

**BEFORE THE PUBLIC UTILITIES COMMISSION  
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

**REPLY COMMENTS OF THE  
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION  
ON TRACK 1 PROPOSALS**

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**I. Introduction**

Pursuant to the *Assigned Commissioner’s Scoping Memo and Ruling* (Ruling), issued on December 12, 2025, and the *Administrative Law Judge’s Ruling On Energy Division’s Transactability Report and Modifying Track 1 Schedule*, dated February 24, 2026, the California Independent System Operator Corporation (CAISO) hereby submits its reply comments on Track 1 proposals.

First, the CAISO urges the Commission to not adopt proposals that would allow Energy Only capacity to meet charging sufficiency requirements. In opening comments, parties urge the Commission to adopt these proposals immediately, yet no party identifies any imminent reliability concern requiring Commission action on these proposals for resource adequacy (RA) Year 2027. The proposals may introduce a near-term reliability risk if Energy Only capacity cannot deliver energy to charge storage resources during non-peak hours. The Commission should avoid this risk by waiting until CAISO publishes study results assessing whether Energy Only capacity can deliver energy to storage resources during non-peak hours. The CAISO also encourages the Commission to not rely on the results of the CAISO’s Off-Peak Deliverability Assessment (OPDA) study when considering these party proposals.

The CAISO also reiterates that the Commission should not impose restrictions on all RA resources for the bidding of, or eligibility to receive revenues from, imbalance reserves and reliability capacity. Further, the CAISO urges the Commission to disregard the Public Advocates Office at the California Public Utilities Commission (Cal Advocates) speculative cost estimate for imbalance reserves. The CAISO also opposes Cal Advocates’ proposal to impose a percentage-based allocation of imbalance reserves and reliability capacity revenues.

Finally, in response to opening comments from the CAISO's Department of Market Monitoring (DMM), the CAISO clarifies that it will not limit all storage resources' dispatch to the range unaffected by non-linearity.

## **II. Discussion**

### **A. The Commission Should Not Allow Energy Only Capacity to Meet Charging Sufficiency Requirements At this Time.**

CAISO's opening comments urged the Commission to not allow Energy Only capacity to meet charging sufficiency requirements at this time.<sup>1</sup> Other parties made similar comments encouraging the Commission to not adopt party proposals related to Energy Only resources.<sup>2</sup> The CAISO supports these comments, including Southern California Edison Company's (SCE) comment that "(r)eliability must remain physics-based, not accounting-based."<sup>3</sup> At this time, the Commission should not adopt party proposals to allow Energy Only capacity to meet charging sufficient requirements.

Parties urge the Commission to adopt these proposals immediately, yet no party identifies any imminent reliability concern requiring Commission action on these proposals for RA Year 2027. In opening comments, CAISO explained that prematurely assuming Energy Only capacity can reliably charge storage resources could leave storage undercharged during stressed system conditions, potentially introducing a near-term reliability risk.<sup>4</sup> To avoid introducing a more immediate reliability risk and to support a more informed decision about the long-term risks regarding charging sufficiency, the Commission should wait for CAISO to publish the results of its forthcoming study assessing whether Energy Only capacity can deliver energy to storage resources during non-peak hours.

The CAISO also urges the Commission to not rely on the results of CAISO's OPDA study to determine whether Energy Only capacity can meet charging sufficiency requirements.

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<sup>1</sup> The CAISO uses the term "Energy Only capacity" to refer to: (1) all capacity from Energy Only resources that are not co-located with a storage resource; (2) capacity from Energy Only resources above the level that is used to charge co-located storage resources; and (3) the non-deliverable portion of resources with Partial Capacity Deliverability Status.

<sup>2</sup> Vistra Corp. (Vistra) Opening Comments, p. 7; Middle River Power LLC (MRP) Opening Comments, p. 17; SCE Opening Comments, p. 8.

<sup>3</sup> SCE Opening Comments, p. 8.

<sup>4</sup> CAISO Opening Comments, p. 3.

Parties misinterpret the results of the OPDA study. The CAISO has not determined that any resource can deliver energy to CAISO system load during off-peak hours. Accordingly, the Commission should not rely on the data identified in party comments that encourage the Commission to allow Energy Only capacity to meet charging sufficiency requirements.

**1. No Party Identifies a Reliability Concern that the Commission Must Address for RA Year 2027 by Allowing Energy Only Capacity to Meet Charging Sufficiency Requirements.**

Two parties explicitly request the Commission adopt Energy Only capacity proposals in Track 1, including Electricite de France’s (EDF) recommendation that the Commission allow Energy Only resources to meet charging sufficiency requirements in 2027.<sup>5</sup> There does not appear to be a reliability risk that would arise in 2027 if the Commission does not adopt these proposals. In fact, no party identifies a reliability concern that the Commission must address for RA Year 2027 by allowing Energy Only capacity to meet charging sufficiency requirements.

