

**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)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE  
RESOURCE ADEQUACY TRACK 3B.2 PROPOSALS**

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RESOURCE ADEQUACY TRACK 3B.2 PROPOSALS**

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits our comments pursuant to the *Assigned Commissioner’s Amended Track 3B and Track 4 Scoping Memo and Ruling* (“Scoping Memo”), issued on December 11, 2020.

**I. INTRODUCTION.**

CESA welcomes the opportunity to provide feedback on the different and revised proposals filed by stakeholders on December 18, 2020. As the Commission moves forward with its consideration of significant structural reforms to the Resource Adequacy (“RA”) program, CESA recommends that the Commission consider near-term and longer-term reforms in a coordinated fashion as to minimize the potential for disruption of adopting near-term proposals that do not reasonably transition to the longer-term structural goals for the RA Program. As such, the Commission’s Ruling modifying the scope and schedule of the of Track 3.B of this proceeding facilitates the consideration of different reform alternatives in a cohesive manner.

In order to fully harness this opportunity to restructure the RA program in an orderly way, CESA recommends the Commission focus on the root causes behind the inability of the current

paradigm to provide the needed reliability given the increasing penetration of energy- and use-limited resources and the probability of previously extraordinary weather conditions. Thus, the most crucial reforms required relate to planning and resource performance. In this context, CESA urges the Commission to place particular emphasis on proposals that seek to modify the planning standards related to RA and ensure resources are accounted for in ways that correlate with their physical characteristics.

In these comments, CESA focuses on providing remarks and feedback on the proposals filed by Pacific Gas & Electric (“PG&E”) and the Commission’s Energy Division (“ED”). This decision relates to the fact that CESA has previously filed comments related to the joint proposal filed by Southern California Edison (“SCE”) and the California Community Choice Association (“CalCCA”).<sup>1</sup> As a result, CESA offers the following comments:

- **The Commission should avoid adopting proposals that are contrary to market-oriented principles:** Within its revised proposal, ED has included a proposal to set a bid cap for RA resources at the higher of \$300/MWh or the resource’s default energy bid (“DEB”). This proposal could undermine the incentives for resources to provide RA, particularly if other balancing areas (“BAs”) do not have a price cap. Furthermore, applying a bid cap as restrictive as the one proposed by ED could lead to higher ratepayer costs, as expected revenues derived from the energy market would need to be recuperated through RA contracts. As this proposal could lead to inefficient outcomes, CESA does not recommend the Commission adopt it.
- **The Commission should recognize ED’s proposal introduces risks by relying on the spot market to fill energy provision gaps:** As CESA understands it, ED’s proposal hinges on the assumption that suppliers will be generally risk averse and, as such, will have strong incentives to hedge their positions. This assumption, however, will vary by supplier, introducing the risk of over-relying on the spot market to cover load. ED’s proposal does not remedy a situation in which actual demand is substantially higher than forecasted demand because it merely introduces an element of financial responsibility for the coverage of actual load. CESA therefore does not recommend adopting this proposal.

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<sup>1</sup> See CESA, “Resource Adequacy Track 3B.2 Proposals of the California Energy Storage Alliance”, filed under R. 19-11-009 on December 18, 2020.

- **The Commission should consider the merits of proposals that seek to reform the RA framework in a manner consistent with the current and expected resource mixes:** CESA finds merit to proposals such as that from PG&E, as it incorporates into the RA program the operational constraints of use- and energy-limited resources while ensuring load will be covered in all hours. In this section of the comments, CESA requests clarifications regarding the treatment of energy storage and the application of the exceedance methodology. Moreover, CESA explains how said proposal requires further refinement and clarification around the issues of availability and accounting.

