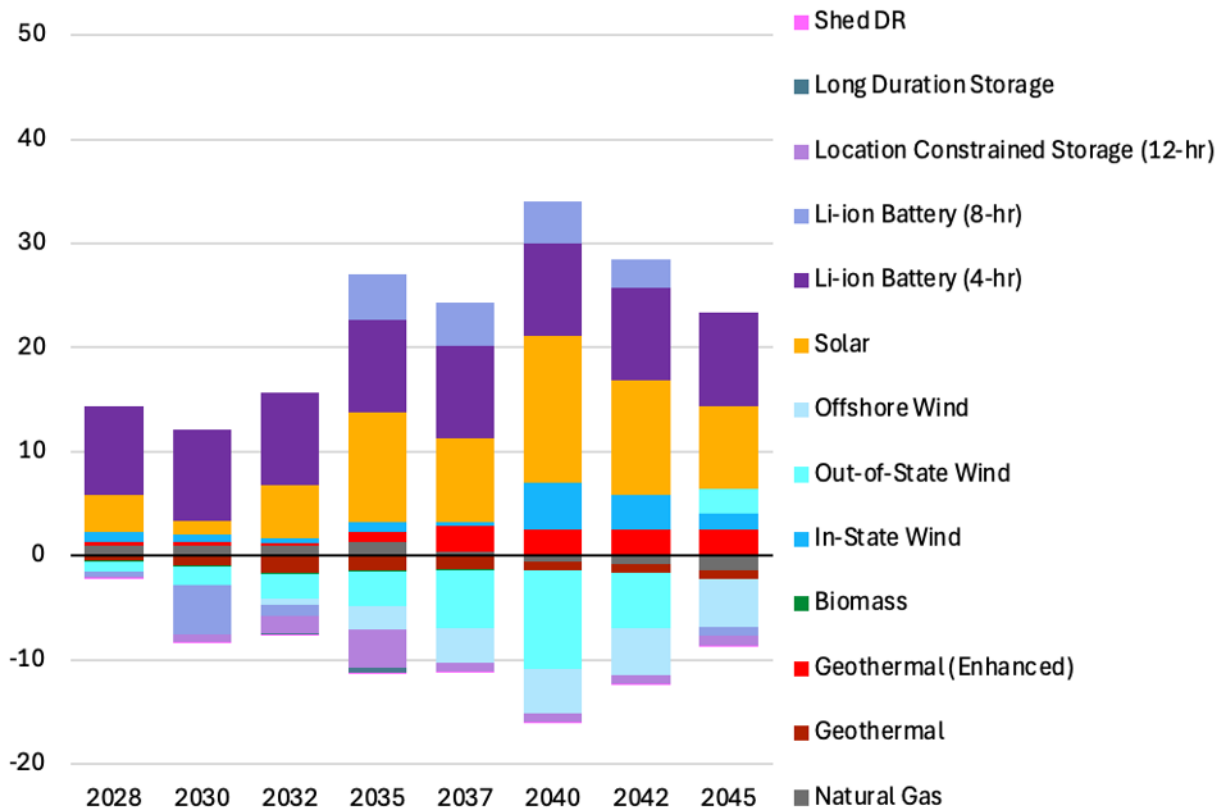
Resource Type	2028	2030	2032	2035	2037	2040	2042	2045
Natural Gas	-	-	-	-	-	-	-	-
Geothermal	0.2	0.3	0.3	1.9	2.5	3.0	3.0	3.0
Geothermal (enhanced)	0.4	0.4	0.5	2.3	4.1	4.2	4.2	4.2
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-State Wind	1.2	1.7	2.1	2.9	2.9	8.3	8.3	8.7
Out-of-State Wind	-	0.9	1.5	1.5	1.5	3.6	10.3	19.5
Offshore Wind	-	-	-	-	-	-	-	-
Solar	13.0	24.7	37.8	50.1	51.2	61.0	62.8	71.0
Li-ion Battery (4 hr)	5.1	5.5	5.6	5.6	5.6	5.6	5.6	5.6
Li-ion Battery (8 hr)	0.8	2.5	9.8	17.1	17.4	17.4	17.4	17.8

