

**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

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON
ADMINISTRATIVE LAW JUDGE'S PROPOSED DECISION ADOPTING LOCAL
CAPACITY OBLIGATIONS FOR 2027-2029, FLEXIBLE CAPACITY OBLIGATIONS
FOR 2027, AND PROGRAM REFINEMENTS**

Scott Murtishaw
Executive Director

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

June 22, 2026

**BEFORE THE PUBLIC UTILITIES COMMISSION
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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits these comments on the Administrative Law Judge’s (“ALJ”) *Proposed Decision Adopting Local Capacity Obligations for 2027-2029, Flexible Capacity Obligations for 2027, and Program Refinements* (“Proposed Decision”), issued on June 1, 2026.

I. INTRODUCTION

While the Proposed Decision introduces several positive mechanisms that progress the Resource Adequacy framework—such as adopting a UCAP framework, establishing a "forced outage" definition, and recognizing long-duration storage classifications—it ultimately fails to address multiple reasonable, record-supported stakeholder proposals. Critical portions of the decision rest on fundamental errors in the Findings of Fact, leading to Conclusions of Law that lack sound evidentiary basis.

Unforced Capacity (UCAP) Framework (Section II)

- The Proposed Decision errs by including “other factors preventing a unit from operating at its full capacity” in the definition of “forced outage”. This broadens the

definition of “forced outage” to include resource unavailability already captured in the resource’s Qualifying Capacity (“QC”), introducing error and market distortion.

- The Proposed Decision contains a technical error by relying on a probabilistic metric (EFORd) to quantify known resource limitations. Because storage nonlinearity is a physical characteristic of the resource rather than a measure of outage risk, using EFORd introduces inaccuracies that undermine both reliability and affordability.
- The Proposed Decision acknowledges that the treatment of foldback within EFORd may create incentives for resources to withhold energy in later hours to preserve accreditation but does not explain how discouraging energy provision during scarcity conditions remains consistent with reliability objectives.
- The Proposed Decision relies on the correction of a typographical error in the Energy Division's proposal to dismiss concerns raised consistently throughout the record that incorporating non-linearity into EFORd would constitute a double penalty. This conclusion rests on a factual misunderstanding of the concern raised by parties.
- The Proposed Decision fails to address why limiting RA Measurement Hours to the top 10 load days in each month, as proposed and supported in the record by Western Power Trading Forum, is an unreasonable path forward.

Energy-Only (EO) Resources (Section III)

- The Proposed Decision concludes that co-located Energy Only (“EO”) resources should count towards a load-serving entity’s off-site storage charging sufficiency, but the record supports a far broader extension of EO resource use for charging sufficiency.

Long Duration Energy Storage (Section IV)

- Adopting a 0% State of Charge (“SOC”) assumption is a technical error, not reflecting the real capability of long duration energy storage (“LDES”) resources.
- The record shows that the days preceding the worst day of the month have substantial excess available energy, and this was not addressed in the Proposed Decision.

Residual Unit Commitment and Imbalance Reserves (Part V)

- The Proposed Decision treats Imbalance Reserve products as capacity products similar to Residual Unit Commitment (“RUC”) despite their role as energy products within CAISO’s market framework. This categorization error leads to the requirement that such products be bid at zero cost, distorting least-cost market outcomes.
- Providing Imbalance Reserves and Reliability Capacity at zero-dollar bid prices results in contracted California generation serving out-of-state load obligations, thus resulting in California ratepayers subsidizing out-of-state reserves

II. THE COMMISSION MUST MODIFY ITS UNFORCED CAPACITY (“UCAP”) FRAMEWORK TO ENSURE ACCURACY AND FAIRNESS ACROSS RESOURCE CLASSES

While CESA supports the adoption of a UCAP framework to improve resource counting and system reliability, several of the Proposed Decision’s determinations are factually or technically incorrect, which will result in inaccurate reliability assessments, violating the Energy Division’s proposed objectives and principles.¹

A. The definition of “forced outage” is improperly broad

The Proposed Decision errs by including “other factors preventing a unit from operating at its full capacity” in the definition of “forced outage”.² Unlike equipment failures or imminent equipment failures, this phrase is not tied to a discrete outage condition and could be interpreted to encompass inherent operating characteristics of a resource. This definition risks treating known capability limitations as forced outages. For example, a multi-stage generation resource operating in 1x1 configuration would be considered a forced outage as it cannot operate at the resource’s full capacity, as could a hydro generator discharging water at less than full capacity. Read literally, the phrase "other factors preventing a unit from operating at its full capacity" could encompass a wide range of resource-specific operating constraints that are not generally understood to constitute outages. This distinction is particularly important because resource characteristics such as duration limitations, state-of-charge constraints, and non-linear operating behavior are more appropriately reflected through the QC accreditation rather than through EFORD calculations.