## **II. THE COMMISSION SHOULD AVOID ADOPTING PROPOSALS CONTRARY TO MARKET-ORIENTED PRINCIPLES.**

In its Addendum to the Issue Paper and Draft Straw Proposal for Track 3B.2, ED offers further clarification on their proposed bid cap to be incorporated into the RA construct.<sup>2</sup> In their original paper, ED noted that either requiring least-cost bids or establishing a bid cap for RA resources would enable the Commission to ensure RA resources will bid into the market at their marginal prices.<sup>3</sup> At the time of the original filing, ED had not offered further specifications regarding the level of the price cap. With their December 2020 filing, ED introduced further detail, recommending the application of a bid cap to RA resources within their contracts which would be equal to the higher of \$300/MWh or the resource's DEB.<sup>4</sup>

Imposing a contractual bid cap provision as the one proposed by ED would have a disruptive effect on the RA market. This proposal has the potential of creating significant market inefficiencies as well as increasing the cost Californian ratepayers pay for the maintenance of a

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<sup>2</sup> See Energy Division, "Addendum to Energy Division Issue Paper and Draft Straw Proposal for Consideration in Track 3B.2 of Proceeding R.19-11-009", filed under R. 19-11-009 on December 21, 2020, at 15.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, at 16.

reliable electric system. In this section, CESA offers comments highlighting that this proposal does not conform to market-oriented principles and should not be pursued by the Commission.

Given the Commission's jurisdiction, a bid cap provision for RA contracts could solely be directed to be included in the contracts associated with Commission-jurisdictional entities and balancing areas. As a result, if this proposal were to be adopted, RA providers would face a marketplace with disparate requirements and opportunities for cost recovery. First, it is worth highlighting the effect this proposal would have during periods of supply scarcity. In these periods, the grid is able to signal the need for additional supply through scarcity pricing. If such a bid cap were to be applied in a subset of the BAs that an RA resource could potentially serve, this resource would face limited incentives to enter into RA contracts with load-serving entities ("LSEs") located in a BA where the bid cap provision is in effect. This is due to the fact that said resource's energy revenues would be substantially hindered by the price cap, particularly during times of grid stress and supply scarcity. Hence, ED's proposal has the potential to utilize supply inefficiently and reduce the overall amount of RA supply, outcomes that would hinder the reliability of the state's electric system.

Second, as resources under the proposed bid cap would have limited opportunities to recover some of their costs through the provision of energy at times when scarcity pricing is in effect, these assets would require other revenue streams to ensure they are able to cover all the costs associated with their development and operation. In the context of RA provision, it is likely resources would increase their RA contract prices to make up for the loss of opportunities to recuperate some of these costs through the energy market. As such, ED's proposal could increase the costs Californians pay to maintain a reliable grid. The impact of an increase in RA contract prices should not be overlooked by the Commission, as it could jeopardize the Commission's

ability to comply with its mandate to maintain electricity rates at reasonable levels. Therefore, CESA does not recommend adopting ED's recommended bid cap provision.

**III. THE COMMISSION SHOULD RECOGNIZE THAT ENERGY DIVISION'S PROPOSAL INTRODUCES RISKS BY RELYING ON THE SPOT MARKET TO FILL ENERGY PROVISION GAPS.**

On December 21, 2020 Administrative Law Judge ("ALJ") Debbie Chiv issued a Ruling containing an addendum to the ED's Issue Paper and Draft Track 3B.2 Straw Proposal based on Frank A. Wolak's paper, "Long-Term Resource Adequacy in an Intermittent Renewable and Import Dependent Future in California." In addition to providing these updates to the proposal, the Commission held a workshop on ED's forward energy requirements proposal on January 8, 2021. CESA appreciates ED's efforts to engage parties and assist them in better comprehending this proposal, as it would significantly modify the RA framework if adopted.

In the aforementioned paper, Professor Wolak notes that a supplier (*i.e.* a seller of RA) with the ability to serve demand at a reasonable price may not do so if it has the ability to exercise unilateral market power in the short-term energy market. If said supplier has entered into a fixed-price forward contract obligation, the supplier would find it profit-maximizing to minimize the cost of supplying this forward contract quantity of energy.<sup>5</sup> As a result, establishing forward energy requirements with the possibility for financial hedging would convert a previously perverse incentive into one that guarantees load coverage by incenting a behavior which would maximize the expected profit of a supplier. In essence, a supplier would have a strong incentive to hedge against potentially unfavorable prices at the time of delivery as established by the forward contact

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<sup>5</sup> Wolak, "Long-Term Resource Adequacy in an Intermittent Renewable and Import Dependent Future in California", at 27.

