BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

FILED
03/20/26
04:59 PM
R2510003

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' REPLY COMMENTS ON ENERGY ONLY RESOURCE CHARGING SUFFICIENCY PROPOSALS

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March 20, 2026

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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' REPLY COMMENTS ON ENERGY ONLY RESOURCE CHARGING SUFFICIENCY PROPOSALS

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 Reply Comments pursuant to the scope[1] and schedule[2] in the *Assigned Commissioner's Scoping Memo and Ruling* ("Ruling") filed on December 12, 2025. This joint filing is submitted by CESA, which is authorized to file on behalf of the undersigned Joint Parties.

I. INTRODUCTION

The Joint Parties appreciate that both Track 1 proposals (submitted on January 23, 2026) and opening comments (submitted on March 6, 2026) widely recognize that the current charging sufficiency rules, which limit eligibility to fully deliverable resources, are too restrictive. Most parties agree that, at a minimum, Energy Only ("EO") resources sharing a Point of Interconnection ("POI") with storage should be eligible to provide charging sufficiency for that storage, as suggested by California Community Choice Association ("CalCCA")[3] and Southern

[1] Ruling, Section 2.1.8.

[2] Ruling, Section 4.

[3] CalCCA Track 1 Proposal, pp. 7 – 11.

California Edison ("SCE").[4] Additionally, many parties support the view that EO resources offer charging sufficiency value beyond the POI, and that implementing a geographic limitation, such as transmission study areas or regions north and south of Path 26, serves as a reasonable measure to address potential congestion risks.[5]

The Joint Parties agree with American Clean Power-California ("ACP") that the Commission must act now to recapture the value of EO resources in the RA program. As ACP explains, if the Commission takes no action in the mid-year RA decision to recognize the value of EO projects as a charging resource, "EO resources are unlikely to be developed at the scale contemplated in the IRP – resulting in elevated reliability risk and elevated non-compliance risk for LSEs."[6] Alternatively, LSEs may be forced to contract with more expensive clean energy resources that require new transmission to be deliverable to load (not storage), raising ratepayer costs. Storage deployment and contracting decisions are being made now without clear signals about what charging resources will be recognized.

In the following section, the Joint Parties address the concerns raised by the California Independent System Operator ("CAISO") about the eligibility of EO resources to meet charging sufficiency requirements and explain why such opposition should not stand in the way of necessary near-term program reforms.

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4 SCE Track 1 Proposal, pp. 7 – 9.

5 Pacific Gas & Electric Company Track 1 Proposal, pp. 1 – 6; ACP Opening Comments, p. 5; Sonoma Clean Power Authority and Peninsula Clean Energy Opening Comments, pp. 5 – 6; California Environmental Justice Alliance and Sierra Club Opening Comments, pp. 11 – 12; The AES Corporation Opening Comments, pp. 7 – 8; REV Renewables, LLC Opening Comments, pp. 3 – 6.

6 ACP Opening Comments, p. 4.

II. DISCUSSION

CAISO's opening comments acknowledge that storage resources "usually charge during lower priced, non-peak-load periods when solar energy is plentiful."[7] This observation supports the Joint Parties' contention that congestion is minimal during these charging windows and underscores that restricting EO resources based on congestion concerns is unfounded. While minor congestion may occur in isolated cases, CAISO's comments highlight the fact that a blanket exclusion of all EO resources is an unjustifiable and overly broad approach.

But rather than supporting prompt efforts to restore the acknowledged charging value of EO resources to ratepayers, CAISO proposes to withhold any such value until it completes an extensive assessment.[8]

The Joint Parties disagree with this approach for four reasons: (a) CAISO's comments fail to acknowledge that it has already assessed the off-peak deliverability of most EO resources; (b) additional CAISO analysis may be useful in the future but should not delay enabling EO resources to charge storage; (c) CAISO's study proposal lacks detail to ensure its relevance to the Commission's charging sufficiency test; and (d) CAISO's concerns about the need for additional framework development are overstated. These arguments are described in more detail below.

a. CAISO's comments fail to acknowledge that it has already assessed the off-peak deliverability of EO resources in the past.

