BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Reforms and Refinements, and Establish Forward Resource Adequacy Procurement Obligations	Rulemaking 25-10-003

JOINT PARTIES' OPENING COMMENTS ON ENERGY ONLY RESOURCE CHARGING SUFFICIENCY PROPOSALS

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OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Reforms and Refinements, and Establish Forward Resource Adequacy Procurement Obligations	Rulemaking 25-10-003

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The California Energy Storage Alliance, the Large-scale Solar Association, the Solar Energy Industries Association, and the California Wind Energy Association ("Joint Parties"), hereby submit these Opening Comments pursuant to the scope[1] and schedule[2] in the *Assigned Commissioner's Scoping Memo and Ruling* ("Ruling") filed on December 12, 2025.

I. INTRODUCTION

The Joint Parties appreciate this opportunity to comment on party proposals regarding the charging sufficiency test. The Joint Parties' proposal – along with the similar proposals of Pacific Gas & Electric (PG&E) and American Clean Power - California (ACP-CA) – address an important misalignment between the RA program and the state's electric resource planning in the Integrated Resource Plan (IRP) process. The Commission has just approved a new IRP Base Case portfolio and ordered 6 GW of net qualifying capacity of new procurement for 2029-2031.[3] The new IRP Base Case will require an unprecedented build-out of new clean energy over the

1 Ruling, Section 2.1.8

2 Ruling, Section 4

3 See D. 26-02-057, approved February 26, 2026 (New IRP Order).

next 6 years – almost 9 GW per year (nameplate) of new wind and solar generation.[4] The major increases in clean energy are needed to meet increasing electric demand and, increasingly, to charge the new storage resources necessary to meet higher peak demands and replace aging fossil-fuel generation.[5] Achieving this immediate build-out means that California will need to make the best use possible of energy-only (EO) wind and solar resources that can be developed without waiting for transmission expansions. The IRP modeling assumes that all EO resources can charge storage without significant constraints and includes a substantial and increasing share of EO resources.[6]

Despite the unprecedented need for capacity and charging energy, the new IRP order adheres to current Resource Adequacy (RA) eligibility requirements by valuing EO resources only if they are in a paired configuration.[7][8] The Joint Parties believe that updating the eligibility requirements for EO resources in both the RA and IRP proceedings is necessary to cost-effectively achieve the state's reliability and procurement goals. Until this issue is addressed, the failure to recognize the full value of EO resources will continue to raise electric rates and the cost of meeting the state's greenhouse gas (GHG) targets. Making clean generation deliverable to load in peak hours can require expensive transmission upgrades that are not needed for that energy to be delivered to storage in off-peak hours. Construction of expensive transmission

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4 *Id*., at Table 6, showing 43.4 GW of new wind and solar resources needed by 2031.

5 See February 10, 2026, workshop presentations of the Joint Parties, at Slide 83, and ACP-CA, at Slides 67-69. The New IRP Order includes a 25% set-aside for long-duration storage or clean firm resources that, if satisfied even partly by long-duration storage, will require even more clean energy for charging; see New IRP Order, at pp. 38-39.

6 See Joint Parties' workshop presentation, at Slide 83, and ACP-CA presentation, at Slide 69.

7 D. 26-02-057, p.110.

8 *Id*. The Commission states that "[r]esources will be deemed eligible for the procurement requirements in this order if they are otherwise compliant with the resource adequacy eligibility rules in place at the time that they are used to show compliance with the procurement requirements."

simply so charging energy can be counted toward deliverability of storage resources will greatly increase costs, with no reliability benefit. The many proposals on this topic demonstrate its urgency, requiring prompt action from the CPUC. After review, the Joint Parties continue to support the framework of our original proposal, as discussed further below.

