

California Community Choice Association

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Contact

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1. Provide your organization's comments on the review of problem statement 2 and 3 stakeholder feedback:

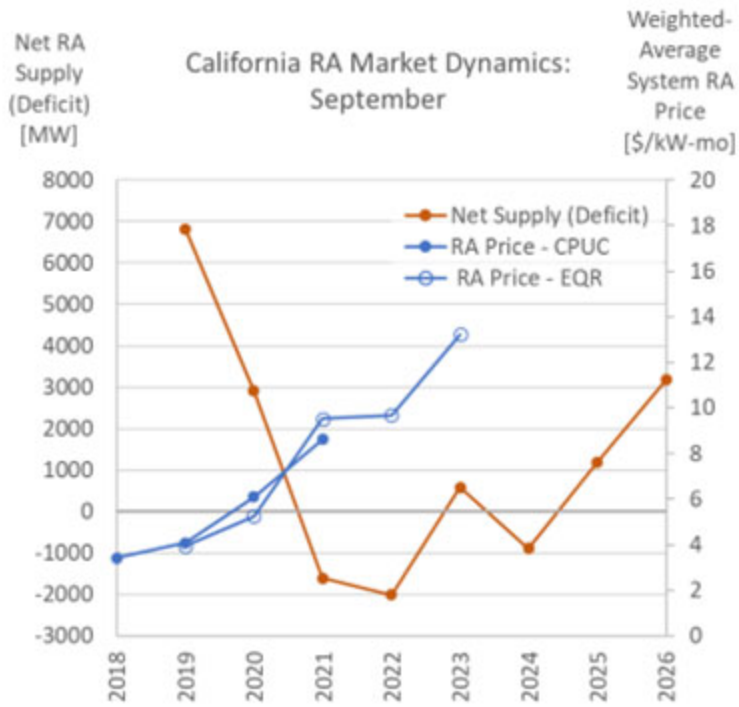
The California Community Choice Association (CalCCA) appreciates the opportunity to provide comments on the Resource Adequacy (RA) Modeling and Program Design Working Group (Working Group). CalCCA supports the California Independent System Operator Corporation's (CAISO) efforts to update their RA modeling, tools, and processes to ensure RA capacity is available when and where needed to support reliable grid operations. In the sections that follow, CalCCA provides the following recommendations:

- The CAISO should replace the Resource Adequacy Availability Incentive Mechanism (RAAIM) with Unforced Capacity (UCAP) counting rules and explore whether changes to the planned outage substitution process are needed.
- CalCCA agrees with the CAISO's key takeaway that its default Planning Reserve Margin (PRM) warrants revisiting. As the CAISO revisits the default PRM, the CAISO should consider how the level of PRM necessary to meet reliability targets is dependent on resource counting rules.
- The CAISO should consider if a Flex RA requirement is needed for California Public Utilities Commission (CPUC)-jurisdictional load serving entities (LSE) once the CPUC transitions to slice-of-day (SOD).
- Given the information that the CAISO has about Year-Ahead RA (YARA) and Month-Ahead RA (MARA) filings that other stakeholders do not, the CAISO should estimate the RA supply used for its RA sufficiency tests.
- Either update the CAISO's backstop cost allocation rules to consider "credited resources" or work with the CPUC to have them update their rules to have credited resources shown on a supply plan.
- When considering longer-term reforms for systemic changes to the CAISO's RA rules, the CAISO should prioritize replacing RAAIM with a UCAP counting methodology.
- The CAISO should move the curing and settling CAISO balancing authority areas (BAA) day-ahead resource sufficiency evaluation (RSE) shortfalls scope item to the Day-Ahead Sufficiency initiative.