Resource Type	2028	2030	2032	2035	2037	2040	2042	2045
Location-Constrained Storage (12 hr)	-	0.5	0.9	1.2	4.7	4.7	4.7	4.7
Generic LDES (12 hr)	-	-	-	-	-	-	-	-
Generic LDES (24 hr)	-	-	-	-	0.0	0.0	0.0	0.0
Generic LDES (100 hr)	-	-	-	-	0.5	0.5	0.5	0.5
Shed Demand Response	-	-	-	-	-	-	-	-
Gas Capacity Not Retained	-	-	-	-	-	-	(0.6)	(1.2)
Total	20.7	36.5	58.5	82.6	90.4	107.7	116.8	133.8

Figure 3 below shows a comparison between the amount of total capacity selected by RESOLVE in the 2026-2027 TPP base case and the amount in the recommended base case for the 2027-2028 TPP. The differences are driven by several factors. The first factor is the delayed availability of LLT resources, including geothermal and out-of-state wind. Second, offshore wind is no longer forced into the portfolio. Third, there are significantly more four-hour batteries in the baseline, due to recent LSE contracting activity. Finally, there is a net increase in geothermal, particularly EGS, selected by 2037.

Figure 3. Capacity Comparison between Recommended and Previous TPP Base Case

Total Capacity - 27-28 TPP Proposed Base Case minus 26-27 TPP Base Case (GW)



More detail on the results of all three potential base case portfolios for the 2027-2028 TPP is available at the following link on the Commission's website: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-27-irp-cycle-events-and-materials/assumptions-for-the-2027-2028-tpp>.

2.3. Recommended 2027-2028 Sensitivity Portfolio

For the sensitivity portfolio, unlike in recent years where there were somewhat obvious variables that warranted testing, this year Commission staff

did not have a strong recommendation for a 2027-2028 TPP sensitivity portfolio, or even whether one is necessary to be studied.

Parties should keep in mind that the purpose of studying a sensitivity portfolio is to look specifically at the transmission implications. Thus, there are many variables that can be changed that do not reveal very much about transmission needs. It is possible that one of the portfolios discussed in Section 2.2 above that is not chosen as the base case could be tested as a sensitivity portfolio. In addition, two other options were evaluated.

The first additional potential portfolio that was evaluated is a lower-load scenario that uses the 2025 IEPR demand planning forecast, without known loads,²³ bearing in mind that known loads are primarily early-stage energization applications, instead of the forecast from 2024. The 2025 IEPR forecast has an overall decrease in electrification, both from buildings and transportation, compared to the 2024 IEPR forecast. The decrease in electrification load is partially offset by forecasted growth in data center load. For the planning scenario, the 2025 IEPR peak and annual load decrease compared to the 2024 IEPR, but are similar to the 2023 IEPR forecast levels. The 2025 IEPR planning scenario remains summer peaking throughout the forecast horizon, unlike the

²³ Known loads are energization requests at the distribution system level, gathered as project-level data from each investor-owned utility. Many of these known loads are still at the very early stage of development. The utilities submit known loads data to the Commission to assist in distribution system planning. In 2025, the CEC analyzed the known loads data for the first time to inform its 2025 IEPR demand forecast, producing variants of the 2025 IEPR forecast with and without known loads. The potential portfolio described would use the 2025 IEPR demand forecast variant that does not include the known loads data. Updated information on the methodology to account for known loads is available in the CEC's 2026 IEPR Electricity and Demand Forecast docket (2026-IEPR-03) available at:

<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=26-IEPR-03>.

previous two vintages where there were winter peaks after 2040. This is primarily due to the decrease in forecasted building electrification.

The downside of this 2025 IEPR demand scenario is that it may not reveal much transmission information, since the number of resources selected and mapped within it would be smaller than in the base case portfolio. But it is possible that the scenario could reveal important information about the best alternative locations within California for transmission development from a least-regrets standpoint.