II. DISCUSSION

The Joint Parties continue to support our January 26, 2026, proposal to allow EO resources to count towards charging sufficiency, with CAISO transmission planning study areas serving as the allowed geographical charging areas, for the reasons originally articulated and supplemented by the introductory comments above. In sum, allowing EO resources to charge FCDS storage resources is not only the least-cost pathway to achieving the Commission's reliability and GHG objectives, but may be the *only* near-term pathway, given transmission delays associated with FCDS charging resources.[9]

In this section, the Joint Parties: (1) address concerns about the ability to deliver EO resources to storage resources during off-peak load hours when storage is typically charging, including market participation and dispatch; (2) explain why expanding the geographical charging areas to NP26 and SP26, as PG&E and ACP-CA have proposed, would also be reasonable; and (3) argue that a "light-touch" approach, like a simple attestation, can be used to demonstrate resource availability.

[9] While allowing EO resources to count towards charging sufficiency would ensure that FCDS storage will be charged to enable fulfillment of RA Capacity delivery requirements, EO resources would not themselves count towards LSEs' RA requirements.

A. The risk that EO resources will not be able to charge FCDS storage resources during off-peak hours is minimal.

The Joint Parties' proposal stated that CAISO's assessments have found nearly 12,000 MW of EO resources to be off-peak deliverable, as indicated in CAISO's Public Queue Report.[10] Further, as noted in the Joint Parties' proposal, CAISO's off-peak deliverability (OPD) studies generally did not include storage load, which should further improve deliverability during off-peak periods because more of the available generation could be readily absorbed by the additional load, especially in generation-heavy areas. A CAISO representative at the February 11 workshop suggested that off-peak deliverability studies had not been performed for queued EO resources. This assertion is false. CAISO did, in fact, perform an off-peak deliverability study for any queued project that requested it before identifying the project as deliverable during off-peak hours.[11] While additional deliverability studies for off-peak conditions may shed additional light on typical system operations during the overall off-peak charging period (particularly if they include storage resources), the record clearly shows that such studies are not necessary and should not delay immediate action.

Concern was expressed at the workshop that transmission-related curtailments could occur during off-peak periods. However, the OPD studies evaluated congestion. Further, it is our understanding that transmission-related curtailments are generally overestimated because price-bid-related wind and solar curtailments during overgeneration conditions are classified as transmission-related curtailments. It would be useful for CAISO to confirm (or correct) this understanding and quantify these separate causes of curtailment. Regardless of whether

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[10] See Joint Parties' January 26, 2026, proposal at p. 7 and footnote 8. Since that time, 3,000 MW of EO resources with off-peak deliverability have withdrawn from the queue, thus ~9,000 GW remain as of 3/2/2026.

[11] Companies that are members of the Joint Parties were involved in these studies.

curtailments are due to transmission or overgeneration, the total curtailment impacts on solar resources are already represented in Energy Division's calculated exceedance values.

More fundamentally, we emphasize that transmission lines are lightly loaded during off-peak periods. Of the 288 hours in the SOD RA framework, only 20 hours (hours ending 17-21 in June, July, August, and September) can reasonably be classified as on-peak load hours (certainly not many more). In the other 93 percent of SOD hours, available resources will significantly exceed system load and, thus, during such off-peak SOD hours, the transmission system has more than adequate capacity to transmit energy to storage resources from many resources in various locations. In other words, as a matter of system reliability (including charging batteries), deliverability is not an issue in off-peak hours.

Even if some portion of available EO resources is transmission-curtailed, most of the rest of the EO resource fleet will be available to charge storage resources. PG&E's analysis provided evidence to support this: its "heat map" shows that EO-solar resources have been delivering power, subject to some curtailment, to load in all hours in PG&E North and PG&E South areas, just as FCDS resources produce in all hours, with some curtailment.[12] Curtailment (dispatch down) of all types of resources (EO, FCDS, and PCDS) routinely occurs as part of CAISO operations and is not evidence that a particular sub-class of resources (such as EO resources) are unable to deliver energy to the grid, especially during off-peak load periods when transmission lines are lightly loaded.