CAISO's comments opposing the Joint Parties' proposal on EO resources providing charging sufficiency assert that the ability of EO resources to charge storage is "untested":

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[7] CAISO Opening Comments, p. 4.

[8] CAISO Opening Comments, pp. 2 – 6.

> *The RA planning process does not include a transmission system study that evaluates whether transmission system constraints restrict generators from supplying energy to charge storage resources during non-peak hours. Adopting party proposals to allow Energy Only capacity to meet charging sufficiency requirements would therefore rely on an untested assumption that Energy Only capacity can provide charging energy to storage resources.*[9]

As a result, CAISO argues that it must conduct a study before EO resources, other than those co-located with deliverable storage, can provide RA charging sufficiency.[10]

CAISO's comments fail to acknowledge that it has assessed the off-peak deliverability of nearly all EO resources in the past and fail to explain why these past studies are inadequate to allow a measured expansion of the ability of EO resources to provide charging sufficiency to storage. As the Joint Parties noted in our comments, CAISO has performed off-peak deliverability studies for, and granted OPD status to, more than 12 GW of queued projects, demonstrating the deliverability of EO resources during off-peak hours.[11] "Deliverable" means deliverable to all load centers; certainly, if this energy is deliverable to sometimes far-off load, it should be deliverable to storage closer in electrical distance to EO resources in NP-15, ZP-26, or SP-15. These results remain relevant today, as the growth of storage resources has only increased the off-peak loads available to absorb generation in these hours, particularly in areas that include both storage and generation.[12]

In addition to its OPD studies, CAISO has regularly estimated the off-peak deliverability of EO resources in the Integrated Resource Planning (IRP) process. As part of developing the inputs and assumptions for the IRP Program, CAISO provides updated *Transmission Capability*

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9 CAISO comments, p. 3.

10 *Id*., pp. 3-5.

11 Joint Parties comments, p. 5.

12 Joint Parties comments, p. 5.

Estimates to guide IRP modeling.[13] CAISO describes how the purpose of this study is to develop "FCDS and EODS transmission capability estimates that limit the amount and deliverability status of candidate resources that can be selected or mapped in transmission-constrained areas."[14] The TCE study is based on the CAISO's most recent Transmission Plan Deliverability Allocation (TPD Allocation) study.[15] Although the 2024 TPD Allocation study did not include a specific assessment of off-peak deliverability, here is the approach that CAISO used to assess the ability of the CAISO system to deliver off-peak generation:

> *…[T]he current transmission capability estimates are mainly based on the 2024 TPD Allocation study results where the off-peak deliverability study was not performed. As such the EODS capability estimates are calculated using FCDS capability estimates and adding existing energy storage and thermal generation capacity behind the constraint on top of it. This is to take into account that energy storage is in discharging mode in on-peak deliverability study while it can be dispatched in charging mode to address off-peak deliverability constraints. To avoid overestimating EODS capability, only existing energy storage resources capacity is used. Same for the thermal units as they can be turned off in off-peak deliverability study.*[16]

In other words, CAISO assumes that, within transmission-constrained areas of the CAISO grid, EO resource development can occur up to an off-peak deliverability limit based on: (1) the amount of storage available to be charged within the areas affected by the constraint; plus (2) the amount of thermal generation that can be turned down in the area when EO resources are dispatched. Thus, CAISO's off-peak deliverability estimates for the IRP assume that EO

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[13] The most recent such Transmission Capability Estimate (2024 TCE Study) is available at Library | Transmission capability estimate inputs for CPUC integrated resource plan - Aug 29, 2024 | California ISO.

[14] 2024 TCE Study, p. 3.

[15] *Id*. p. 4: "The current estimates are based primarily on 2024 TPD study."