The second additional portfolio that was evaluated as a potential sensitivity scenario was one that reduces reliance on out-of-state resources. To develop this scenario, the portfolio was constrained such that it could not use any potential generic transmission development to reach out-of-state resources. In other words, only known transmission development that is already in service or under contract could be used to deliver out-of-state electricity. Any additional out-of-state resources would not be able to be delivered to California load and therefore could not be selected by RESOLVE. This scenario shows more likelihood of revealing new transmission planning information, because it would require development of significantly more in-state generation and storage, and therefore additional transmission development within the CAISO area.

Mainly for that reason, Commission staff recommend analysis of the limited out-of-state resource scenario as the sensitivity portfolio for the 2027-2028 TPP.

Table 4 below summarizes the assumptions used for the two main sensitivity portfolio options analyzed, beyond the scenarios described in Section 2.2 above.

Table 4. Potential and Recommended Sensitivity Portfolio Assumptions for the 2027-2028 TPP

Component	2025 IEPR	Limited Out-of-State Resources – Recommended
Minimum Builds	• LSE Contracts • Reliability Procurement Orders²⁴ • Partial LLTs²⁵	• LSE Contracts • Reliability Procurement Orders • Partial LLTs
Load Forecast	2025 IEPR, without known loads	2024 IEPR
Out-of-State Resources	Default (updated for 2027-2028 TPP)	No generic transmission potential
Offshore Wind	None forced in	None forced in
DCPP	Offline in 2025	Offline in 2025
GHG Targets	38 MMT by 2030, 30 MMT by 2035	38 MMT by 2030, 30 MMT by 2035

In terms of results of the analysis of the recommended sensitivity portfolio, it is similar to the recommended base case in that both conventional geothermal and EGS are selected for their reliability and high-capacity-factor GHG-free attributes, mostly before 2037, to take advantage of expiring Federal tax credits. Solar and storage, especially eight-hour, are the scalable resources needed to meet GHG reduction and reliability needs through 2035, with alternative resources scaling up after 2035 and storage development slowing. However, due

²⁴ The amounts included are the cumulative procurement requirements from D.21-06-035, D.23-02-040, D.24-02-047, and D.26-02-057, cumulatively known as the mid-term reliability (MTR) orders.

²⁵ The LLTs forced into the portfolio include half of the maximum non-off-shore-wind amounts in D.24-08-064, including 1 GW of geothermal, 0.5 GW of 12-hour LDES, and 0.5 GW of multi-day LDES. This is the procurement associated with procurement authorized under Assembly Bill (AB) 1373 (Stats. 2023, Ch. 367).

to the unavailability of out-of-state resources, solar continues to scale up until 2045, even though it becomes heavily saturated on the system and its reliability value declines significantly. No offshore wind is selected due to cost. All gas capacity is also retained in the recommended sensitivity portfolio.

Figure 4 and Table 5 below show the resources selected by RESOLVE for the recommended sensitivity portfolio.

Figure 4. Capacity Selected by RESOLVE in Recommended Sensitivity Portfolio (GW)

