

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Oversee
the Resource Adequacy Program, Consider
Program Refinements, and Establish
Forward Resource Adequacy Procurement
Obligations.

Rulemaking 19-11-009
(Filed November 7, 2019)

**RESOURCE ADEQUACY TRACK 3.A PROPOSAL OF THE CALIFORNIA ENERGY
STORAGE ALLIANCE PURSUANT TO THE ASSIGNED COMMISSIONER'S
AMENDED TRACK 3.A AND TRACK 3.B SCOPING MEMO AND RULING**

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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 this Track 3A Proposal pursuant to the *Assigned Commissioner’s Amended Track 3.A and Track 3.B Scoping Memo* (“Scoping Memo”), issued on July 7, 2020 by Assigned Commissioner Liane M. Randolph.

I. INTRODUCTION.

Track 3A of the Resource Adequacy (“RA”) proceeding, R.19-11-009, outlines a number of important issues to refine the RA Program, including evaluation of the California Independent System Operator (“CAISO”) updated Local Capacity Requirements (“LCR”) reliability criteria, evaluation of an LCR reduction compensation mechanism, consideration of the Central Procurement Entity’s (“CPE”) competitive neutrality rules, and behind-the-meter (“BTM”) hybrid solar-plus-storage resource net qualifying capacity (“NQC”) values. The RA Program plays an important role in ensuring an optimal and reliable fleet to enable the CAISO’s reliable operations while simultaneously achieving the state’s decarbonization goals. Especially in light of the most recent heat storm leading to supply shortages, timely and effective RA reforms are more important than ever, where energy storage is well-positioned to support the state’s transition to clean supply resources and at the same time ensuring a reliable electric system.

To this end, each of the issues scoped in Track 3A of this proceeding will play a key role in optimizing Local RA resource procurement. First, successful and effective implementation of

the CPE structure will play a key role in supporting the orderly retirement and transition from gas generation resources, where CESA urges the Commission to adhere to the tenants of Senate Bill (“SB”) 1136 to facilitate the development of preferred, storage, and hybrid capacity resources to the greatest extent possible. In addition, to the degree that CPE procurement can support the development of RA capacity products that recognize and reflect the physical constraints and energy/generation needs in each local load pocket, the Commission should do so to reduce contracting and financing risks. CESA will respond in more detail at a later time in response to the LCR Reduction Compensation Mechanism Working Group Report, which will be filed on September 1, 2020.

Second, CESA strongly supports the evaluation and resolution of each of the issues outlined in D.20-06-031 and scoped into the Track 3 Amended Scoping Memo regarding the steps necessary to establish NQC values for BTM hybrid solar-and-storage resources as well as other distributed energy resources (“DERs”) with exporting capability. With the significant potential to enable exporting capacity, the Commission can support the transition away from fossil generation and deliver sorely needed incremental resource capacity in emergency situations and to replace ongoing and impending retirements. Our views on this issue are expressed more deeply in Joint DER Parties separately filed on September 1, 2020.

Finally, CESA generally supports the evaluation of the CAISO’s updated LCR reliability criteria, with our focus in these comments on the inclusion of energy storage limits in the LCR report and its implications on future resource procurement. CESA understands that a standalone LCR Working Group has just begun to convene and is only starting to tackle this issue, with Energy Division posing the following key questions regarding energy storage limits:

- Should energy storage limits be addressed in Commission’s Local RA requirements, including consideration of maximum cumulative capacity (“MCC”) buckets, energy requirements, etc.?
- Does it make sense to include this information in the LCR study without upfront requirements and if so, how can it be made more useful to load-serving entities (“LSEs”)?
- Should this energy storage limitation report be included separately or within the LCR report?

CESA appreciates the physical constraints of local areas and sub-areas and has generally found the energy storage limits presented in the CAISO’s annual LCR reports to be helpful as

guidance for developers and LSEs alike. Understandably, any local resource procurement, particularly for storage, must identify the amount of local generation needed and the charging limits likely to constrain storage operations and capacity delivery. While welcoming further discussion in future LCR Working Group discussions, CESA offers comments herein to make the energy storage limits more useful in the short term and to adapt this helpful guidance into discrete RA products and requirements in the long term, potentially incorporating them into some of the Track 3B proposals submitted several weeks earlier in this proceeding. Generally, CESA cautions the Commission from narrowly applying these energy storage limits to impose procurement caps at this time and to have LSEs use this information to guide their bilateral procurement decisions, which will already be subject to CPE procurement considerations that take into account effectiveness factors.

II. ENERGY STORAGE LIMITS SHOULD BE USED AS GUIDANCE AT THIS TIME.

CESA supports the new supplemental information included in the CAISO's LCR reports, which inform both developers and LSEs alike on the types of resources and resource characteristics that are needed to provide Local RA in each local area and sub-area and replace existing fossil (as well as other types of) generation while ensuring reliability. However, at this time, CESA believes that the energy storage limits need to be further vetted, refined, and aligned with the RA Program and Integrated Resource Planning ("IRP") modeling and procurement activities. CESA has several questions regarding the assumptions used in the CAISO methodology and how this would impact or influence RA procurement.