since the spot market prices could fall below the supplier's marginal cost. Since this supplier has a guaranteed revenue dictated by the fixed price of the forward contract, it would have an incentive to maximize profit by covering its requirement with the cheapest possible generation.<sup>6</sup>

As CESA understands it, this proposal hinges on a series of assumptions regarding market participants' level of risk aversion, the availability of additional generation in the real-time ("RT" or "spot") market, and the incentives derived from the possibility to hedge against unfavorable prices in the market. First, this proposal assumes that suppliers are generally risk averse and will find it beneficial to *ad minimum* partially hedge their positions considering the probability of spot prices falling below their marginal costs. CESA does not agree with this assumption, as the proposal does not offer empirical evidence and does not take into account that risk aversion is directly related to the penalties attached to a failure to comply.

Second, this proposal assumes that if actualized demand exceeds the demand a supplier, or set of suppliers, can provide during a particular interval, they will have the ability to turn to the spot market in order to cover their position. However, this proposal does not remedy a situation in which, despite the best forecasting efforts, demand rises in a way which could severely hinder the reliability of the broader system. Moreover, this proposal ignores the fact that load in specific areas or sub-areas cannot be met any resource available, but only by resources which have transmission access to local load pockets. Thus, this proposal assumes a paradigm that favors import reliance over one that incents sufficient capacity to be built and available. As Wolak notes, this reliance could be surpassed if the state were to build additional controllable generation or make substantial investments in energy storage assets.<sup>7</sup> However, instead of proposing the latter two solutions, the

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<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

paper goes on to assume import reliance is unavoidable and puts forth placing the forecasting and risk management responsibility on suppliers that could erroneously assume prices will exceed their marginal costs or sufficient generation will be available through the RT market. It is worth noting that the assumption of import reliance fails to take into account the potential for declining available capacity across the Western Electricity Coordinating Council (“WECC”) as numerous Western states have adopted policies alike the Renewable Portfolio Standard (“RPS”).

Third, this proposal’s hedging component does not limit the possibility of hedgers further securing their positions by having forward contracts of their own. It could be the case that Supplier A hedges its position by establishing a forward contract with Supplier B. Supplier B, being a profit-maximiser itself, would have the incentive to hedge its own position.<sup>8</sup> This would further dilute the physical responsibility of covering demand, potentially replacing it with a set of convoluted financial responsibilities. While this case could be considered an edge case, it is easily arguable that, if the same risk aversion and profit-maximizing assumptions are to be applied to all suppliers, Supplier B would have the incentive to hedge its position fully.

Fourth, the incentive to cover load with least-cost assets creates risks that do not advance the attainment of California’s ambitious environmental and energy targets.<sup>9</sup> While securing least-cost solutions is an optimal strategy to maximize supplier profit, it does not directly correlate with the current emphasis the Commission has placed on integrating best-fit solutions that curb GHG emissions, air quality impacts, and local pollution. Instead, this component, paired with the proposal’s intention to award multi-year forward contracts, could enable otherwise sub-optimal thermal generation to remain in the market despite its adverse climate impacts.

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<sup>8</sup> *Ibid.*

<sup>9</sup> *Ibid.*, at 28.



In sum, CESA does not believe this proposal is properly equipped to resolve the current challenges of the electricity sector as it: assumes a risk averse behavior that is not proven or easily generalized; fails to incent new generation assets from developing; negates the possibility of robust investment in in-state resources; and could hinder California’s opportunity to achieve its environmental goals. Moreover, this proposal places much of the forecasting and risk-bearing responsibility on non-regulated suppliers rather than the LSEs regulated by the Commission. As such, CESA does not support this proposal and urges the Commission to focus its attention on other suggestions within this proceeding.