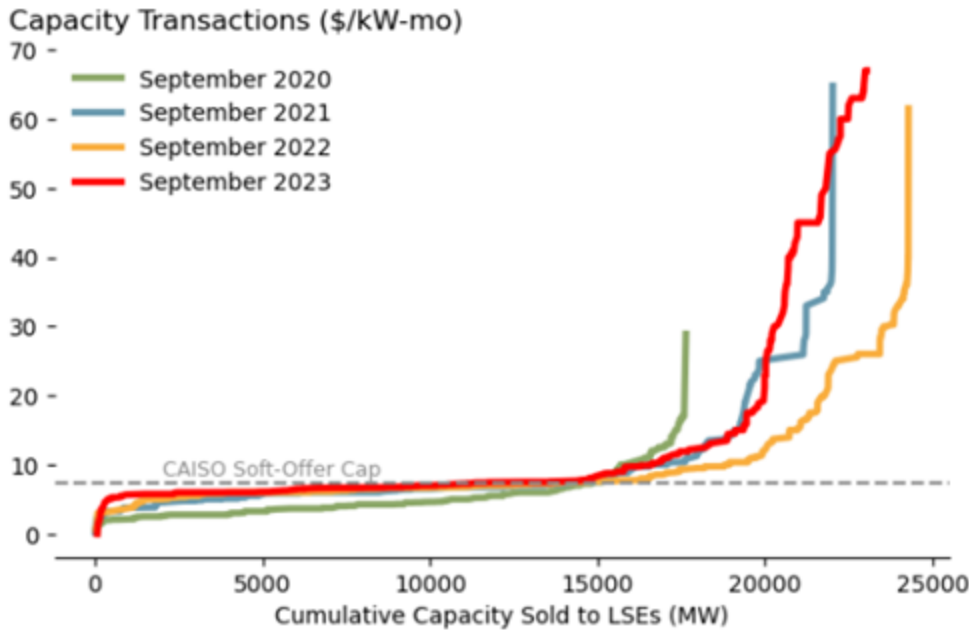
2. Provide your organization's comments on the ISO presentation "Exploring problem statement 2 & 3 and data analysis needs," specific to the ISO's problem statement discussion on issues related to capacity counting, availability and performance incentives, and outage and substitution rules:

In the Working Group, the CAISO discussed the existing tools and processes the CAISO uses to incent RA resource availability. Data presented by CAISO suggests that such tools and processes are not successful in incentivizing resources to be available or to conduct planned maintenance to prevent forced outages. Outages during the summer months regularly exceed outage rates used in state planning and neared 18 percent of the shown RA fleet during the September 2022 heat event.

There are several reasons RA resources may not have the right incentives to be available, primarily stemming from the ineffectiveness of the current RAAIM mechanism,^[1] and how RAAIM interacts with the bi-lateral RA market. RAAIM unavailability charges are 60 percent of the Capacity Procurement Mechanism (CPM) soft offer cap (resulting in a RAAIM charge of \$3.79 per kilowatt (kW) -month). The CAISO presented prices at major hubs outside of CAISO to demonstrate that implied capacity prices are significantly above the CPM soft-offer cap. CalCCA agrees with the CAISO's suggestion that capacity prices are significantly above the CPM soft-offer cap, and therefore the RAAIM unavailability charge, but recommends looking at a data source that is better suited to come to this conclusion – the Federal Energy Regulatory Commission (FERC) Electronic Quarterly Reports (EQR). These reports show that, as RA supply tightened, the weighted average price for capacity delivered to the CAISO system more than tripled between 2019 and 2023.



Importantly, detailed transaction-level data from the FERC EQRs shows that the rise in average capacity prices is primarily driven by a growing share of transactions at extremely high prices. In September 2020, a time with excess RA supply, around 2,800 megawatts (MW) of RA capacity was purchased by California LSEs at prices above \$7.34/kW-month, the CAISO’s recently proposed CPM soft-offer cap. In contrast, more than 7,800 MW, 10,600 MW, and 11,700 MW were purchased at prices above \$7.34/kW-month in September 2021, 2022, and 2023 respectively, times with an RA deficit or extremely tight market. The highest observed prices rose from \$29/kW-month in September 2020 to over \$60/kW-month in September 2021, 2022, and 2023.