¹ Energy Division Track 1 Proposal, pgs. 31-32

² Proposed Decision 4.6.3, pg. 76

Additionally, the proposed definition of “forced outage” could inadvertently capture scheduled outages for testing and maintenance that the Proposed Decision specifically recommends excluding from UCAP. The Proposed Decision correctly notes that maintenance outages on the transmission system can be scheduled to avoid impact to system reliability and should therefore be excluded from UCAP.³ The same is true for routine capacity testing by generators. This nuance is not captured in the Proposed Decision’s definition of forced outages. CESA supports the Commission’s decision to defer the identification of specific NOW codes to Energy Division, but a more precise definition of “forced outage” is needed to ensure that those future decisions are consistent with the Commission’s intent.

Accordingly, the definition should be revised *as follows*:

*“A forced outage is an **unplanned event** that requires immediate, delayed, or postponed removal of a unit from service, derating, or another outage state due to equipment failure (or risk of imminent equipment failure) or other factors that prevent a unit from operating at its full Pmax level **and are not due to the unit’s known design specifications.**”*

The purpose of establishing a forced outage definition was to ensure that EFORd measures probable operational reliability and outage performance, not to re-evaluate resource capabilities already incorporated into QC determinations. This issue is further discussed in II.B and II.C below.

B. Using a backward-looking measure of outage probability to quantify a known technical limitation introduces error and thereby undermines reliability and affordability

The Proposed Decision treats the non-linearity limitation of a storage resource as an outage that reduces reliability and must be incorporated into the probabilistic calculation of outage frequency, the EFORd. CESA does not oppose recognition of foldback limitations. To the contrary, CESA supports the Proposed Decision's QC methodology because it directly measures and incorporates those limitations. CESA's concern is that the Proposed Decision subsequently treats the same physical limitation as an outage event within EFORd. Foldback is a resource limitation inherent to the unit, which should be directly calculated and incorporated into the resource’s QC rather than extrapolated from a sampling of hours.

³ Proposed Decision 4.6.3, p. 75

Using EFORD to account for non-linearity instead of the proposed Maximum Continuous Energy⁴ runs the risk of both overcounting and undercounting the resource’s availability. This is not a reasonable means of addressing the foldback limitation, disproving Finding of Fact 16.⁵

Undercounting. The EFORD captures a limited subset of hours that do not necessarily correspond to the hours in which the market dispatches energy-limited resources. For example, consider a resource with a Pmax of 100 MW, a total capacity of 400 MWh, and a foldback region that limits discharge to 50 MW when the battery’s state of charge is 40 MWh or lower. Consider the scenario where reliability conditions dictate that the market should discharge a storage resource’s entire shown RA (360 MWh) from Hour Ending (“HE”) 13 to HE 16 on a given day. If the assessment hours are HE 17 through HE 21, the resource faces two options: (1) violate its must-offer obligation in HE 17 by failing to offer the 40 MW of capacity that remains available after foldback, or (2) submit a partial outage with its bid, resulting in 50% unavailability being incorporated into its EFORD calculation. *If the market does not dispatch the remaining 40 MW in HE 17, the resource faces the same dilemma in HE 18 and each subsequent assessment hour.* As a result, a single foldback event may be reflected repeatedly in the EFORD calculation across multiple assessment hours on a market day in which the resource has already discharged its full accredited RA capability and is offering its remaining capability to the market. See Table 1:

Table 1 100 MW/400 MWh resource. Discharge is reduced to 50 MW when SOC reaches 40 MWh.