First, it is not entirely clear on how the energy storage limits impact CPE procurement since the methodology does not make assumptions on the effectiveness factors of specific storage locations since the battery storage replacement is modeled as repowering the same site.¹ As such, it is unclear on how the storage limits could be translated to different locations with different deliverability needs/costs to know what the site-specific limitations may be in a given local area or sub-area. While some storage procurement will be repowered sites, it may not always be the case. Meanwhile, some of the charging limits may be better identified in the interconnection study

¹ CAISO 2021 Local Capacity Technical Study: Final Report and Study Results published on May 1, 2020 at 24-25. <http://www.caiso.com/Documents/Final2021LocalCapacityTechnicalReport.pdf>

process. Furthermore, because the outputs are based on the worst contingency scenario, it is unclear in terms of how the storage limits will translate to RA capacity ratings from CPE procurement since, like effectiveness factors, limits or effectiveness under one scenario may not be applicable to all contingency scenarios. Second, the battery storage limits are narrowly focused on lithium-ion storage or similar technologies with 85% roundtrip efficiency, whereas different storage technologies may fit within these limits in different ways depending on their characteristics. For example, certain thermal storage technologies have dynamic capacity ratings that differ depending on the ambient temperature, with higher ratings in the 1-in-10 extreme heat storm events.

All in all, CESA supports the inclusion of these energy storage limits as guidance for developers and LSEs, which may inform how best to bilaterally procure and contract for resources to bid or show into the CPE solicitation, including for hybrid generation and storage capacity as well as longer-duration storage technologies. Ultimately, this guidance will be informative to support the appropriate balance of generation, storage, and hybrid capacity to meet Local RA needs, which will be further incentivized by least-cost best-fit portfolio procurement by the CPE, but CESA cautions against the use of resource-specific limits in the form of prescriptive or restrictive upfront LSE requirements at this time. With further refinements to the granularity and methodology for the energy storage limits, CESA hopes that this information can evolve from mere guidance to align with RA products and planning constructs, reflecting, for example, generation and energy needs. However, CESA supports the inclusion of the energy storage limitation report in the LCR report and does not see a benefit or purpose for separating them, as suggested by Energy Division.

III. ENERGY STORAGE LIMITS STUDY SHOULD ALSO BE PRODUCED FOR PARTIAL REPLACEMENT SCENARIOS.

To enhance the usefulness of the guidance of this energy storage limit supplemental information in the LCR report, CESA recommends that the CAISO and Commission consider additional information that highlights interim pathways to replace some existing capacity rather than wholly replace them. Specifically, the study looks at energy storage limits based on a storage resource wholly replacing (100%) an existing capacity resource – whether gas, hydro, or geothermal – which may be challenging to address in a single coordinated procurement decision and may pose some project development and/or investment cost challenges in terms of scale, pace,

and cost of deployment. Rather, an interim pathway may be to phase in new storage procurement to replace the existing generation resource over time, where developers and LSEs may benefit from the study results of energy storage limits in a “50% replacement” scenario of the same resources. Such information may provide more useful or feasible guidance for LSEs to incrementally procure additional storage in the near term while recognizing the energy storage limits and constraints. It could also facilitate the development of hybrid capacity that reduces gas generator run time (and thus reduce emissions) and provides a bridge to a full replacement strategy.

CESA understands that this would lead to not insignificant modeling to be conducted by the CAISO for each LCR report. Ideally, multiple different partial-replacement scenarios would be provided, but due to modeling intensity and complexity, a 50% replacement scenario appears more manageable for the CAISO and would provide more useful “mid-point” guidance. To help manage the scope of this work, CESA suggests that the energy storage limit report could be focused on the full and partial replacement of existing gas in local areas or sub-areas given the state’s decarbonization goals, as opposed to one focused broadly on other resource types (*e.g.*, geothermal, hydro).

IV. ENERGY STORAGE LIMIT INFORMATION SHOULD EVENTUALLY BE INCORPORATED INTO DISCRETE RESOURCE ADEQUACY PRODUCTS AND INTEGRATED RESOURCE PLANNING MODELS.

As reiterated above, CESA generally supports the publication of energy storage limits in the LCR report and seeks to eventually refine them to reflect them into discrete RA products and requirements, which support project development financeability and transactability, ease procurement processes and certainty, and advance innovative approaches. Whether through the portfolio proposal by CESA or the net qualifying energy (“NQE”) proposal by Southern California Edison Company (“SCE”) and California Community Choice Association (“CalCCA”) in Track 3B, these modeled energy storage limits could be adapted and incorporated into setting the RA capacity, availability, and energy requirements for LSEs and the CPE, in supporting least-cost best-fit procurement reflecting these attributes, and in developing qualifying capacity (“QC”) methodologies with clear performance requirements. With further refinement of the report to address the questions above, the Commission may be able to then incorporate this information into the Commission’s Local RA requirements.

V. **CONCLUSION.**

CESA appreciates the opportunity to submit this Track 3A proposal and looks forward to working with the Commission and stakeholders in this proceeding.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Alex J. Morris".

Alex J. Morris
Executive Director
CALIFORNIA ENERGY STORAGE ALLIANCE

Date: September 1, 2020