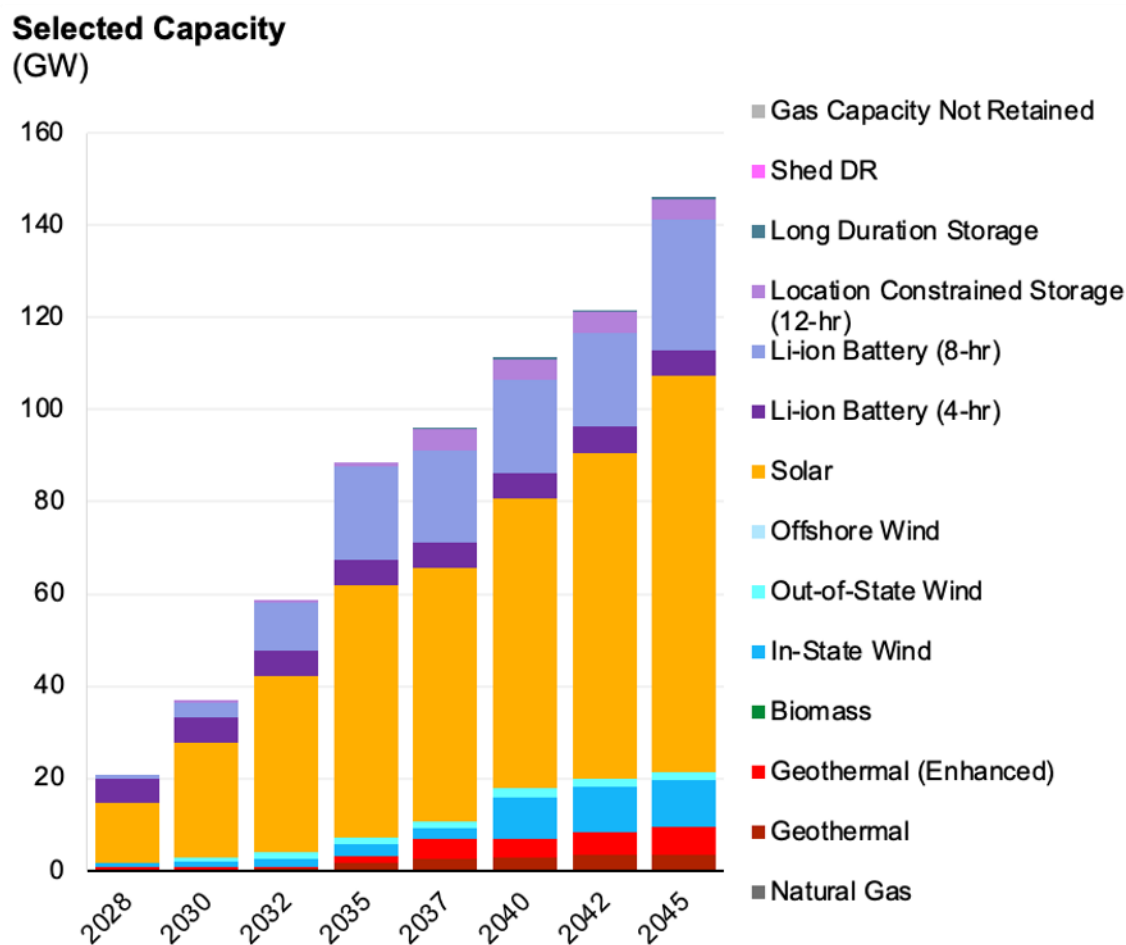


Table 5. Selected New Resources in Recommended Sensitivity Portfolio by Resource Type (GW)

Resource Type	2028	2030	2032	2035	2037	2040	2042	2045
Natural Gas	-	-	-	-	-	-	-	-

Resource Type	2028	2030	2032	2035	2037	2040	2042	2045
Geothermal	0.2	0.3	0.3	1.5	2.5	2.8	3.5	3.5
Geothermal (enhanced)	0.4	0.4	0.5	1.5	4.2	4.2	4.7	6.1
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-State Wind	1.2	1.2	1.6	2.5	2.5	9.0	10.0	10.0
Out-of-State Wind	-	0.9	1.5	1.5	1.5	1.8	1.8	1.8
Offshore Wind	-	-	-	-	-	-	-	-
Solar	13.0	24.9	38.2	54.8	54.8	63.0	70.7	85.9
Li-ion Battery (4 hr)	5.1	5.5	5.6	5.6	5.6	5.6	5.6	5.6
Li-ion Battery (8 hr)	0.8	3.0	10.5	20.1	20.1	20.1	20.4	28.4
Location-Constrained Storage (12 hr)	-	0.5	0.5	0.9	4.4	4.4	4.4	4.4
Generic LDES (12 hr)	-	-	-	-	-	-	-	-
Generic LDES (24 hr)	-	-	-	-	-	-	-	-
Generic LDES (100 hr)	-	-	-	-	0.5	0.5	0.5	0.5
Shed Demand Response	-	-	-	-	-	-	-	-
Gas Capacity Not Retained	-	-	-	-	-	-	-	-
Total	20.7	36.7	58.7	88.4	96.1	111.4	121.6	146.2

More details of both sensitivity portfolios evaluated are presented in the slides available at the following link on the Commission's website:

<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-27-irp-cycle-events-and-materials/assumptions-for-the-2027-2028-tpp>.