Hour	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21
Bid (MW)	100	100	100	100	40	40	40	40	40
Dispatched (MW)	90	90	90	90	0	0	0	0	0
SOC (MWh)	400	310	220	130	40	40	40	40	40
Upper operating limit (MW)	100	100	100	100	50	50	50	50	50
Outage	No	No	No	No	Foldback	Foldback	Foldback	Foldback	Foldback
Assessment	No	No	No	No	Yes	Yes	Yes	Yes	Yes

Overcounting. If the same resource enters the assessment hours with full charge, offers at the bid cap and is not dispatched in HE 17-21, it has no visible foldback limitation and its EFORD is not impacted. It would appear to be a 100 MW resource. This would be erroneous, however. Through the Proposed Decision’s calculation of Maximum Continuous Energy, the resource’s true qualified value within the system is 90 MW rather than 100 MW. This is in keeping with the Commission’s desire to “incent reliability but also to calculate a resource’s expected future

⁴ Proposed Decision, Ordering Paragraph #7

⁵ Proposed Decision, pg. 152

availability.”⁶ The energy storage resource is expected to be capable of producing 90 MW continuously over four hours, an accurate representation of its actual technical capabilities, inclusive of foldback limitations.

Under a framework in which foldback is measured by EFORD, two identical resources could receive materially different EFORD values despite having identical capability limitations. This is a fundamental weakness of using a probabilistic assessment: it is an *approximation* of reality rather than a true representation of it. When the true technical limitation is known, as with foldback, it should be directly incorporated in the accreditation calculation rather than approximated using EFORD.

The UCAP methodology must not incorporate outages due to energy storage non-linearity.

C. Incentivizing the withholding of foldback energy undermines reliability and introduces market distortion, which cannot be remedied by a new outage code

The Proposed Decision acknowledges that including foldback in EFORD may create incentives for resources to withhold energy to preserve accreditation.⁷ Having identified this market distortion, however, the Proposed Decision does not explain why retaining the distortion better serves reliability objectives than reflecting foldback through the accreditation framework, where the limitation can be measured directly. The Proposed Decision finds that calculating EFORD based on a five-hour assessment period and including foldback imposes a negative impact on accreditation or an incentive for withholding foldback energy in four-hour energy storage resources.⁸ It urges CAISO to adopt a Nature of Work (“NOW”) code that would allow monitoring of this issue. Although CESA supports the development of a foldback-specific NOW code, monitoring alone cannot resolve the underlying problem. Because resources are incentivized under the proposed framework to avoid outage declarations associated with foldback, a new NOW code would capture only those resources that choose to offer capacity despite the resulting EFORD penalty. Resources that instead withhold foldback energy to protect accreditation would remain

⁶ Proposed Decision, Section 4.6.3, pg. 74

⁷ Proposed Decision, Section 4.6.3, pg. 77. CESA notes that the Proposed Decision’s “fifth hour concern” actually can occur during all five assessment hours, as shown in the example in **Table 1** herein. Therefore, it is an “all hours concern” and demonstrates why foldback must not be included in the calculation of the EFORD.

⁸ Proposed Decision, Section 4.6.3, pg. 77

unobservable. As a result, the proposed monitoring framework would systematically understate the extent of the market distortion identified by the Proposed Decision.

To receive meaningful and accurate outage data reflecting the extent of true foldback operations, the Proposed Decision must exclude foldback from EFORD calculations and account for the limitation through the accreditation framework in addition to adopting a new NOW code.

D. Subtracting the EFORD from Pmax rather than Pmax_{RA} does not resolve the problem of double-penalizing energy storage resources for foldback

The Commission must modify Ordering Paragraph 13(b) to exclude foldback from EFORD. The Proposed Decision identifies a typographical error in Energy Division's proposal and addresses only the treatment of foldback during the fifth hour of the RA Measurement Hours through Ordering Paragraph 14(e).⁹ However, parties' concerns are broader.¹⁰ As discussed in Section II.B, incorporating foldback into EFORD can cause a single foldback event to affect multiple assessment hours. Consequently, counting physical limitations in both the QC and EFORD calculations creates a double penalty that systematically understates storage capability. This issue arises from the adopted forced outage definition in Ordering Paragraph 13(b), not solely from the treatment of foldback during the fifth hour. Unless foldback limitations are excluded from EFORD, storage resources will continue to face a double reduction in UCAP values regardless of how the fifth-hour issue is ultimately resolved. This artificial capacity reduction forces load-serving entities to buy redundant replacement capacity, driving up ratepayer costs without any real-world reliability benefit.