For all these reasons, the risk that EO resources will not be able to charge FCDS storage resources during off-peak hours is minimal. As Joint Parties and others have previously

[12] PG&E's Track 1 Proposal, Eligibility of Energy-Only Resources for Charging Sufficiency Requirements, Slides 91 & 92 (February 11, 2026, Workshop on Track 1 Proposals in R. 25-10-003).

explained, storage resources typically charge during off-peak load hours, not during peak-load hours. However, to assuage any concerns that storage charging might use even a limited amount of on-peak deliverability, the Commission could, in an abundance of caution, allow LSEs to show standalone EO charging resources in the SOD framework only during off-peak SOD hours.

The Commission must weigh the minimal risk that EO resources will be curtailed during off-peak hours against the much greater near-term risk that insufficient resources will be available to charge the critical storage resources that we are counting on to provide system reliability on critical days.

B. Expanding the geographical charging areas to NP26 and SP26 is reasonable.

While Joint Parties proposed, as a conservative guardrail, that a charging resource be located within the same CAISO study area as the FCDS storage resource, it would be reasonable – even necessary – to expand the boundaries of charging zones to NP 26 and SP 26. First, the study areas with the most battery capacity are PG&E's Greater Bay Area and SCE's LA Metro area. There are currently few existing renewable resources and very limited opportunities for renewable energy development in these areas, so it would be appropriate to extend the charging areas further. Moreover, PG&E's analysis indicates that EO resources are regularly dispatched (and thus delivered) across its territory, despite the limited curtailments discussed above. Expanding the geographical charging areas from CAISO transmission planning study areas to NP26 and SP26 will therefore provide the flexibility needed to ensure reliable storage charging and system reliability during critical periods.

C. A "light-touch" approach can be used to prove resource availability.

Parties make compelling proposals that support a "light-touch" approach to EO resource must-offer obligations. Several parties have addressed whether EO resources used on RA Plans

should have an obligation to offer supply in the CAISO market (i.e. a Must-Offer Obligation, or MOO). ACP-California proposes a contractually required must-bid obligation[13], and PG&E believes that current energy market incentives for solar and wind resources make a MOO unnecessary[14]. The Joint Parties have proposed that EO resources used on RA Plans should have a regulatory obligation to bid into CAISO markets and not be used to support priority exports.[15] There appears to be little party concern regarding whether EO resources would make themselves available to the CAISO market or not, given that their only revenue streams are for energy and RECs. Furthermore, EO resources are already prohibited from supporting priority exports.[16] A reasonable "light-touch" implementation approach would suffice, such as a simple attestation that the load-serving entity has contracted charging availability from the EO resource and that the contract requires the resource to bid into CAISO markets.

III. CONCLUSION

The Joint Parties strongly encourage the Commission to act now to expand its charging sufficiency test to include EO resources, since the record shows that the current policy of valuing standalone EO resources at zero for charging sufficiency is neither accurate nor reasonable. CAISO has published studies showing that 12 GWs of EO resources are deliverable off-peak .[17] PG&E's study documents that EO resources and FCDS resources have comparable resource production profiles following the same worst-day-based exceedance methodology.[18] Given the

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13 American Clean Power-California Track 1 Proposals, R25-10-003 at III.A, pg. 7.

14 Pacific Gas and Electric Company's Proposals on Track 1 issues, R25-10-003 at II.A.3, pg. 7.

15 Joint Parties Energy Only Charging Sufficiency Track 1 Proposal, pg. 6.

16 CAISO *Market Enhancements for Summer 2021 Readiness* stakeholder initiative.

17 Joint Parties Energy Only Charging Sufficiency Track 1 Proposal, pg. 7.

18 PG&E Track 1 Proposal, Section II.A.1.

documentation already available and the difference between CAISO's single-hour focus and the Commission's Slice-of-Day framework, additional CAISO studies are not needed at this time for the Commission to determine that a geographic expansion of the charging sufficiency from EO resources is reasonable.

Respectfully submitted,

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