[16] *Id*., p. 9.

resources are deliverable in off-peak hours to storage located in all areas affected by the constraint (not necessarily the same study area). This is the same logical assumption that the Joint Parties believe reinforces the conclusions of the OPD studies for 12 GW of EO resources, which support allowing EO resources to charge storage located in the same zone (NP-15 or SP-15).[17] Moreover, the Joint Parties explained that 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, as supported by PG&E's analysis comparing the output of EO and FCDS solar.[18] CAISO has provided no sound reason why an initial step cannot be taken to align the EO deliverability assumptions used in the RA program with those used in the IRP.

b. Additional CAISO analysis may be useful, but should not delay enabling EO resources to charge storage.

CAISO states that it plans to perform an additional deliverability study as part of its 2026-2027 Transmission Planning Process. It states that the study will provide two sets of results: (1) the extent to which transmission congestion constrains output from generation resources; and (2) the extent to which transmission congestion constrains storage resources' ability to charge.[19] It further describes that the study will assess the time of day during which storage typically charges and will provide location-specific results. CAISO plans to publish draft study results in November 2026.

Regarding the first study component, as discussed above, CAISO has already performed sufficient studies to determine that transmission congestion will not constrain delivery of EO resources during off-peak periods. The second study component may provide additional

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17 Joint Parties comments, at pp. 5-7

18 Joint Parties at p. 6.

19 CAISO at p. 5.

information, but the Commission should not "let the perfect be the enemy of the good" in this situation; i.e., its value will not be great enough to warrant delaying Commission action to enable EO resources to charge storage.

CAISO's OPD studies do not currently determine "the extent to which transmission congestion constrains storage resources' ability to charge." This second proposed study component is not relevant to the ability of EO resources to produce energy; instead, it appears to be a proposed update to CAISO's FCDS study methodology for energy storage resources. The Joint Parties estimate that such a study will show that a few storage resources located at isolated buses may not be chargeable for a limited number of hours.

Today, developers generally avoid locations with charging difficulties due to the outsized impacts such constraints have on project economics and financing. That is, the CAISO day-ahead and real-time market congestion and pricing signals already drive resource development to areas where no charging constraints are expected. Even assuming that a few isolated facilities will not be chargeable in a limited number of hours, the risk that all other storage resources will not be fully charged is virtually nonexistent and is outweighed by the risk of not having the EO charging resources that recent IRP modeling shows are needed.

CAISO's proposed study can provide fine-tuning that can safely be adopted a year after the policy is adopted. For example, where isolated storage facilities are found to have charging limitations, EO resources could be allowed to qualify only if they are near the storage facility.

However, waiting for CAISO's proposed study would have negative impacts for resource adequacy as developers working on Cluster 16 resources will not know by their October 2026 deadline if or how EO resources may qualify for charging sufficiency. Opening Comments from

ACP and EDF Power Solutions (EDFps)[20] provide strong arguments showing that delay will be detrimental to resource adequacy.

c. CAISO's study proposal lacks detail to ensure its alignment with the Commission's charging sufficiency test

Although additional CAISO analysis could be useful, there is not enough information in the record for the Commission to determine whether the results of CAISO's proposed study would be relevant or aligned with its slice-of-day RA framework. CAISO does not operate a 24-hour RA framework with a charging sufficiency test, and its focus has traditionally been on distinct, smaller slices of peak days. Ultimately, the Commission determines whether resources should reasonably count towards its unique, and increasingly important, charging sufficiency test, not the CAISO.

Furthermore, CAISO has not provided important details that describe how applicable its proposed two-part study would be to the Commission's slice-of-day RA framework. The Commission's slice-of-day RA framework evaluates 24 individual hours on the worst day of each month. Will the study provide 24 individual EO "deliverability" values for each month of the year? If averages, minimums, or maximums across the hours will be used, why? If a single representative hour will be studied, does the justification for selecting this hour match the Commission's intent with the slice-of-day RA framework design? What logic will the study use to set energy storage charging levels? Do these charging levels match the real capabilities of the storage fleet, are they some average, or will they be based on some observation of past charging levels? What transmission system constraints will be enforced in the study? Will the study recognize the ability to "turn-down" other non-zero marginal cost resources? These details are

[20]ACP Opening Comments, Sec I.A, pp. 3-4, EDFps Opening Comments, R25-10-003, Sec III, pg. 4

important because each assumption could inadvertently lead to over- or undercounting resource contributions to charging sufficiency on the slice-of-day worst day.

