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

REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON TRACK 1 PROPOSALS

Scott Murtishaw
Executive Director
California Energy Storage Alliance

808 R Street, #209
Sacramento, California 95811
Telephone: 510-205-7774
Email: scott@storagealliance.org

March 20, 2026

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 ENERGY STORAGE ALLIANCE ON TRACK 1 PROPOSALS

The California Energy Storage Alliance ("CESA") hereby submit these Reply Comments on Track 1 Party Proposals ("Proposal") pursuant to the scope[1] and schedule[2] in the *Assigned Commissioner's Scoping Memo And Ruling* ("Ruling") filed on December 12, 2025, and as modified in the Administrative Law Judge's Ruling on Energy Division's Transactability Report and Modifying Track 1 Schedule issued on February 24, 2026.

I. INTRODUCTION

CESA appreciates the opportunity to provide the following reply comments on the Track 1 Opening Comments:

- Unforced capacity ("UCAP") discussion
    - CESA's proposal for a principles-based forced outage definition is supported by many parties.

[1] Ruling, Section 2.1.8
[2] Ruling, Section 4

- CESA's concerns about double-counting storage non-linearity or "foldback" between QC calculations and EFORd are shared by many parties.
- Multiple parties support implementing a UCAP data review process to allow operators to identify and correct errors in outage data used for UCAP calculations.
- Outage data for hybrid resources has systemic errors affecting the entire resource class. This data should be corrected prior to the implementation of UCAP for hybrid resources.
- A refresh mechanism for EFORd would preserve incentives for maintenance and investment and improve the accuracy of UCAP values over time.
- Evaluating UCAP in low-price periods is inherently flawed, as it would ignore the resource characteristics and economic allocation mechanism of storage resources.

- The change from ELCC to exceedance methodologies for solar QC value may inadvertently reduce the deliverability classification of certain resources.

II. UCAP DISCUSSION

A. Forced outage definition

Opening Comments reflect broad support among parties for a principles-based forced outage definition as proposed by CESA and AES. REV Renewables[3] and others support CESA's proposal. AES[4], NextEra[5], Vistra[6], Western Power Trading Forum[7] ("WPTF"), Independent Energy Producers' Association[8] ("IEP"), and Middle River Power[9] ("MRP") emphasize that, in order to align resource incentives with reliability, a forced outage should be defined as an equipment failure and exclude causes outside control of the resource owner. Southern California Edison[10] ("SCE") highlights the contractual importance of a clear definition, reducing uncertainty for all parties. SCE, MRP, NextEra and AES point out the importance of not relying on the CAISO tariff or other CAISO materials to define an outage, thus keeping UCAP calculations transparent and under the jurisdiction of the Commission. AES joins CESA in noting the need for a durable, technology-neutral definition as new resource technologies are brought to market. CESA reiterates its recommendation for the adoption of a principles-based definition of forced outage that addresses these concerns, as described in its opening comments[11].

B. Storage Qualifying Capacity (QC) and accounting for storage foldback

There is significant concern in Opening Comments about potential double-counting for storage nonlinearity, or "foldback". Parties including AES[12], the Alliance for Retail Energy

[3] REV Renewables Opening Comments, R.25-10-003, at Sec. III, pg. 6
[4] AES Opening Comments, R.25-10-003, at Sec. II.A, pg. 2
[5] NextEra Opening Comments, R.25-10-003, at Sec. II.B, pg. 12
[6] Vistra Opening Comments, R.25-10-003, at Sec. II.A.4, pg. 12
[7] WPTF Opening Comments, R.25-10-003, at Sec. II.2, pg. 5
[8] IEP Opening Comments, R.25-10-003, at Sec. I.B.i, pg. 4
[9] Middle River Power Opening Comments, R.25-10-003, at Sec. 2.A.i, pg. 4
[10] SCE Opening Comments, R.25-10-003, at Sec. V.B, pg. 12
[11] CESA Opening Comments, R.25-10-003, at Sec.II.A.i, pg. 3
[12] AES Opening Comments, R.25-10-003, at Sec. II.B, pg. 3

Markets[13] ("AReM"), Calpine[14], NextEra[15], California Community Choice Association ("CalCCA")[16], Ava Community Energy with Peninsula Community Energy[17] ("Joint CCAs"), Vistra[18], and REV Renewables[19] express their objections to double-penalizing storage resources by incorporating foldback parameters in the QC calculation and then penalizing foldback performance through EFORd. While these parties differ in exact mechanisms for managing the double-counting, they broadly agree that if foldback is accounted for in either QC or EFORd, it should be excluded from the other calculation to ensure a fair and accurate representation of a resource's reliability.

REV Renewables[20] and CAISO[21] join CESA in noting that the charging foldback period does not impact a storage resource's ability to discharge and therefore should not be considered in evaluating the resource's QC. AES[22] joins CESA in highlighting the incentive for strategic withholding that could arise if foldback were treated as a Plant Trouble outage within EFORd.