Despite the Proposed Decision's assurance that EFORD is applied to Pmax rather than Pmax_{RA}, the Proposed Decision fails to address how the *UCAP value* interacts with the storage accreditation framework adopted in Section 4.4.1.3. The Proposed Decision appears to assume that incorporating foldback into EFORD will affect a resource's assessed reliability contribution yet does not explain how this outcome is achieved if EFORD is not applied to accredited capacity. It does not explain whether procurement obligations are ultimately satisfied based on QC or UCAP,

⁹ Proposed Decision, Section 4.6.3, pg 77

¹⁰ AES Opening Comments on Track 1 Proposals at 3, AReM Opening Comments on Track 1 Proposals at 6, Ava/PCE Opening Comments on Track 1 Proposals at 11, Calpine Opening Comments on Track 1 Proposals at 3, CESA Opening Comments on Track 1 Proposals at 8, CalCCA Opening Comments on Track 1 Proposals at 16, NextEra Opening Comments on Track 1 Proposals at 17, IEP Opening Comments on Track 1 Proposals at 3, REV Opening Comments on Track 1 Proposals at 6.

nor how the UCAP framework preserves the Commission's determination that storage accreditation should reflect four continuous hours of deliverability. Is the resource procured, and the load-serving entity's resource obligation satisfied, based on the QC accreditation, or on the UCAP value? If the UCAP value, how does this interact with the 4 continuous hour requirement for storage QC, or indeed with the QC valuation?

The appropriate interaction between QC and UCAP has not been established in the record, nor is it addressed in the Proposed Decision. If a 100 MW/400 MWh resource with a 40 MWh foldback period and a 5% outage rate is evaluated under 4.4.1.3, its QC is 90 MW. If the same resource is evaluated based on its Pmax (100 MW) minus its EFORD including foldback (variable, as in II.B above), its UCAP is completely dependent on the interaction of CAISO dispatch and the assessment hours decided on by the Commission. But if both EFORD and QC incorporate a foldback penalty, the interaction between the two must be appropriately established in the record in order to verify whether there is (or is not) a double counting. Furthermore, if the Proposed Decision intends to only use the UCAP value for LSE compliance (which is also not established in the record), a UCAP value that includes foldback outages would be inaccurately low or high as described in Section II.B and relative to the appropriate accounting of foldback in the QC value.

Energy Division's inclusion of foldback into EFORD seems due in part to lack of differentiation between foldback periods and true Plant Trouble in the current Outage Management System. The Proposed Decision acknowledges that current outage information does not provide information about foldback adequate to "identify derations associated with nonlinearity to exclude from the UCAP evaluation".¹¹ This appears to assume that, because CAISO does not currently maintain a dedicated NOW code for foldback, then foldback-related derates cannot be distinguished from other outage causes.

This conclusion does not follow. Foldback is a known and verifiable operating characteristic of a resource, and resource operators are able to identify foldback-related limitations even where CAISO's reporting framework lacks a dedicated classification. Prior to UCAP implementation, CESA proposed, and the Proposed Decision agrees, that there should be an

¹¹ Proposed Decision, Section 4.6.3, pg. 77

opportunity to review outage data prior to the initial calculation of EFORd.¹² During this period, storage operators could identify and substantiate foldback-related derates, allowing those events to be excluded from EFORd calculations pending implementation of a dedicated NOW code.

Because historical outage data collected during the transition period will form the basis of future EFORd calculations, data quality during this period is particularly important. The Commission should establish a process allowing resource operators to identify and correct foldback-related derates in historical records until a dedicated NOW code becomes available. This would avoid foldback being permanently embedded as a known classification error into future UCAP calculations.

E. Resource Adequacy Measurement Hours should be limited to the top ten load days in each month.

Several parties, including CESA, proposed changes to the resource adequacy measurement hours.¹³ CESA's proposal was rejected on the basis that it adds complexity and requires confidential data. However, Western Power Trading Forum also proposed changes to the RA Measurement Hours, suggesting they be limited to the top 10 load days in each month, thereby focusing on true in-demand hours.¹⁴ This proposal does not add complexity or require confidential data, and the Proposed Decision does not address why this would be unreasonable.

III. THE RECORD SUPPORTS A BROADER EXPANSION OF ENERGY ONLY RESOURCE USE FOR CHARGING SUFFICIENCY

While CESA supports the decision to find energy-only resources qualified to provide off-site charging sufficiency when they share a POI with a storage resource, the Proposed Decision errs in ignoring unrefuted evidence of standalone EO resources' ability to deliver energy to the grid mid-day: PG&E's worst-day exceedance value calculations and CAISO's prior off-peak deliverability analyses.¹⁵ Furthermore, parties broadly support recognizing EO resource value in the charging sufficiency test.¹⁶ The Proposed Decision postpones wider qualification pending the completion of CAISO's preliminary Transmission Planning Process ("TPP"). However, TPP

¹² Proposed Decision, Section 4.6.3, pg. 80

¹³ CESA Track 1 Proposals at 3.