When RA market prices reflect market scarcity, it is logical to assume sellers would find it worth it to sell RA that may not be available instead of taking measures to avoid RAAIM charges, like providing substitution or performing planned maintenance.

This does not suggest the RAAIM price or the CPM price is too low, as the CPM price is meant to reflect the going forward fixed costs of marginal resources, not RA market prices. Instead, it points to RAAIM being structurally insufficient because it does not properly incent resources to be available. This is because RAAIM is

not tied to RA market prices, which do not always reflect going forward fixed costs. UCAP counting rules could remedy this issue by tying penalties for non-performance to the resource's ability to sell RA in the future. Doing so would tie penalties for non-availability to the ability to receive revenues at the existing RA market prices. UCAP should also be applied to non-RA resources with NQC values to incent availability from resources that are not currently providing RA but looking to provide it in the future. This also simplifies the process of applying UCAP, as the calculation will use all forced outages and not have to discern between a forced outage when it was providing RA and a forced outage when it was not providing RA.

Including forced outages in the counting rules, as UCAP does, creates incentives for generators to conduct planned maintenance to prevent unplanned, forced outages. The CAISO should further explore whether UCAP should be coupled with changes to the planned outage process to ensure resources are not disincentivized to take planned outages and are able to take them when necessary. Currently, the CAISO requires substitution to take planned outages. Resources should be planning maintenance during off-peak months so that they are available during the peak summer months that are most challenging from a reliability perspective. It would be helpful to know if resources are having trouble finding substitution during off-peak months, and therefore are unable to take planned outages when necessary.

The CAISO should work with the CPUC, which has scoped UCAP into its new RA proceeding, to evaluate how to incorporate UCAP into the CAISO and CPUC's RA programs. Part of this evaluation should include whether special considerations need to be made to make UCAP compatible with SOD. Whether or not a UCAP methodology needs to be specifically tailored to SOD can be informed by evaluating how forced outage trends vary by hour.

[1] Several reasons could contribute to RAIM's ineffectiveness including but not limited to sellers incorporating the risk of RAIM charges into capacity pricing, scheduling coordinators' payments and charges balancing each other out, or too many resources or outage types receiving RAIM exemptions.

3. Provide your organization's comments on the ISO presentation "Exploring problem statement 2 & 3 and data analysis needs," specific to the ISO's problem statement discussion on the need to revisit the default PRM:

The CAISO presented the PRM setting process, in which each Local Regulatory Authority (LRA) sets its own PRM and resource counting rules. The CAISO has a default PRM if an LRA does not provide its own PRM. The CAISO's presentation indicates that six LRAs have PRMs of less than or equal to seven percent, 20 LRAs have PRMs of 15 percent, and one LRA has a PRM of 16 percent. CalCCA agrees with the CAISO's key takeaway that "The CAISO's default PRM warrants revisiting in light of changes in the RA landscape." As the CAISO revisits the default PRM, the CAISO should consider how the level of PRM necessary to meet reliability targets is dependent on resource counting rules. For example, the PRMs of LRAs under a SOD RA framework would be different than PRMs of LRAs not under SOD RA frameworks. These differences should be considered when the CAISO considers revisiting the default PRM. In addition, if the CAISO pursues UCAP, this would account for forced outage rates in the resource counting and the PRM should be reduced as the PRM would no longer need to account for resource forced outage rate.

4. Provide your organization's comments on the ISO presentation "Exploring problem statement 2 & 3 and data analysis needs," specific to the ISO's problem statement discussion on re-evaluating aspects of the Flex RA program:

The CAISO presented the existing Flex RA program and open questions and challenges related to the program. One key question the CAISO should consider is "Does the CAISO require a Flex RA requirement under slice-of-day?" Stakeholders in the CPUC's RA proceeding have suggested that there may not be a need for Flex RA under SOD. This is because hourly RA showings would ensure that if the CAISO were to dispatch the shown RA fleet, it would meet load for each hour of the day. To evaluate the need for a Flex RA requirement under SOD, the CAISO should evaluate SOD 2024 test year showings to see if they meet the CPUC-jurisdictional LSEs' portion of the 2024 Flex RA requirement. Because the test year showings are not binding, and LSEs may not

have completely filled out their RA portfolio to meet non-binding requirements, the CAISO could also evaluate the first binding SOD showings (i.e., 2025) to see if they meet the CPUC-jurisdictional LSEs' portion of the 2025 Flex RA requirement. If the CAISO finds that a separate Flex RA product is not needed to meet flexibility needs under SOD, then the CAISO could at that time remove the Flex RA requirement for LSEs subject to SOD.