CalCCA[23] suggests that if QC is modified to reflect foldback periods, it could be calculated by dividing the resource's full discharge capacity into three hours of full output and one hour at a derated discharge amount. This approach could enable a more accurate representation of reliability capability for some resources. This is a different way of addressing the technical limitations of foldback and may be an improvement on the modeling proposed by others. Other options are also

[13] AReM Opening Comments, R.26-10-003, at Sec. II.C, pg. 6
[14] Calpine Opening Comments, R.25-10-003, at Sec. II.B, pg. 3
[15] NextEra Opening Comments, R.25-10-003, at Sec. II.E, pg. 17
[16] CalCCA Opening Comments, R.25-10-003, at III.C.2, pg. 16
[17] Joint CCAs, Opening Comments, R.25-10-003, at IV, pg. 12
[18] Vistra, Opening Comments, R.25-10-003, at Sec. II.A.1, pg. 4
[19] REV Renewables Opening Comments, R.25-10-003, at Sec. IV, pg. 7
[20] Ibid.
[21] CAISO Opening Comments, R.25-10-003, at Sec II.F.2, pg. 20
[22] AES Opening Comments, R.25-10-003, at Sec. II.B, pg. 3
[23] CalCCA Opening Comments, R.25-10-003 at III.C.1, pg. 14.

possible. Depending on resource characteristics, some resources could potentially provide varying uses within the RA plan, enhancing flexibility as well as reliability. For instance, resources discharging at the maximum discharge rate for four hours may have additional available charge that can be provided at a lower foldback rate of output in a fifth hour. Because proposals for modeling foldback differ across parties, CESA suggests that the precise logic to use in the resource adequacy plans should be addressed in Track 2, allowing additional time to evaluate the implications of alternative methods.

CAISO's Division of Market Monitoring[24] (CAISO DMM) endorses a CAISO Master File change not proposed in this Track 1 proceeding[25] as a method for calculating storage QC, that would also limit the amount of energy a storage resource could offer to CAISO's market. While CESA supports a QC calculation based on the discharge unaffected by foldback, it reiterates that the Commission's QC and UCAP calculations should be independent of CAISO market dispatch and scheduling decisions. Although CAISO DMM acknowledges the value of allowing storage resources to offer energy into the market even during foldback periods, it does not address the incentives for economic or physical withholding that could arise if supply offers associated with foldback energy were penalized under RA program rules. CESA has already described the efficiency and fairness concerns associated with double-counting foldback in its Opening Comments[26] and therefore opposes this suggestion.

While several parties propose delaying UCAP implementation until foldback behavior is more fully modeled[27], CESA supports proceeding with UCAP implementation provided that

[24] CAISO DMM Opening Comments, R.25-10-003 at Sec. 1, pg. 4.
[25] CAISO Track 1 Proposals do not include the proposal the CAISO DMM references.
[26] CESA Opening Comments, R.25-10-003, at Sec. II.A.ii, pg. 9
[27] E.g. AES Opening Comments, R.25-10-003, at Sec. II.D, pg. 6

EFORd includes clear exceptions for resources operating within their normal technical parameters and that robust data quality and verification mechanisms are established.

C. Data quality review mechanism

AES[28], American Clean Power-California[29] ("ACP-CA"), PG&E[30], SCE[31], NextEra[32] and Calpine[33] supports a data quality review process for UCAP values. The Public Advocates Office[34] (CalAdvocates) supports a timeline for resource operators to review and discuss outage data concerns. CESA reiterates its support for a mechanism allowing resource operators to identify and cure errors in the data underlying UCAP calculations, which will help ensure that UCAP values accurately reflect resource performance and avoid distortions caused by incorrect outage reporting.

D. Ensuring hybrid resources have accurate outage data prior to UCAP implementation

San Diego Gas and Electric[35] ("SDGE"), IEP[36], Joint CCAs[37] and AES[38] express concern about the disparate treatment of hybrid resources in the proposed UCAP mechanism. AES explains that, when hybrid resources declare an outage to CAISO, the outage is recorded for the parent resource and therefore *overstates the unavailability of the resource*. AES requests that the component portions of the hybrid resource be reported separately by CAISO in OMS and urges the implementation of UCAP be delayed until this problem is resolved. CAISO[39] acknowledges

[28] AES Opening Comments, R.25-10-003, at Sec. II.A, pg. 3
[29] ACP-California Opening Comments, R.25-10-003, at Sec II, pg. 8
[30] PG&E Opening Comments, R.25-10.003, at Sec. III.A.1, pg. 6
[31] SCE Opening Comments, R.25-10-003, at Sec. V.C, pg. 13
[32] NextEra Opening Comments, R.25-10-003, at Sec. II.D, pg. 16
[33] Calpine Opening Comments, R.25-10-003, at Sec II.A, pg. 2
[34] CalAdvocates Opening Comments, R.25-10-003, at Sec V.B, pg. 24
[35] SDGE Opening Comments, R.25-10-003, at Sec VII, pg. 10
[36] IEP Opening Comments, R.25-10-003, at Sec. I.b.ii, pg. 3
[37] Joint CCAs Opening Comments, R.25-10-003, at Sec. IV, pg. 11
[38] AES Opening Comments, R.25-10-003, at Sec. II.D, pg. 6
[39] CAISO Opening Comments, R.25-10-003, at Sec II.D.4 pg. 15

the fundamental issue arising from its disparate treatment of hybrid and co-located resources but nevertheless urges the adoption of the Energy Division's proposed framework and suggests that determining the appropriate resource-specific treatment of hybrid resources in UCAP be pushed to a later track in this proceeding. Since the double-counting originates from CAISO's method of assigning outages to the parent resource rather than its components, CAISO's OMS reporting should change to accurately reflect the hybrid resource's outage status. CESA agrees with AES that UCAP should be implemented only after the development of accurate and fair resource-specific methodologies for hybrid resources.