**IV. THE COMMISSION SHOULD CONSIDER THE MERITS OF PROPOSALS THAT SEEK TO REFORM THE RA FRAMEWORK IN A MANNER CONSISTENT WITH THE CURRENT AND EXPECTED RESOURCE MIXES.**

Within their December 18, 2020 Track 3B.2 filing, PG&E introduced their “slice-of-day” (“SOD”) proposal, which recommends modifying the RA program to focus on meeting demand in all hours of the day by dividing a given load shape into several multi-hour slices. These slices would serve as the means to establish RA showing requirements on an intra-day basis.<sup>10</sup> PG&E further recommends that seasonal variations are considered within RA showings to account for the differences in availability and output several resources such as renewable VERs, thermal generators, and hydroelectric facilities experience across the year.<sup>11</sup> Given these time-differentiated approach, resources would account for a certain level of their output dependent on the exceedance methodology for particular slices and seasons.<sup>12</sup>

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<sup>10</sup> PG&E, “Revised Track 3B.2 Proposals of Pacific Gas And Electric Company (U 39 E)”, filed under R. 19-11-009 on December 18, 2020, at A-5.

<sup>11</sup> *Ibid*, at A-8.

<sup>12</sup> *Ibid*, at A-9 – A-10.

In general, CESA finds that PG&E’s proposal closely considers the tradeoffs and conditions in which different resources operate. CESA commends PG&E for their thoughtful proposal as it has been developed with the current and future resource mix in mind. While this proposal merits close consideration, CESA notes that several questions regarding its potential for implementation require further analysis.

First, CESA has several recommendations regarding the accounting of energy storage. In their proposal, PG&E suggests that resources with 4-hours of duration will be able to count one 4-hour slice as “positive” (*i.e.* discharging) RA, and one 4-hour slice as “negative” (*i.e.* charging) RA.<sup>13</sup> Moreover, PG&E proposes that a 4-hour storage asset could count positively towards two 4-hour slices at half its Pmax, provided it does the same in the opposite direction in previous intervals.<sup>14</sup> CESA appreciates the flexibility offered by this construct but seeks clarification regarding the treatment of charging within this proposal. Specifically, it is unclear if a 4-hour asset that seeks to count its capacity at half its Pmax for two 4-hour slices would be required to charge at half its Pmax for two 4-hour slices or it could do so at its full Pmax for only one 4-hour slice. This comment hinges on the fact that storage assets can modulate their output regardless of the rate of charge. As such, a 4-hour storage asset could fully charge in one of the 4-hour slices and dispatch at a rate lower than its Pmax later on to be positively counted on the two subsequent 4-hour intervals.

In addition, CESA seeks clarification regarding resources with durations that exceed four hours. As noted in R.16-02-007 and R.20-05-003, long-duration energy storage (“LDES”) will be required to maintain reliability in a context of increasing renewable penetration. As a result, CESA

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<sup>13</sup> *Ibid.*, at A-11.

<sup>14</sup> *Ibid.*

recommends that PG&E's proposal is clarified to offer a similar treatment for resources with durations in excess of four hours. For example, an 8-hour, 100 MW storage asset should be able to count for 100 MW for two 4-hour slices or 50 MW for four 4-hour slices, provided it counts negatively in previous intervals.

Second, CESA has concerns regarding the application of the exceedance methodology, particularly for renewable VERs. As PG&E notes in their proposal, the Legislature has mandated the Commission to evaluate the capacity contributions of wind and solar resources using the effective load carrying capability ("ELCC") methodology. Given this mandate is now incorporated into the Public Utilities Code ("PUC"), CESA requests further clarification on the feasibility of this modification. Moreover, and related to the broad application of the exceedance methodology, CESA has some concerns regarding its compatibility with the proposed unforced capacity ("UCAP") framework currently being considered in at the CAISO. Under an exceedance methodology, all unavailability would be seen as equal, regardless of its root cause (*e.g.* ambient conditions, planned or forced outages, etc.) As such, consideration of how these two methodologies could coexist and complement each other is warranted.

In sum, CESA welcomes this proposal and looks forward to work with PG&E and other stakeholders to further refine it, as it could prove a viable means to incorporate the operational complexities of the current and future grid mix into the RA framework. Many implementation details will likely need to be worked out but there is significant merit in the balance of simplicity, transactability, granularity, and accommodation of the future resource mix to warrant further attention in Track 3B.2.

V. **CONCLUSION.**

CESA appreciates the opportunity to submit these comments on the revised Track 3B.2 proposals and looks forward to working with the Commission and stakeholders in this proceeding.

Respectfully submitted,

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

Jin Noh  
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**CALIFORNIA ENERGY STORAGE ALLIANCE**

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