

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

Order Instituting Rulemaking to  
Continue Electric Integrated Resource  
Planning and Related Procurement  
Processes.

Rulemaking 20-05-003  
(Filed on May 7, 2020)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE  
ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENTS ON STAFF  
PAPER ON PROCUREMENT PROGRAM  
AND POTENTIAL NEAR-TERM ACTIONS  
TO ENCOURAGE ADDITIONAL PROCUREMENT**

Jin Noh  
Policy Director

Sergio Dueñas  
Policy Manager

Alondra Regalado  
Policy Analyst

**CALIFORNIA ENERGY STORAGE ALLIANCE**  
10265 Rockingham Dr. Suite #100-4061  
Sacramento, California 95827  
Telephone: (510) 665-7811  
Email: [cesa\\_regulatory@storagealliance.org](mailto:cesa_regulatory@storagealliance.org)

December 12, 2022

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

Order Instituting Rulemaking to  
Continue Electric Integrated Resource  
Planning and Related Procurement  
Processes.

Rulemaking 20-05-003  
(Filed on May 7, 2020)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE  
ADMINISTRATIVE LAW JUDGE’S RULING SEEKING COMMENTS ON STAFF  
PAPER ON PROCUREMENT PROGRAM  
AND POTENTIAL NEAR-TERM ACTIONS  
TO ENCOURAGE ADDITIONAL PROCUREMENT**

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission” or “CPUC”), the California Energy Storage Alliance (“CESA”) hereby submits these comments on the *Administrative Law Judge’s Ruling Seeking Comments on Staff Paper on Procurement Program and Potential Near-term Actions to Encourage Additional Procurement* (“Ruling”), issued by Administrative Law Judge (“ALJ”) Julie Fitch on September 9, 2022. These comments are being submitted in a timely fashion according to the schedule set by the Commission through the *Administrative Law Judge’s Ruling Seeking Comments on Electricity Resource Portfolios for 2023-2024 Transmission Planning Process*, issued by ALJ Fitch on October 7, 2022.

**I. INTRODUCTION.**

CESA appreciates the work done by the Commission’s staff in the development of the Ruling and the different options and elements referenced therein regarding the potential for a future procurement framework for jurisdictional load-serving entities (“LSEs”). As noted in the Ruling and its Attachment, the establishment of a programmatic procurement approach within the

Integrated Resource Planning (“IRP”) proceeding is necessary to help mitigate, among others, two negative externalities arising from the wholesale energy market: (1) market participants are unable to recover the fixed costs of building new resources; and (2) the market is selecting the least-cost resources, not the least-carbon resources. The Ruling and its Attachment (“Attachment A”) demonstrate that the Commission is dedicated to designing a procurement framework that not only ensures a reliable grid but also incentivizes key investments required to achieve California’s clean energy goals.

Generally, CESA is supportive of the direction of the Ruling. The Commission’s consideration of the various fundamental design elements and the options presented in Attachment A represent a commendable effort in developing a programmatic approach for LSEs to procure the resources needed to meet California’s reliability and greenhouse gas (“GHG”) emission reduction targets. While supportive of the scope and spirit of the Ruling and Attachment A, there are still areas where further development and added complexity are warranted. In these comments, CESA seeks to specifically underscore that, while some of the options shared in the Attachment represent viable starting points, any consideration of a programmatic approach for procurement must seek to provide clear market signals based on future reliability needs while bolstering resource diversity and the development of assets that can minimize overall resource costs. Thus, CESA comments can be summarized as follows:

- CESA generally supports a program designed to drive attribute-focused procurement because it is the most economically efficient approach, but any procurement framework would benefit from allowing some degree of resource-specific procurement that can promote some resource diversity and deployment of innovative solutions that can minimize total resource costs in the long run.