¹⁴ WPTF Opening Comments on Track 1 Proposals at 6.

¹⁵ PG&E Track 1 Proposal at 1.

¹⁶ ACP-CA Track 1 Proposal at 3, PG&E Track 1 Proposal at 1, Joint EO Parties Track 1 Proposal at 7, and commenters as cited in Proposed Decision, Section 4.4.2.2.

results will not be issued until November 2026, after the Cluster 16 Application Window, leading to uncertainty for developers and other parties involved in resource procurement. The record supports a broader relaxation of charging sufficiency rules while the Commission awaits CAISO's results.

The Proposed Decision errs in asserting that “there is insufficient data to conclude” that storage resources can charge from EO capacity.¹⁷ No evidence has been presented in the record to refute the demonstrated value that EO resources provide for charging sufficiency. PG&E's data demonstrated that EO resources are delivering meaningful quantities of energy to the grid, and CAISO did not refute these findings. PG&E's findings were meaningful because they represent the exceedance values of their EO resources following the same worst-day methodology that sets the QC values for FCDS resources. These are real MWs being delivered to the grid under worst-day conditions.¹⁸

The benefits of establishing a reasonable geographic footprint (such as NP/SP) at this time outweigh the risks. The record demonstrates uncertainty regarding appropriate geographic footprint, which CAISO's forthcoming TPP study is purported to resolve. Because CAISO's TPP study will not be available until after key interconnection and procurement decisions are made, an unnecessarily restrictive interim eligibility standard risks excluding resources that provide genuine charging sufficiency benefits. Such exclusions will increase procurement costs by requiring load-serving entities to obtain additional charging sufficiency resources without a corresponding reliability benefit.

Because of the current limits on the use of EO resources for charging sufficiency, there are contracts that do not designate ownership of the EO output. The Commission should direct ED to be mindful of this consideration in the implementation of expanding charging sufficiency eligibility consistent with Ordering Paragraph #8.

IV. THE PROPOSED DECISION'S ASSUMPTIONS FOR LONG DURATION ENERGY STORAGE ARE NOT SUPPORTED BY THE RECORD

CESA supports the classification of extended duration and multi-day long duration energy storage provided by the Proposed Decision, specifically the clarity that these accreditation rules

¹⁷ Proposed Decision, Section 4.4.2.3, pg. 34.

¹⁸ PG&E Track 1 Proposal Section 1.

will apply to resources with durations that exceed 8 hours.¹⁹ CESA supports the implementation of a Forward Charging Period based on the “shifted energy” approach proposed by Joint Parties.²⁰ However, the Proposed Decision makes errors of fact when it assumes an SOC of zero and when it assumes a worst-day scenario in days leading up to the worst day.

A. Because reaching a 0% state of charge is an emergency-only condition, it is an unreasonable starting assumption for the Forward Charging Period (“FCP”).

The Proposed Decision rejects parties’ arguments that a 0% SOC assumption is unrealistic and does not reflect the operational reality of LDES management.²¹ This is an error of fact. The evidence supports an SOC greater than 0%²². The Decision justifies its determination by stating that a 50% initial SOC assumption may discriminate against shorter-duration energy storage resources.²³ In this, the Proposed Decision appears to be conflating equal treatment and comparable treatment. A four-hour battery and a multi-day storage resource provide different reliability services and are designed to be operated in fundamentally different ways, and therefore it is appropriate that they be evaluated differently within the RA construct.

Four-hour batteries are designed to charge and discharge within a daily cycle. Accordingly, it is reasonable to evaluate their ability to fully recharge within a 24-hour period. Multi-day storage resources, by contrast, derive value from their ability to shift energy across multiple days and respond to sustained reliability events. Evaluating these resources under a framework that assumes they begin a reliability event with no stored energy does not reflect the operational characteristics that distinguish them from shorter-duration resources. While a common framework may simplify administration, resource adequacy accreditation should reflect expected reliability contributions rather than impose identical assumptions across fundamentally different technologies.