5. Provide your organization's comments on the ISO presentation "Potential modeling frameworks," including feedback on short term reliability and reliability visibility in the mid-term years 2-4 and the survey proposals:

The CAISO presented the scope of its short-term, medium-term, and long-term modeling that it proposes to perform to analyze RA sufficiency. CalCCA appreciates the CAISO's responses to stakeholder feedback on the short-term study scope that (1) affirm the CAISO will work with LRAs to ensure consistent assumptions with LRA requirement setting and planning, (2) assure that the CAISO can perform a stack analysis along with the probabilistic modeling, and (3) confirm that the CAISO will provide RA supply data to stakeholders.

The CAISO also presented its proposed methodology for estimating RA showings in the short and medium term. For the short-term modeling, the CAISO proposes to collect information from LSEs through non-binding "soft-showings" in which LSEs provide information year-ahead about their expectations for their 100 percent RA showings. During the workshop, the CAISO explained that it would prefer LSEs to do this estimation rather than the CAISO doing the estimation itself because CAISO does not see historical trends in the types of resources shown between the YARA and MARA showings. CalCCA continues to recommend the CAISO explore its own ability to estimate 100 percent RA showings for the following reasons:

1. If the CAISO does not see historical trends in the types of resources shown between the YARA and MARA showings, it is unlikely LSEs do.
2. The CAISO knows the resources shown in the YARA showings, LSEs only know what they have shown and therefore do not have insight to the availability of other resources to fulfil their MA obligations.
3. The CAISO knows which resources on the NQC list are still available after the YARA showings.
4. The CAISO knows historical import RA shown between YARA and MARA.

Given the information that the CAISO has, the CAISO can identify resources on the NQC list that have not been shown in the YARA showings and use that information to make better assumptions about what resources will be shown between the YA and MA.

For collecting information on the medium-term RA supply, the CAISO should utilize individual LSE IRP plans, which are filed biennially with the CPUC. This will reduce the administrative burden on LSEs and ensure consistency between CAISO and CPUC modeling.

6. Provide your organization's comments on the DMM presentation "Ensuring energy and resource adequacy with storage":

CalCCA appreciates the information provided by Department of Market Monitoring (DMM) that informs storage resource availability. DMM's presentation offers several observations about storage resources that may be "limiting" storage resources' availability (Slide 92 of 96). CalCCA addresses select observations below:

- **Regulation awards may deplete SOC reaching full capacity and the ancillary service state-of-charge (SOC) may influence SOC in adjacent hours** – These observations are correct and a function of the CAISO's market and RA resource bidding requirements. RA storage resources have must offer obligations bidding for energy *and* for the ancillary service products they are certified to provide. When storage resources are dispatched to provide ancillary services, it is because it is the most economic market outcome. Further, unlike when there were very few batteries on the system, storage resources now provide a significant amount of energy in addition to regulation. It is not clear this observation is a problem that requires a solution.
- **Lack of must-offer obligations for charging leading to insufficient SOC** – CalCCA agrees that this could be a limitation. The CAISO should evaluate whether current market rules provide sufficient incentive for RA storage resources to bid to charge. For example, the CAISO already has must offer obligations, bid insertion, and market power mitigation on storage discharging. With these elements in place, storage likely already has an incentive to bid for charging because if it has bids inserted and cannot perform to its

awards, it would need to buy back the imbalance. If there are not sufficient incentives and the CAISO is seeing routine unavailability of storage discharge because it did not charge, then the CAISO should consider what rule changes may be necessary.