2.4. Busbar Mapping Methodology Updates

Each year, Commission staff build on the methodology used in the previous TPP cycle to map generation and storage resources to specific busbars on the transmission system. This locational analysis helps the CAISO, in its TPP analysis, to understand the locations needed for potential expanded and/or upgraded transmission.

For the 2027-2028 TPP cycle, the methodology updates include the following:

Substation-level interconnection criteria

- Revisions have been made to the way substation upgrades influence the substation-level interconnection criteria alignment.

Commercial-interest criteria

- Permitting data has now been incorporated into the commercial interest criteria.

Gas non-retention logic

- The binning method underlying the gas non-retention logic has been revised.
- The unit exemption methodology has been revised to include units well suited to CCS retrofits, aligned with the RESOLVE exclusion modification.²⁶

Land-use criteria

- A new method for land use and environmental evaluation of pumped storage hydroelectric resources (PSH) has been implemented, which calculates a weighted average of project-specific and landscape-level data.
- A new method for land use and environmental evaluation of EGS resources has been implemented.
- A method for avoiding double-counting of resource potential near substations has been implemented.

²⁶ D.26-02-057 at 58-59 states: “We will ask staff to prioritize modeling CCS projects as candidate resources for the next TPP cycle, as this technology appears to be becoming a more viable option that should be modeled and evaluated.” While Commission staff were unable to model CCS as a candidate resource within the RESOLVE model for this TPP cycle, staff updated the unit exemption methodology for mapping purposes. Staff plan to model CCS as a candidate resource for development of next year’s PSP.

Details of these modifications are available at the following link on the Commission's website: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-27-irp-cycle-events-and-materials/assumptions-for-the-2027-2028-tpp>.

Stakeholders provided feedback during the June 16, 2026 webinar held to discuss busbar mapping updates for this TPP cycle, as well as informal written comments submitted to Commission staff after the webinar. Several ideas will be useful in the future, but could not be accommodated in this TPP cycle due to the time it would take to incorporate them. Commission staff will provide progress updates on items discussed in the June 16, 2026 webinar at upcoming webinars, workshops, or other venues, to incorporate the stakeholder suggestions into future TPP cycles.

3. Potential for Geographically-Targeted Procurement Requirements in the West LA Basin

This section describes the alternative identified by the CAISO in its 2025-2026 TPP analysis to address the transmission constraints in the Western LA Basin in the Mira Loma-Mesa area and specifically at the Mesa substation. The CAISO's analysis and the resulting 2025-2026 Transmission Plan cancels the Serrano-DelAmo-Mesa 500 kilovolt (kV) transmission reinforcement project in the LA Basin, originally approved in the 2022-2023 TPP cycle. Instead, the CAISO states that the needs will be addressed by a number of smaller, lower-cost upgrades and increased reliance on energy storage development planned in key areas on the grid.

The CAISO recommends that the Commission ensure that at least 4,400 MW or 12,428 megawatt-hours (MWh) of storage come online in the West LA

Basin across the following substations by 2032: Alamitos, Barre, Chevmain, Del Amo, El Nido, El Segundo, Ellis, Hinson, Huntington Beach, Johanna, La Cienega, Laguna Bell, Lighthipe, Mesa, Redondo, and/or Rio Hondo. From a transmission perspective, this area may be well-suited to local procurement because the interconnection queue currently has a number of projects planned in the area, there is sufficient deliverability and charging capability to cover the full need identified by the CAISO, and the Commission has historically mapped resources to this area in busbar mapping of resources to transmission locations in previous TPP portfolios.

In the 2024-2025 TPP, Commission staff mapped 500 MW of 4-hour batteries and 66.5 MW of 8-hour batteries to the area in 2034. In the 2025-2026 TPP, Commission staff mapped no batteries to the area in 2035, but 1,238.5 MW of 4-hour batteries and 10 MW of 8-hour batteries were already in development in the area. In the 2026-2027 TPP, Commission staff mapped 3,508 MW of 8-hour batteries to the area in 2036, and there were 922 MW of 4-hour batteries and 10 MW of 8-hour batteries already in development in the area.