E. EFORd refresh mechanism for plant improvements

Calpine[40], WPTF[41] and MRP[42] emphasize the importance of a UCAP refresh mechanism to preserve incentives for operator repair and upgrade. MRP notes that that major upgrades or repairs can span multiple years and may not align neatly a single calendar year, making a best three out of four years rule insufficient to exclude anomalous outage data. PG&E[43], CalCCA[44] and NextEra[45] also support the establishment of a refresh mechanism. CESA therefore urges the Commission to adopt a process allowing resources to refresh their EFORd values so that UCAP calculations reflect improvements in resource performance over time and incentivize operator investment in reliability.

[40] Calpine Opening Comments, R.25-10-003, at Sec II.A, pg. 2
[41] WPTF Opening Comments, R.25-10-003, at Sec II.A.4, pg. 7
[42] Middle River Power Opening Comments, R.25-10-003, at Sec. 2.A.ii, pg. 8
[43] PG&E Opening Comments, R.25-10-003, at Sec. III.A.3, pg. 10
[44] CalCCA Opening Comments, R.25-10-003, at Sec. III.E, pg. 19
[45] NextEra Opening Comments, R.25-10-003, at Sec. II.C, pg. 15

F. Assessing outages during periods when resources are in demand

CAISO DMM[46] asserts that resources should be subject to UCAP obligations even in hours in which the energy price is below the resource's default energy bid, on the basis that UCAP should represent the average physical capability of the resource. CESA disagrees that the EFORd value underpinning the UCAP should target an average physical capability. By definition, the EFORd targets resource performance during times when the resource would be *in demand*. CESA's proposal uses market prices and DEB values to determine when a resource would be in demand. Similarly, Energy Division's proposal uses static Availability Assessment Hours to narrow the assessment to hours when resources may be more likely to be in demand. Storage resources are designed to be available during highest-priced and highest-demand hours.

CAISO DMM[47] expressed some concern that the introduction of bids as a determining criterion in the UCAP framework would incentivize inefficient bidding in the market that may not align with marginal cost of production. It is unclear how changes in bidding could affect intervals where no bids are being assessed. Under CESA's proposal, a DEB is compared to Pnode prices. CESA proposed using the DEB (or similar Energy Division calculation) precisely because bids do not exist when resources are on outage. To the extent that resource operators have the latitude to limit outages to low-demand periods or stretch their resources to remain online through high-demand periods, they should be incentivized to do so, because it is good for system reliability. Broad averages would erode this incentive.

CESA reiterates its acknowledgement[48] that some parties are not yet comfortable with its proposal due to uncertainties, implementation complexities, and not yet having results data to

[46] CAISO DMM Opening Comments, R.25-10-003, at Sec. I, pg. 5.
[47] Ibid, pgs. 5-6
[48] CESA Opening Comments, R.25-10-003 at Section II.A.iii

review. In its opening comments, CESA recommended Energy Division provide results following the CESA proposal to enable a more robust party review of the various ways to target in-demand hours.

III. CONVEYING THE SOLAR EXCEEDANCE QC VALUE TO CAISO MAY RESULT IN UNANTICIPATED AND UNDUE DELIVERABILITY STATUS DOWNGRADES

CESA supports the comments from the Solar Energy Industries Association and Large-Scale Solar Association[49] ("Joint Solar Parties") regarding the unintended downgrade of some projects from Full Capacity Deliverability Status ("FCDS") to Partial Capacity Deliverability Status ("PCDS") resulting from the transition from the Effective Load Carrying Capability ("ELCC") methodology to the Exceedance methodology. The Joint Solar Parties further expand on the concern raised in CESA's Opening Comments[50] that this change may inadvertently reduce the deliverability classification of certain resources. CESA reiterates its recommendation that the impact of solar exceedance on deliverability status be evaluated in Track 2 proceedings.

[49] Joint Solar Parties Opening Comments, R.25-10-003 at Sec. II.A, pg. 3
[50] CESA Opening Comments, R.25-10-003 at Sec. IV, pg. 17.

IV. CONCLUSION

CESA appreciates the opportunity to submit these Reply Comments and continues to look forward to working with the Commission and parties in this proceeding.

Respectfully submitted,

Scott Murtishaw

Scott Murtishaw
Executive Director
California Energy Storage Alliance

March 20, 2026