CAISO claims that "[o]nly a detailed study of the transmission system can demonstrate how ... interacting factors impact congestion." The Joint Parties disagree. PG&E has provided results of a study following the Commission's current exceedance methodology which examines several worst-day situations, looking back several years, that demonstrate EO resources' ability to reasonably produce energy midday when storage resources are charging. This study is particularly useful and relevant because it evaluated all 24 hours of the day following the Commission's current methodology, showing that the current assumption that EO resources provide no value is demonstrably wrong.

Given CAISO's OPD studies, its transmission capability estimates for the IRP, and PG&E's indicative exceedance analysis, the Commission can reasonably conclude that EO resources have been and are currently providing charging energy to the system and that energy should count towards the charging sufficiency test for full capacity deliverability status energy storage resources.

d. CAISO's concerns about the need for additional framework development are overstated.

CAISO argues that before the Commission expands EO resources' ability to count towards the charging sufficiency test, it must develop rules for: (1) which hours can count; (2) how location impacts the ability of EO resources to charge storage; and (3) how the CPUC can validate the EO capacity shown to ensure it has been contracted by the LSE showing it and will show up when needed. None of these issues are significant enough to justify an implementation delay.

First, CAISO argues that varying load conditions across the day can create lower or higher levels of transmission congestion during non-peak hours, and states that no party provided a proposal for which hours the Commission's RA program would recognize EO capacity to charge storage resources.[21] However, the Joint Parties recommended in opening comments that LSEs should be allowed to show standalone EO charging resources during all off-peak Slice-of-Day ("SOD") hours.[22]

Second, CAISO states that party proposals regarding geographic limitations are flawed because they do not account for local transmission constraints.[23] However, the Joint Parties addressed the potential for local transmission constraints by grounding geographic limitations in CAISO's off-peak deliverability analyses and CAISO's estimates of the off-peak deliverability of EO resources in the IRP process, which show that transmission is lightly loaded when storage charges.[24] The designation of OPD status is not specific to NP-15 or SP-15. Therefore, allowing EO resources to charge storage only if located in the same zone (NP-15, ZP-26, or SP-15) provides an additional locational guardrail. Furthermore, geographic limits can be updated once CAISO provides additional analysis; therefore, any limited exposure to increased risk would be only pertain to a relatively short interim period. Finally, CAISO expressed concerns that no party proposal provides a way for Energy Division to validate the EO capacity shown to meet charging sufficiency requirements. As stated in opening comments, validation can be easily handled through "light touch" efforts like an affidavit. (Affidavits are used by the CAISO in both the Interconnection Request submittal and TPD Allocation processes, and there is no evidence that

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21 CAISO Opening Comments, p. 6.

22 Joint Parties Opening Comments, pp. 6 – 7.

23 CAISO Opening Comments, p. 7.

24 Joint Parties Opening Comments, pp. 5 – 7.

this method has been deficient.) These validation concerns are minor and should not prevent ratepayers from benefiting fully from the EO resources they have already funded.

In sum, the Commission must weigh the minimal risk that some 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 the state is counting on to provide system reliability on critical days. Alternatively, LSEs may be forced to provide charging sufficiency from more expensive clean energy resources that are fully deliverable or that require new transmission to be deliverable to storage, raising costs for ratepayers. The Commission should act decisively to implement interim rules now, allowing EO resources to contribute to charging sufficiency, while additional analysis is conducted. Delaying action would jeopardize reliability, increase costs, and undermine the benefits of recent and future investments in storage and renewable resources by reducing their ability to serve accelerating demand growth.

III. CONCLUSION

Since there are significant harms to delay and sufficient data already presented for the Commission to act, the record supports and the Joint Parties urge a speedy decision in favor of allowing EO resources to be eligible to provide charging sufficiency for storage within the same pricing zone (NP-15, ZP-26, or SP-15).

This joint filing is submitted by CESA, which is authorized to file on behalf of the undersigned Joint Parties.

Respectfully submitted,

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March 20, 2026