Within the current CAISO tariff, there is no pathway for the CAISO to procure storage as a transmission asset directly. A 2018-2019 stakeholder initiative addressing storage as a transmission asset closed without completing a final proposal.²⁷

In order to meet the Mesa constraint identified in the 2025-2026 TPP, the CAISO has recommended publicly that the Commission issue a procurement order for 2,336 MWh or 2,900 MW of storage to be online by the second quarter of 2032. This proposed procurement quantity would meet the CAISO's identified

²⁷ For more information on the stakeholder initiative of the CAISO, see the following link: <https://stakeholdercenter.caiso.com/StakeholderInitiatives/Storage-as-a-transmission-asset>

need only if all projects already in the interconnection queue materialize. If all queue projects do not materialize, there could be a need for an additional transmission solution, even with the proposed procurement order. One potential solution could involve doubling the duration of a portion of the in-queue resources (i.e., modify 4-hour storage resources to 8-hour resources by adding more batteries at a given location).

The CAISO presumes that the batteries under development and to be procured would operate as market resources and would not receive specialized compensation for performing a transmission asset function.

It is important to note that the Commission tried out an opportunity for storage to act in place of a planned transmission asset once before in the IRP context. D.22-02-004 authorized storage procurement on the Kern-Lamont line (95 MW of 4-hour batteries) and on the Mesa system (50 MW of 4-hour batteries) to alleviate a constraint identified in the 2020-2021 TPP. PG&E conducted a solicitation but found no viable offers able to meet the 2025 online date identified by the CAISO. Also in 2022, numerous parties in the IRP rulemaking at the time responded to a ruling seeking input on storage as a transmission asset.²⁸ Parties at the time raised concerns related to cost allocation, which entity or entities should be required to procure, timing, and inherent complexity.

In response to this ruling, parties are asked to provide input on the local storage procurement suggested by the CAISO in its 2025-2026 TPP analysis and available at the following link: <https://www.caiso.com/generation-transmission/transmission/transmission-planning>.

²⁸ See September 8, 2022 ruling in R.20-05-003.

4. Potential GHG Emissions Targets for Preferred System Plan Portfolio

In 2027, using the individual IRP filings of the LSEs received in August 2026, Commission staff will be developing portfolios for consideration by the Commission as the next PSP portfolio. The PSP portfolio could also serve as the Commission's recommended base case portfolio recommendation to the CAISO for its next TPP cycle. As many parties are aware, the CAISO has filed with FERC its proposal in response to FERC Order 1920.²⁹ If the CAISO proposals are implemented, among other changes, the transmission planning cycle would begin every two years instead of annually, and the CAISO would also conduct long-term transmission planning over a 20-year time horizon every four years.

During the 2023 PSP development process, parties commented on the reasonableness of two different GHG emissions targets for developing the PSP portfolios. However, due to time limitations and input dependencies involved in modeling, mapping, and taking party input on the resource portfolios, Commission staff may not be able to complete portfolio development and mapping work in time to meet the CAISO's deadlines unless the GHG emissions targets are selected in advance. Commission staff still plan to produce core portfolios (based on LSE resource preferences contained in their individual IRPs) and least-cost portfolios for further stakeholder consideration and feedback.

The basic two basic options under consideration so far are the same trajectories discussed in Section 2.2 of this ruling, that represent the CARB Scoping Plan range for the electricity sector, namely:

²⁹ CAISO Docket No. ER26-704, Tariff Amendment to Comply with Order No. 1920 December 9, 2025. Available at the following link:

https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20251209-5106&optimized=false&sid=8b3978b0-1c30-415b-a34e-4ebfa580e860

- 38 MMT by 2030, 30 MMT by 2035, and 8 MMT by 2045; or
- 30 MMT by 2030, 25 MMT, and 8 MMT by 2045.