- For the Reliability component, CESA supports designing the program to focus on new resources only, centered on the development of resources that will mitigate reliability risks moving forward.
  - CESA recommends the Commission staff note that a framework focused on new resources should not preclude hybridization and repowering using energy storage.
  - If the Commission is intent on incorporating existing resources to any degree, CESA recommends that it should be limited to variable energy resources (“VERs”) and Renewable Portfolio Standard (“RPS”) compliant resources.
- For the Reliability component, CESA supports the use of a method based on net load allocation, which would entail the use of some form of marginal effective load carrying capability (“ELCC”).
  - Considering the drawbacks of marginal ELCC (*i.e.*, significant variance between study periods), CESA supports the use of vintaged marginal ELCC values to promote resource diversity and reward first-movers who paid a premium for new, innovative technology.
- For the GHG component, CESA supports the annual emission accounting, mass-based approach, because it is a more efficient and direct effort to measure the impact of an LSE’s clean energy procurement.
- While CESA expects that Slice-of-Day (“SOD”) will bolster reliability and strengthen the RA program, we are not yet convinced that the SOD framework is ready to be seamlessly applied to an IRP procurement framework at this time.

- CESA believes there are material ratepayer benefits to addressing local reliability needs within the IRP Procurement Track.
  - Local reliability needs should be integrated since the Planning Track so that the models and procurement directives will inform transmission and distribution planning assumptions, allowing for a more holistic view of the investments made at different points of the electric system.

## II. RESPONSES TO QUESTIONS INCLUDED IN THE RULING.

### Question 1: Objectives

**E. Should the program be designed to drive resource attribute-focused procurement by all LSEs, or should it also be able to deliver some form of centralized, resource-specific procurement (e.g., large-scale and/or long lead-time resources)? Explain your reasoning.**

Currently, the IRP proceeding lacks a formal process for translating the findings and conclusions of its Planning Track to regular procurement orders authorized by the Commission. As key market fundamentals continue to change (e.g., increased role of Community Choice Aggregators [“CCAs”], scarcity in the capacity market, more ambitious GHG goals), the Commission’s frameworks must change with it. The design of this procurement program must balance the attainment of economically efficient, reliable, and clean resources with the bilateral nature of contracting in the West, as well as the load migration considerations that are particular to California. In addition, it is also important to recognize that the Commission is also tasked with promoting resource diversity where reasonable and take a holistic view of the market to navigate the interconnected nature of decarbonizing the grid.

In this context, CESA generally supports a program designed to drive attribute-focused procurement because it is the most economically efficient approach. Attribute-focused procurement would allow market participants to be responsive to changes in the grid and the suite of technological solutions.

This being said, the attribute-focused approach does have its limitations. As Commission staff explained, the market is currently failing to select zero-carbon resources in favor of resources that seem to be the least-cost option in the near term. Nonetheless, there are resources available today that could reduce ratepayer costs in the long run if adopted today. This is supported by the *2021 SB 100 Joint Agency Report*, which modeled a comparison of cumulative capacity additions for SB 100 core scenario and a generic zero-carbon firm resources scenario for 2045.<sup>1</sup> The report found that when zero-carbon firm resources (*e.g.*, multi-day storage (“MDS”), seasonal LDES, geothermal, biomass, and hydrogen fuel cells) are adopted at significant levels, costs are reduced across the board. Average rate costs decreased from 16 cents per kWh in the core scenario to 15 cents per kWh in the generic zero-carbon firm resources scenario due to total resources costs savings of \$4 billion. These results are confirmed by CESA’s landmark study, *Long Duration Energy Storage for California’s Clean, Reliable Grid*, where CESA found that there are savings of up to \$1.5 billion per year in system costs by 2045 relative to a grid without LDES.<sup>2</sup>

---

<sup>1</sup> *2021 SB 100 Joint Agency Report*, Read more here: <https://www.energy.ca.gov/sb100>

<sup>2</sup> *CESA’s Long Duration Energy Storage for California’s Clean, Reliable Grid Report*. Read more here: [https://static1.squarespace.com/static/5b96538250a54f9cd7751faa/t/5fcf9815caa95a391e73d053/1607440419530/LDES\\_CA\\_12.08.2020.pdf](https://static1.squarespace.com/static/5b96538250a54f9cd7751faa/t/5fcf9815caa95a391e73d053/1607440419530/LDES_CA_12.08.2020.pdf)

As such, it is clear that any procurement framework would benefit from allowing some degree of resource-specific procurement that can promote resource diversity. Resource diversity is not an end unto itself: increased diversity in a deployed resource portfolio will improve its robustness to unforeseen, resource-specific reliability risks; increased diversity in the planned resource pipeline will reduce the grid reliability impacts of deployment delays caused by resource-specific supply-chain issues. In addition, including a pathway for resource-specific procurement will allow the Commission flexibility to order procurement when unexpected resource needs arise.