Consistent with statute, near-term reliability should be the RA program’s priority. Section 380 of the California Public Utilities Code states that the Commission must “ensure the reliability of electrical service in California” and serve other purposes “to the extent possible.”<sup>6</sup> However, the Commission might introduce a near-term reliability risk by adopting proposals to allow Energy Only capacity to meet charging sufficiency requirements. By adopting these proposals, the Commission would rely on the untested assumption that Energy Only capacity can charge storage resources. If Energy Only capacity cannot charge storage resources, storage resources may have insufficient state of charge to meet grid reliability during peak conditions, leading to potential reliability shortfalls. Given the novelty of the concept of relying on Energy Only capacity to charge storage resources, the Commission has limited assurance that this reliability risk wouldn’t arise in RA year 2027 if it adopted the proposals supported by parties in opening comments.

The Commission should take the prudent course of withholding its judgment until it can make a more informed decision. As CAISO explained in opening comments, the CAISO will perform a study that will provide information the Commission can use to evaluate whether it is

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<sup>5</sup> American Clean Power – California (ACP-CA) Opening Comments, p. 2; EDF Opening Comments, p. 4.

<sup>6</sup> California Public Utilities Code § 380(b).

reasonable to assume that storage resources can charge from Energy Only capacity.<sup>7</sup> Until those study results are available, the CAISO urges the Commission to not adopt party proposals that would allow Energy Only capacity to meet charging sufficiency requirements.

**2. The Commission Should Not Rely on the Results of CAISO’s Former OPDA Study to Determine Whether Energy Only Capacity Can Meet Charging Sufficiency Requirements.**

Several party comments reference the results of the CAISO’s OPDA study to support claims that CAISO has determined certain resources can deliver their energy to CAISO system load during off-peak hours.<sup>8</sup> These parties misinterpret the study results. As explained further below, the CAISO has not determined that any resource can deliver energy to CAISO system load during off-peak hours. Accordingly, the Commission should not rely on the results of the OPDA study to determine whether to allow Energy Only resources to meet charging sufficiency requirements.

First, parties relying on the OPDA study to support their claims that CAISO has determined certain resources can deliver their energy to CAISO system load during off-peak hours disregard the study’s actual purpose. The CAISO conducted the OPDA study “to ensure some minimal level of protection from otherwise potentially unlimited curtailment,” and explicitly stated that the study was “not for resource adequacy purposes.”<sup>9</sup> Therefore, the OPDA study does not support the assertion that Energy Only capacity can reliably deliver energy to charge storage resources.

Second, an “off-peak deliverability” classification does not indicate that Energy Only capacity can deliver energy to CAISO system load without facing constraints. The “off-peak deliverability” classification is a relic of the OPDA study that CAISO no longer performs as part of its generation interconnection study process.<sup>10</sup> The OPDA study identified only the network

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<sup>7</sup> CAISO Opening Comments, p. 1.

<sup>8</sup> Joint Parties Opening Comments, p. 5; REV Renewables, LLC (REV) Opening Comments, p. 5; The AES Corporation (AES), p. 7.

<sup>9</sup> *Id.*

<sup>10</sup> Note that the CAISO still performs a version of OPDA study as part of the Transmission Planning Process. This version of the study is mainly for informational purposes. When CAISO refers to the OPDA study in these comments, it refers to the version of the study that it performed as part of the generation interconnection study process during which it assigned the “off-peak deliverability” classification. CAISO no longer performs this latter version of the study.

upgrades needed to relieve local constraints, not area constraints. Local constraints arise near the resource itself, whereas area constraints reflect broader transmission congestion across the wider region. Because the OPDA study did not identify upgrades to relieve area constraints, area constraints could still limit the studied resource’s output, restricting the studied resource’s output from serving CAISO system load. Because of the potential presence of unmitigated area constraints, the Commission should not treat an Energy Only resource with an “off-peak deliverability” classification as capable of delivering energy to CAISO system load.

Third, the assumptions CAISO used in the OPDA study do not align with party proposals that would allow Energy Only capacity to be shown in the same Slice of Day hour as conventional deliverable resources. In the OPDA study, CAISO assumed low output levels from conventional deliverable resources.<sup>11</sup> By contrast, party proposals would allow both conventional deliverable resources *and* Energy-Only capacity to be shown at full output in the same Slice of Day hour.<sup>12</sup> The OPDA study never assessed this scenario; it evaluated Energy-Only capacity constraints only when conventional deliverable resource output was low. When output from conventional deliverable resources increases, Energy Only capacity could create congestion and require generation to be partially or fully curtailed. Because the OPDA study did not assess the situation when both conventional deliverable resources and Energy Only capacity are dispatched to significant output levels, the Commission should not rely on OPDA study results to determine whether Energy Only capacity can meet charging sufficiency requirements.