In response to this ruling, parties are asked to provide input on the appropriateness of either of the options above to be used for development of the PSP portfolio. Parties may also propose alternative options and should include detailed rationale for their recommendations in their comments.

5. Questions for Parties

Parties are requested to respond to the analysis presented in this ruling and associated/linked materials on the Commission's web site in comments and reply comments. To assist parties in preparing their comments, included below is a list of questions to which parties are requested to respond. If parties wish to make comments on topics that are not covered in the below questions, parties should include those comments at the end of their submissions, to assist Commission staff in organizing the comments received.

Questions Related to the 2027-2028 TPP Recommendations

1. Please comment on the modeling assumption updates made for this round of TPP recommendations. Are there other critical assumption changes that you recommend? Be as specific as possible about assumptions and data sources.
2. Do you support the recommended Base Case for the 2027-2028 TPP? Provide rationale for your recommendation. If you prefer a different Base Case portfolio, describe it as specifically as possible.
3. Please comment on whether the timing and quantities of out-of-state wind and/or geothermal selected in the recommended Base Case portfolio for the 2027-2028 TPP are commercially reasonable and why; also provide rationale for any modifications recommended.
4. Describe any other out-of-state wind, geothermal, and/or transmission projects that you are aware of, in addition to

those already assumed in RESOLVE, that could meet California's needs. Be as specific as possible about assumptions and data sources.

5. Comment on any actions the Commission should take to support the development of out-of-state transmission and/or generation to serve California's needs.
6. Do you support offshore wind being removed from (i.e., not being forced into) the recommended Base Case portfolio for the 2027-2028 TPP? Why or why not?
7. Do you support the recommended Sensitivity portfolio for analysis in the 2027-2028 TPP? Provide rationale for your recommendation. If you prefer a different Sensitivity portfolio, describe it as specifically as possible.
8. Comment on the busbar mapping methodology updates included for this TPP cycle.

Questions Related to Potential Geographically-Targeted Procurement Requirements in the Western LA Basin

9. Is it appropriate for the Commission to issue a geographically-targeted procurement order designed to alleviate the constraint at Mesa identified by the CAISO in the 2025-2026 TPP, instead of leaving it to the CAISO to pursue a wires-based transmission alternative? Why or why not?
10. If the Commission orders geographically-targeted procurement, what amount should the Commission require?
11. If the Commission orders geographically-targeted procurement, which LSEs should be responsible for soliciting the procurement?
12. If the Commission orders geographically-targeted procurement, should the Resource Adequacy Local CPE play any role? If so, what role? If the resources continue to provide the transmission value but cease to provide a local resource adequacy value in the future, should the Local CPE continue to procure the resource? Why or why not?

13. If the Commission orders geographically-targeted procurement, which LSEs should be responsible for paying for the costs of procurement?
14. If the Commission orders geographically-targeted procurement, how should cost recovery be handled (e.g., should the Commission use the Cost Allocation Mechanism or another approach)?
15. If the Commission orders geographically-targeted procurement, what, if any, cost control mechanism and/or market power mitigation mechanisms should the Commission put in place?
16. If the Commission orders geographically-targeted procurement, should utility-owned resources be able to fulfill the need, and if so, what rules or limitations should the Commission place on these types of resources?
17. Should, and if so, how should the CAISO and the Commission approach developing a joint framework to enable future geographically-targeted procurement, to address transmission constraints? What elements are critical for the Commission to consider in creating such a framework?

Questions Related to Potential GHG Emission Targets for Preferred System Plan Analysis

18. Comment on the appropriate GHG targets for next year's PSP to assume for 2030 and 2035, and any other years recommended, for purposes of analysis. Provide rationale for your recommendation.

Other

19. Please feel free to comment on any other aspect of this ruling that is not covered by the above questions.

IT IS RULED that:

1. Any party may file and serve comments in response to this ruling and the questions in Section 5 by no later than September 28, 2026.

2. Any party may file and serve reply comments in response to this ruling by no later than October 12, 2026.

Dated August 31, 2026, at San Francisco, California.

/s/ JULIE A. FITCH

Julie A. Fitch
Administrative Law Judge