Importantly, the Commission should also consider allowing joint procurement in the framework, to enable the deployment of high capital cost assets, such as the ones referred to in the 2021 SB 100 JAR. This would allow the Commission to direct development of resources that would benefit ratepayers in the long run, and incentivize LSEs to, individually or jointly, pursue innovative, large-scale and/or long lead-time projects. There may be other “diverse” attributes or resource types that are often overlooked in IRP models and in competitive solicitations, such as the value of resiliency, expected useful life of an asset (*e.g.*, 10-15 years versus 50 years), supply chain diversity and resiliency, and value stacking of local and system benefits. This procurement approach will empower the Commission to strategically balance and structure the grid for future needs, particularly considering how the passage of the Inflation Reduction Act (“IRA”) will be a catalyst for energy storage.

**Question 2: The “fundamental program elements” and “additional design features” introduced in Section 4 of Attachment A build on concepts detailed in the November 2020 Staff Proposal for a**

**Procurement Framework in IRP. Comment on their general suitability for discussing potential procurement program designs.**

CESA supports the Commission defining sub-categories as part of need determination but requests for more information on how this could be implemented. This design feature could be used to support our remarks in Question 1.E of promoting the procurement of LDES and long lead-time resources through some form of resource-specific procurement. CESA urges Commission staff to further develop the sub-category concept with CESA's remarks regarding Question 1.E. in mind.

**Question 4: Comment on each of the fundamental program elements and features described in Section 5 of Attachment A on Designing for Reliability. Is the range of options for each design element or feature appropriate? Explain your rationale.**

**A. Need Determination**

The Commission should develop policies that focus on developing the resources needed to maintain grid reliability and achieve California's ambitious decarbonization goals. CESA believes this can be achieved by designing the program to focus on new resources only. By focusing on only new resources, the Commission can design a procurement program focused on ensuring the procurement of the assets that can best mitigate current and future loss-of-load probability ("LOLP"). This is intrinsically linked to the compliance mechanism, as a method focused on current and future reliability needs implies the use of a marginal ELCC methodology rather than an average ELCC approach. As noted in our comments below, a marginal ELCC approach should be preferred given its advantages regarding a more efficient procurement of resources that can contribute to preserving reliable power for all Californians.



As the Commission staff noted in Attachment A, Resource Adequacy (“RA”) contracting, backstop procurement, and the energy market itself are all tools that already incentivize the re-contracting of essential assets or represent the means to do so. By focusing on new resources only, the Commission can design a procurement program centered on the development of resources that will mitigate reliability risks moving forward.

While CESA generally supports a framework focused on new resources, the scope of such an approach should be further defined by the Commission’s staff. In particular, CESA is concerned with Attachment A’s omission of how hybridization (*i.e.*, pairing generation with energy storage) or repowering of existing projects using energy storage would be treated. CESA requests the Commission clarify that these scenarios would be considered under the scope of new resources since current market tools designed to retain essential capacity (RA contracts and backstop procurement) are not equipped or sufficient to incent these types of investments. Hybridization and repowering of existing generation with energy storage is desirable as it adds capacity to the system and, in the case of conventional assets, it can materially enhance the GHG profile of resources. As such, CESA recommends the Commission staff note that a framework focused on new resources should not preclude hybridization and repowering using energy storage.

CESA understands that the inclusion of *some* existing resources could limit the risks faced by older renewable generation falling out of contract. As such, if the Commission is intent in incorporating existing resources to any degree, CESA recommends that it should limit it to variable energy resources (“VERs”) and Renewable Portfolio Standard (“RPS”) compliant resources. This caveat can support the procurement program’s

clean energy goals, further enabling California's to achieve its GHG goals. CESA believes this can be achieved through the vintaged marginal ELCC framework, as noted in our response to Question 4.A.