Instead of relying on the OPDA study results, the Commission should consider the results of CAISO’s upcoming study it will perform as part of the 2026-2027 Transmission Planning Process. This future study will assess the situation when output is high from both conventional deliverable resources and Energy Only capacity.<sup>13</sup> Therefore, the results of this future study will be appropriate for the Commission to consider when determining whether Energy Only capacity

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<sup>11</sup> CAISO uses the term conventional deliverable resources to refer to thermal and hydro resources that have deliverability status. CAISO assumed 15% output from thermal resources and 30% output from hydro resources in its OPDA study. See <https://www.caiso.com/documents/off-peakdeliverabilityassessmentmethodology.pdf>, p. 3.

<sup>12</sup> See SCE Track 1 Proposals, p. 8; California Community Choice Association (CalCCA) Track 1 Proposals, p. 9; ACP-CA Track 1 Proposals, p. 3.

<sup>13</sup> See CAISO 2026-2027 Transmission Planning Process Unified Planning Assumptions and Draft Study Plan – Feb 2026, p. 58, <https://stakeholdercenter.caiso.com/InitiativeDocuments/2026-2027-Transmission-Planning-Process-Unified-Planning-and-study-Plan-Draft-Feb-2026.pdf>

can meet charging sufficiency requirements. Until the Commission can utilize the study results to determine whether storage resources can charge from Energy Only capacity, the Commission should not allow Energy Only capacity to meet charging sufficiency requirements.

**B. The Commission Should Not Impose Restrictions on All RA Resources for the Bidding of, or Eligibility to Receive Revenues from, Imbalance Reserves and Reliability Capacity.**

Many parties oppose Energy Division’s proposal to restrict how RA resources bid the Day-Ahead Market Enhancement (DAME) Products.<sup>14</sup> Most of these parties also oppose Energy Division’s proposal to impose a fleetwide restriction on resources receiving Reliability Capacity (RC) revenues and a substantial portion of Imbalance Reserve (IR) revenues.<sup>15</sup> These parties represent both RA suppliers and load serving entities (LSEs). The Commission should consider this wide and deep opposition as a clear signal that fleetwide restrictions on the DAME Products are not the appropriate path forward.

The CAISO continues to urge the Commission not to impose restrictions on all RA resources for the bidding of, or eligibility to receive revenues from, the DAME Products. Instead, the Commission should recognize that LSEs can negotiate revenue allocations in RA contracts as they see fit.

**C. The Commission Should Disregard Cal Advocates’ Speculative Cost Estimates for Imbalance Reserves.**

In opening comments, Cal Advocates states that the CAISO’s market policy design for the imbalance reserves and reliability capacity products is expensive and includes an implausibly high estimate of the costs of imbalance reserves.<sup>16</sup> For the reasons set forth below, the Commission should not consider this cost estimate in assessing party proposals regarding the bidding and revenue allocation of imbalance reserves and reliability capacity.

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<sup>14</sup> Independent Energy Producers Association (IEP) Opening Comments, p. 2; Western Power Trading Forum (WPTF) Opening Comments, p. 9; Vistra Opening Comments, p.14; CalCCA Opening Comments, p. 8; PG&E Opening Comments, p. 13; MRP Opening Comments, p. 13; AES Opening Comments, p. 6.

<sup>15</sup> IEP, WPTF, Vistra, Calpine, CalCCA, REV, Pacific Gas and Electric Company (PG&E), MRP, AES.

<sup>16</sup> Cal Advocates Opening comments, p. 5.

First, direct cost estimates ignore other cost decreases which could partially or wholly offset the net cost impact of imbalance reserves. By Cal Advocates' own admission, "(t)otal net costs can be higher or lower than direct costs because of changes to other products, bid cost recovery, and costs embedded in RA contracts."<sup>17</sup> The Commission should not ignore these offsetting impacts because ratepayers will receive the net benefits or pay the net costs associated with imbalance reserves, not the direct costs of imbalance reserves.

Second, the methodology of Cal Advocates' direct cost estimate is overly simplistic because it extrapolates direct costs for an entire year based on imbalance reserves prices and quantities for a single day. The direct costs to procure imbalance reserves will vary from day to day and hour to hour because the quantity and price of imbalance reserves will change daily and hourly. These changes result from factors including the forecasted variability of renewable resource output and load levels that fluctuate daily. Cal Advocates' direct cost estimate fails to reflect these nuances and therefore fails to reliably estimate the potential direct cost of imbalance reserves.