B. Evaluating charging sufficiency based on worst-day procurement disregards the record in the name of expediency

The Proposed Decision chooses the existing Slice of Day worst-day framework to evaluate charging sufficiency requirements for the Forward Charging Period, reasoning that alternative

¹⁹ Proposed Decision, Section 4.4.3, pg. 46

²⁰ Joint LDES Parties Track 1 Proposal

²¹ Joint LDES Parties Track 1 Proposal at 6, SCE Opening Comments on Track 1 Proposals at 16

²² See, e.g., SCE Opening Comments at 16, CalAdvocates Opening Comments at 16, which proposes using future operational data to determine true initial SOC, despite opposing the 50% SOC proposed by Joint LDES Parties.

²³ Proposed Decision, 4.4.3.3 pg. 43

approaches introduce additional complexity and that deployment of long-duration storage resources remains limited.²⁴ However, the record demonstrates, and the Proposed Decision acknowledges, that valuation of long-duration storage presents unique challenges that parties and stakeholders have been actively examining for several years.²⁵ The existence of complexity should therefore not, by itself, be a sufficient basis for rejecting approaches that may more accurately reflect the reliability contribution of these resources.

Similarly, the current limited deployment of long-duration storage does not diminish the importance of establishing an accurate valuation framework. To the contrary, accreditation methodologies influence investment and procurement decisions. A framework that systematically understates the contribution of long-duration storage discourages deployment of precisely the resources the Commission has identified as necessary to meet future reliability needs.

The record includes analyses empirically addressing the Proposed Decision's concern²⁶ about available excess energy in days leading up to the worst day. This analysis shows that there is significantly more excess energy in days leading up to the worst day, by virtue of significantly lower loads.²⁷

LDES resources are designed to provide access to excess energy in the days leading up to the worst day. The Proposed Decision appears to rely on the possibility of a multi-day reliability event²⁸ as justification for adopting a methodology that assumes the resource cannot utilize the multi-day charging and energy-shifting capabilities for which it was procured. The record already addresses the Proposed Decision's concern. Parties, particularly Ava Community Energy and Peninsula Clean Energy, submitted extensive quantitative analyses demonstrating that substantial charging opportunities are available during the days preceding the identified worst-day conditions.²⁹ The Proposed Decision does not address this evidence or explain why the

²⁴ Proposed Decision, pg. 47

²⁵ Proposed Decision, Section 4.4.3.3 pg. 43

²⁶ Ava Community Energy Reply Comments on Proposals, Appendix A.

²⁷ Ibid.

²⁸ Proposed Decision, pg. 47 states "As RA resources are required to perform across multiple consecutive days (with the minimum RA requirement of four hours for three consecutive days), the days prior to the worst day may reflect extreme system conditions and thus, may serve as an unstable basis for charging sufficiency."

²⁹ Ava Community Energy Reply Comments on Proposals, Appendix A.

demonstrated availability of charging energy during the preceding period should be disregarded when evaluating the charging sufficiency of multi-day storage resources.

Finally, the Proposed Decision combines two independent conservative assumptions: a worst-day framework and a 0% state-of-charge assumption. The record does not demonstrate that both assumptions will occur or will occur simultaneously, yet the framework effectively requires long-duration storage resources to be valued as though they do. This is functionally equivalent to valuing gas resources assuming force majeure conditions. As a result, the adopted methodology evaluates long-duration storage resources under a highly stressed scenario that is not similarly applied to other resource classes. In doing so, the Proposed Decision neither provides comparable treatment across technologies nor explains why long-duration storage should be evaluated using assumptions that are more restrictive than its expected operating conditions. The Commission should adopt the 50% initial SOC assumption and the slack value method for determining excess energy in the days leading to the worst day, as proposed by Joint LDES Parties.³⁰

V. THE PROPOSED DECISION ERRS IN EQUATING IMBALANCE RESERVES TO RA CAPACITY, INTRODUCING INCENTIVE MISALIGNMENT AND INCREASING RATEPAYER COSTS BY REQUIRING \$0 BIDS

CESA is concerned that the Proposed Decision's treatment of Imbalance Reserve products will distort market outcomes, increase costs, and result in a large amount of RA capacity receiving *high-priority export* treatment in the real-time market without due compensation.