While CESA acknowledges that it is likely that details of system reliability need determination will occur in the IRP planning track, we take this opportunity to encourage the Commission to incorporate planning methodologies that are appropriate to emerging reliability risk. We urge the Commission to include atypical weather years in the planning process, as average weather years to not include the types of periodic extreme weather events that are increasingly the cause of reliability events. In addition, we recommend that the Commission consider reliability metrics beyond LOLE, such as those being explored in order to address emerging reliability concerns in the Pacific Northwest.<sup>3</sup>

## **B. Need Allocation**

The selection of a need allocation methodology is intertwined with the resource counting methodology to be used for compliance purposes. CESA finds it prudent to uphold the Commission's objective of ensuring need allocation and flexibility to address future needs, influenced by the evolving nature of the load shape and the shifting of the hours of reliability concern. This phenomenon was most apparent during the September 2022 heatwave, when California experienced historical levels of demand. The California Independent System Operator ("CAISO") Summer Market Performance Report noted that gross demand peak happened at hour ending ("HE") 18, while net demand peak occurred

---

<sup>3</sup> *Preliminary Pacific Northwest Resource Adequacy Assessment for 2027, Northwest Power and Conservation Council: <https://nwcouncil.app.box.com/s/yivjno3orq69epghul4hoiffteloilpj>*

between HE 19 and HE 20 (after sunset).<sup>4</sup> Planning for net peak can ensure there are enough resources to meet those early evening needs that are increasingly driving loss-of-load probability (“LOLP”). Thus, CESA supports the use of a method based on net load allocation, which would entail the use of some form of marginal ELCCs. As explained in subsequent sections, CESA currently favors the use of vintaged marginal ELCCs for the compliance component.

### **C. Compliance**

Standardized reporting allows LSEs to demonstrate their procurement is sufficient to meet their forward reliability obligations. As noted above, the use of a need allocation methodology based on net peak implies the application of a form of marginal ELCCs since these denote the degree to which an asset mitigates loss-of-load expectation (“LOLE”) across the LOLP hours moving forward. This is desirable considering that the use of ELCC for resource counting provides a variety of benefits including capturing the reliability contributions across different system conditions, capturing saturation and interactive effects, and accounting for energy and capacity constraints.

In a long-term planning context, the marginal ELCC approach is the most efficient means to signal the reliability contribution of an incremental MW of a resource. This allows for economically efficient planning and procurement, as it places value on the benefits of the asset currently and moving forward. Marginal ELCC, nonetheless, does have its drawbacks. Namely, marginal ELCCs can vary significantly between study periods, destabilizing the value of resources. Thus, CESA supports the use of vintaging. Under this

---

<sup>4</sup> CAISO Summer Market Performance Report, September 2022, Read more here: <http://www.caiso.com/Documents/SummerMarketPerformanceReportforSeptember2022.pdf>

scheme, resources would be credited based on the marginal ELCC of when they entered the market, and that value would be vintaged as more resources are added to the grid. Vintaged marginal ELCC would promote resource diversity and emerging technologies, helping the market recognize the need for procuring different resources (*e.g.*, long duration storage) at a faster rate while rewarding first movers who paid a premium for new, innovative technology. Vintaging enables first-movers to secure and lock-in the value of their project, reducing regulatory risks while preserving the efficiency outcomes of the marginal approach.

#### **D. Enforcement.**

CESA offers no comments but reserves the right to address other parties' opening comments in replies.

**Question 5: Comment on each of the fundamental program elements and features described in Section 6 of Attachment A on Designing for GHG-Reduction. Is the range of options for each design element appropriate? Explain your rationale.**

#### **A. Need Determination**

As explained previously, Attachment A notes that the market is not selecting zero-carbon resources, instead favoring the lowest-cost resources. Thus, the Commission must design a procurement program that translates the GHG targets set in the IRP planning track into procurement obligations. Commission staff presented two options: (1) a Clean Energy Standard ("CES") similar to the RPS, where LSEs count generated megawatt hours ("MWh") within a compliance period toward a MWh target; and (2) a Mass-Based GHG

target, where LSEs will be assigned annual GHG benchmarks in million metric tons (“MMT”).

CESA supports the annual emission accounting, mass-based approach because it is a more efficient and direct effort to measure the impact of an LSE’s clean energy procurement. This approach aligns with methodology used in the transmission planning process (“TPP”), where GHG standards are used as the key modeling constraint. In fact, costs and GHG targets are the only binding constraints in capacity expansion modeling, proving them to have the largest influence in procurement planning. CESA assures the Commission that there is no scenario in which LSEs do not meet an RPS/CES while also meeting their GHG target. On the contrary, it is possible that an LSE meets the RPS/CES and falls short of their GHG obligations. As a result, CESA favors establishing need determination based on a mass-based GHG target.