Third, Cal Advocates bases its direct cost estimate on simulated test data. Cal Advocates derives imbalance reserve prices and quantities from test data where both the CAISO market software and participant bids are preliminary or simulated and therefore do not reflect real world operations. The Commission should not assume that direct cost estimates derived from simulated test data reflect the actual costs to ratepayers.

Instead of increasing ratepayer costs, CAISO expects the introduction of imbalance reserves to decrease the overall costs to address net load uncertainty. As CAISO explained in its opening comments, by optimizing imbalance reserves across the entire Extended Day Ahead Market (EDAM) footprint, the EDAM market design creates a diversity benefit by which all EDAM balancing areas, including the CAISO balancing area, receive these services at a lower cost than they would on a balancing area-specific basis.<sup>18</sup> RA resources may also earn additional revenues from providing imbalance reserves to other balancing areas, potentially offsetting the RA contract costs that LSEs pass onto ratepayers.

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<sup>17</sup> *Id.*

<sup>18</sup> CAISO Track 1 Proposals, p. 4.

The Commission should not consider Cal Advocates' cost estimate when determining whether to impose restrictions on RA resources for day ahead market bidding and revenue eligibility.

**D. The Commission Should Not Adopt Cal Advocates' Proposal to Impose a Percentage-Based Allocation of IR and RC Revenues.**

Cal Advocates proposes that the Commission "direct LSEs and resource operators to negotiate revenue splits that are a specific fraction of the resource's total IR and RC revenues."<sup>19</sup> Cal Advocates states that this proposal would "avoid distorted energy bidding."<sup>20</sup> The Commission should not adopt Cal Advocates' proposal to require RA contracts to allocate DAME Products revenues based on a static percentage for three reasons.

First, RA suppliers and LSEs are in the best position to negotiate the terms of RA contracts, including terms that determine the allocation of DAME Product revenues. By imposing a fleet-wide requirement to base this allocation on a percentage basis, the Commission would restrict contracting parties from pursuing more effective contracting terms that maximize benefits for both parties.

Second, by imposing a fleet-wide requirement on how Commission-jurisdictional LSEs must contract for the DAME Products, the Commission would put Commission-jurisdictional LSEs at a disadvantage relative to LSEs not subject to the Commission's jurisdiction. RA suppliers might choose to contract with LSEs not subject to the Commission's jurisdiction to avoid onerous contracting requirements and the risk that the agreed-upon percentage is inappropriate. In order to be compensated for the additional burden and risk, RA suppliers might charge a premium price when negotiating RA contracts with Commission-jurisdictional LSEs. The higher RA costs would then pass to ratepayers.

Third, Cal Advocates' proposal fails to meet its intended objective of avoiding distortions to energy bidding. Efficient market outcomes depend on bids that reflect actual costs. If RA suppliers retain only a portion of the revenues for the DAME Products, it will distort their incentive to bid their actual costs for both energy and the DAME Products. This distortion occurs because RA suppliers will attempt to bid in a manner that maximizes both their energy revenues

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<sup>19</sup> Cal Advocates Opening Comments, p. 10.

<sup>20</sup> *Id.*

and the DAME Product revenues. Because they will receive only a portion of the DAME Product revenues, they may seek to offset this decrease by increasing their energy revenues by submitting bids that do not reflect their actual costs. The Commission should not force this inefficient outcome on the entire RA fleet.

**E. The CAISO Will Not Limit All Storage Resources' Dispatch to the Range Unaffected by Non-Linearity.**

In opening comments, the CAISO's DMM references a potential clarification to the definition of state of charge limits that the CAISO previously considered in its Storage Design and Modeling stakeholder process.<sup>21</sup> The clarification would have limited the dispatch of storage resources to the state of charge range unaffected by non-linearity. However, based on stakeholder feedback, the CAISO decided not to move forward with this clarification. The CAISO explained its decision in a public stakeholder meeting on January 22, 2026.<sup>22</sup>

**III. Conclusion**

The CAISO appreciates the opportunity to provide reply comments on the party proposals.

Respectfully submitted,  
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<sup>21</sup> DMM Opening Comments, p. 6.

<sup>22</sup> CAISO, Storage Design and Modeling, Working Group on Uplift & DEB, Outage Management, and State-of-Charge Management, p. 16.

<https://stakeholdercenter.caiso.com/InitiativeDocuments/Presentation-Storage-Design-Modeling-Jan-22-2026.pdf>