A. The Proposed Decision treats Imbalance Reserve products as RA capacity products despite the fact that they are an energy reserve product within CAISO's market framework

The Proposed Decision finds that IR products are capacity products for purposes of the RA program because CAISO materials have used the term “capacity” to describe the product even though CAISO itself states that it is a reserve product. CESA notes that according to the Proposed Decision’s logic, day-ahead energy schedules or ancillary services (that financially commit resource capacity to providing energy in the real-time market) would also be considered an RA capacity product. CESA supports the Opening Comments on the Proposed Decision filed by California Wind Energy Association (“CalWEA”) in its discussion of this issue.

³⁰ Joint LDES Parties Track 1 Proposal

It is incorrect to categorize Imbalance Reserves as an RA capacity product. As the Proposed Decision recognizes, Imbalance Reserves are co-optimized with energy and ancillary services in the Integrated Forward Market ("IFM"), not in the Residual Unit Commitment ("RUC") process. The product itself provides intra-hour flexibility like the current flexible ramping product, and unlike the RUC products which provide inter-hour flexibility. The Imbalance Reserve product enables the market optimization to determine when it is more efficient to award imbalance reserves products to cover future energy uncertainty and forgo scheduling for energy in the immediate interval. For this reason, Finding of Fact 23 is flawed and must be modified.

By co-optimizing imbalance reserves with energy and using a product demand curve, the market ensures that imbalance reserves are awarded only to benefit the market when future uncertainty exceeds the value of scheduling for energy in the immediate interval. The important interplay with energy through the co-optimization holds resources indifferent to which product they are awarded as opportunity costs are reflected in the clearing prices.

B. Requiring Imbalance Reserve products to bid at zero cost prevents the market from incorporating their true opportunity cost and distorts least-cost market outcomes

Regardless of whether the Commission determines IR is an RA product, CESA agrees with CAISO that if suppliers are forced to submit zero-dollar Imbalance Reserve bids, CAISO's market optimization will be unable to differentiate between resources that could provide the Imbalance Reserve service at lower real costs versus resources that would incur higher real costs. This will ultimately result in an inefficient allocation of both Imbalance Reserves and Energy in the market and higher wholesale costs.³¹

C. Providing Imbalance Reserves and Reliability Capacity at zero-dollar bid prices results in contracted California generation serving out-of-state load obligations, thus resulting in California ratepayers subsidizing out-of-state reserves

The CAISO Extended Day-Ahead Market ("EDAM") is now regularly transferring PacifiCorp's real-time load serving obligation to CAISO in the form of Imbalance Reserve and Reliability Capacity. The market optimization sees the transfers as free (with zero-dollar bids). In May, the average IR export in HE 20 through HE 6 was between 250 and 350 MW.³² Because

³¹ CAISO Track 1 Proposal, Section C.1 and Section C.2

³² CAISO, Daily EDAM reports.

CAISO must serve PacifiCorp's real-time load associated with these transfers with the same priority as serving native CAISO load, California is now providing the EDAM footprint its flexibility needs at prices subsidized by California ratepayers.

D. The record does not support the Commission dictating the revenue allocation between contract counterparties, and doing so will expose current contracts to renegotiation and increases in RA prices.

The Proposed Decision recognizes that “many parties oppose the Commission dictating the terms of future RA contracts” but does not respond to these concerns, stating only that the requirements of D.05-10-042 remain in place (Conclusion of Law 18).³³ CESA strongly recommends the Commission not dictate the terms of future RA contracts related to imbalance reserves and reliability capacity revenues altogether. Counterparties can negotiate future RA contract terms related to the transfer of imbalance reserve and reliability capacity revenues. Allowing individual LSEs to weigh the costs and benefits of these contract terms, given their individual exposure to the cost allocation of these products in CAISO’s market, is the most appropriate path forward.

VI. CONCLUSION

CESA appreciates the opportunity to comment on the Proposed Decision and urges the Commission to remove consideration of foldback from the EFORd calculation, reasonably allow broader energy only resource eligibility for charging sufficiency, and modify forward charging requirements for LDES resources to accurately and affordably ensure a reliable grid.

Respectfully submitted,

/s/ *Scott Murtishaw*

Scott Murtishaw
Executive Director
CALIFORNIA ENERGY STORAGE ALLIANCE
808 R Street, #209
Sacramento, California 95811
Telephone: 510-205-7774
Email: scott@storagealliance.org

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³³ Proposed Decision, Section 4.7.3 pg. 102.