### **B. Need Allocation**

In accordance with the GHG mass-based target approach, CESA supports need allocation being based on the LSE-level share of CAISO-wide or statewide load and GHG emissions. Refer to comments in Question 5.A.

### **C. Compliance**

In accordance with the GHG mass-based target approach, CESA supports integrating a CPS calculator into the LSE IRP filings. LSEs would be able to show they meet their share of the electric sector GHG target as part of that compliance showing.

#### **D. Enforcement.**

In accordance with the GHG mass-based target approach, CESA supports penalties assessed on a \$/ton basis for GHG emissions. This approach further incentivizes LSEs to optimize their portfolios.

**Question 8: Do you recommend adopting any of the options as presented in Attachment A? Explain your reasoning and justify your recommendation, by including assessment of your preferred approach against the program’s objectives listed in Section 3 of Attachment A. If you do not recommend any of the option in Attachment A, indicate whether you recommend: a. A hybrid of elements described, b. A hybrid of some elements described and some not described, or c. An entirely different approach than the options described.**

As noted in the comments above, CESA is generally aligned with Option 1 for the Reliability component of the program and the Mass-Based approach for the GHG component. Importantly, CESA urges the Commission to allow some degree of resource-specific procurement that can promote resource diversity and development of resources that can minimize total resource costs. CESA’s position is informed by the urgency to send clear signals to buyers and sellers of new resources, the evolving nature of grid needs, and the expanding solution toolkit available to meet reliability and decarbonization targets.

CESA currently favors the aforementioned options since the marginal ELCC methodology has been materially enhanced in recent years by including a solar-storage surface. In addition, stakeholders across the industry are largely familiar with this metric, its benefits, and limitations. As such, it is sensible to continue to employ these methods within long-term planning. This being said, CESA is acutely aware of the changes taking place in the RA space, particularly regarding implementation of the Slice-of-Day (“SOD”). While we expect that SOD will bolster reliability and strengthen the RA program, we are

not convinced that the framework is ready to be seamlessly applied to a procurement framework within the IRP proceeding at this time. This could of course change over time as stakeholders and the Commission become more familiar with the SOD framework. As such, while CESA commends Southern California Edison (“SCE”) and the Commission staff for incorporating said option, we do not, at this time, recommend it being the basis of the programmatic procurement approach Attachment A seeks to develop.

**Question 10: Local reliability is raised briefly in Section 5.1.1 of Attachment A. Requirements are currently set for the near-term as part of the resource adequacy program. Are these sufficient, or should there be medium-to-long-term procurement requirements as well? If so, should they be part of the new program or should they be addressed on an order-by-order basis in parallel with the program? Explain your reasoning.**

CESA strongly supports more detailed consideration of local reliability needs within the procurement approach discussed herein. Currently, the Commission’s procurement directions have been focused exclusively on the development of System RA assets despite the fact that California’s LRAs house a significant share of aging, polluting capacity. CESA believes there are material ratepayer benefits to addressing local reliability needs within the IRP Procurement Track. When an LSE is directed to procure resources that could count as System RA, the LSE will seek to minimize the cost of said asset by procuring System only. As such, any incremental MW will not affect the LSE’s Local RA needs. Alternatively, if the Commission directs procurement of assets that can provide Local RA, any incremental MW provides both System and Local benefits, minimizing over-procurement.

Integrating local reliability needs into the Procurement Track can be achieved by including locationally targeted procurement directives in future Commission-issued

procurement orders. For this to yield cost-minimization, local reliability needs should be integrated since the Planning Track so that that this models and procurement directives will inform transmission and distribution planning assumptions, allowing for a more holistic view of the investments made at different points of the electric system.

**III. CONCLUSION.**

CESA appreciates the opportunity to submit these comments to the Ruling and looks forward to working with the Commission and stakeholders in this proceeding.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. Noh', written in a cursive style.

Jin Noh  
Policy Director  
CALIFORNIA ENERGY STORAGE ALLIANCE

Date: December 12, 2022