- **Bidding predominantly in the real-time market** – Additional information is needed to classify this as a limitation. RA storage resources have must offer obligations to bid into the day-ahead market, in addition to the real-time market. If an RA storage resource fails to meet its must offer obligation in the DA market, the CAISO has rules to address this failure.
- **Exceptional Dispatches** – Operators rely on exceptional dispatches to manage resources outside of the market when needed for reliability purposes. The Energy Storage Enhancements initiative adopted a policy that would allow operators to exceptionally dispatch storage to manage SOC. If the operators are inefficiently using exceptional dispatch and this is leaving them with insufficient amounts of energy storage, then the CAISO should examine the operators' practices to determine if those practices should change or if a rule change for all RA storage resources is needed.

7. Which issues would your organization like to see addressed quickly, taking an incremental approach to the ISO's rules, versus issues require longer reform for systemic changes to the ISO's rules on RA?

Incremental Change

Either Update the CAISO's Backstop Cost Allocation Rules to Consider "Credited Resources" or Update the CPUC's rules to have Credited Resources Shown on a Supply Plan: The CAISO's tariff does not allow the CAISO to consider "credited" resources (resources count for RA under CPUC rules but are not shown on CAISO supply plans) when allocating CPM costs, a problem that revealed itself after the CAISO's August 2023 CPM. The CAISO should work with the CPUC to ensure credited resources' RA capacity is recognized, either through changes to the CPUC rules to have credit resources shown on supply plans or through a CAISO tariff change to support credited resources when allocating CPM costs.

Systemic Change

Replacing the Resource Adequacy Availability Incentive Mechanism (RAAIM) with an Unforced Capacity Counting Methodology: When considering longer-term reforms for systemic changes to the CAISO's RA rules, the CAISO should prioritize replacing RAIM with a UCAP counting methodology, for the reasons described in section 2.

8. Are there any issues that you believe are ready to go to an action plan, and then move to the policy development phase?

CalCCA has no comments at this time.

9. Please provide your organization's feedback to the sequencing of issue deep dives and potential panels:

February 13: resource counting; February 27: outage and availability incentives; March 13: backstop

CalCCA supports the CAISO's proposed sequencing of issue deep dives and potential panels, including resource counting, outage and availability incentives, and backstop.

10. Please indicate if you would like to participate in a panel on any of the topics from question 9, and if so, which topics:

CalCCA plans to continue to actively participate in the RA Working Groups going forward. CalCCA would like to participate in panel discussions that include the Proposed Revision Request 1280 issue and, if it remains in the scope of this initiative, the Extended Day-Ahead Market (EDAM) CAISO BAA RSE Shortfalls topic.

11. Please indicate if you would like to present on a different topic, and if so, describe the topic and the problem statement it is associated with:

See response in Section 10.

12. Provide any additional comments not already captured:

The CAISO includes curing and settling CAISO BAA day-ahead RSE shortfalls in the scope of this initiative. The CAISO should remove this item from the scope of this initiative and include it in the Day-Ahead Sufficiency initiative. The causes of EDAM RSE failures are not solely attributable to LSE RA deficiencies. In fact, RA deficiencies are fully resolved prior to the EDAM RSE, because the CAISO assesses the need for additional RA and procures it through its backstop process prior to the RA operational month. Additionally, opportunities to cure EDAM RSE failures will differ from those used to cure RA deficiencies given the differences in the timeframe for identifying and curing RA deficiencies in the year-ahead and month-ahead and the timeframe for identifying and curing EDAM RSE failures in the days prior to the trade date. Including this item in the scope of this initiative presupposes that EDAM RSE failures are directly attributable to RA deficiencies, which is not necessarily the case nor is an RA deficiency the only cause of an RSE failure (generator outages, generation and load not following dispatch, etc., can all be causes of RSE failures as well). For these reasons, the CAISO should move this scope item to the Day-Ahead Sufficiency initiative.