



Stakeholder Comments Template

Resource Adequacy Revised Straw Proposal

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on July 24.

Submitted by	Organization	Date Submitted
<i>Jaime Rose Gannon Michele Kito</i>	<i>CPUC - Energy Division</i>	<i>8/5/2019</i>

Energy Division Staff (hereafter, “ED Staff” or “Staff”) thanks the CAISO for incorporating language to its Revised Straw Proposal that reflects its intention to coordinate with the CPUC on this initiative. The Straw proposal specifically states that “CAISO commits to providing the coordination necessary to align with the LRA’s RA programs.... CAISO will work with LRAs to align RA programs with the current proposal. This collaborative effort includes proposing similar counting rules in the upcoming CPUC RA proceeding.”¹

The Stakeholder engagement plan schedule published in the Revised Straw Proposal² reflects Board approval in Q2 2020. Staff is concerned that the proposed schedule³ is too ambitious and could lead to misalignment between the CAISO’s reliability requirements and the CPUC’s RA program, if the CPUC fails to adopt a forthcoming proposal in an anticipated June 2020 decision. This misalignment could result in two separate RA programs in California. It is very likely that CAISO and stakeholders will need more time to form a workable solution that is superior to the current construct and have its proposal vetted and adopted through the CPUC’s process. As reflected during the July 8th and 9th stakeholder meetings, there are many program details and implementation issues that need further consideration to develop a workable solution. Such large changes to the RA framework will take significant time to work through and implement effectively.

Given the sheer magnitude of issues the CAISO is trying to address in this stakeholder initiative, Staff recommends that CAISO take a narrower approach to enhancing the RA framework. This would entail a prioritization of the issues and phased schedules that match the prioritization. Staff is concerned that addressing too many issues at once could result in sub-optimal solutions that may be no better and possibly worse than the status quo. Staff request the ISO prioritize its issues and then propose several phases that examine these issues in a more focused process rather than the broad scope currently before us.

SUGGESTED PRIORITIES

Staff recommends that CAISO prioritize changes to the RA requirement structure that would limit

¹ RA Enhancements Revised Straw Proposal at 20

² RA Enhancements Revised Straw Proposal at 6

³ RA Enhancements Revised Straw Proposal at 6

reliance on use-limited resources in meeting both system and local requirements and Import/Maximum Import Capability rules. Next, CAISO should prioritize Planned Outage Substitution Obligations and RAAIM/Forced Outage Rules. After these issues have been addressed, CAISO should address FRACMOO and Backstop Enhancements.

Other Means of Fulfilling the Objectives of CAISO's UCAP⁴ and EFORd⁵ Framework

Staff does not currently support the CAISO's proposal to determine system requirements based on UCAP requirements. In general, CAISO has not identified sufficient benefits to support such a shift to the RA program. Staff believes there may be more effective and efficient ways to make the system more reliable. For example, the PRM could be increased to account for load forecast uncertainty, or system requirements could be based on a 1-in-5 weather year rather than a 1-in-2 weather year, which CAISO proposed (for shoulder months) in the current RA proceeding. Additionally, the CAISO could increase the RAAIM penalty to be equal to the soft-offer-cap, which could lead to a decrease in the forced outage rate.

In its proposal, CAISO states that it "has observed the impacts of forced outages exceeding resource margins during some periods." During the stakeholder meeting, CAISO presented forced outage rates in excess of the 15% planning reserve margin for the three days in June when northern California was experiencing a heat wave. While these outage rates are extremely high, viewing them in isolation and not as part of a broader review of forced outage rates – and of whether the system has remained reliable – does not reveal the entire story/problem. Staff requests that the CAISO provide additional analysis looking at historical forced outage rates before and after implementation of RAAIM, as recommended by PG&E at the stakeholder meeting. In addition, Staff supports WPTF's request that the CAISO provide additional data that looks at whether RAAIM is working by providing substitution data for forced and planned outages. Staff would also like additional data on resource technologies that are included in these forced outage rates to shed light on the natures of the forced outages occurring (especially during peak system conditions). For example, useful data would include resource technology types and outage cards submitted. This level of detail will help ensure that a proposed UCAP framework would address the high forced outage rates the CAISO is seeking to mitigate.

It is critical that we first completely understand the problem we are trying to solve before proceeding with detailed solutions to that problem. If the system is less reliable because RAAIM is not working or because load forecast errors have increased, then we need to know by how much and what the drivers are so that we can design a solution that is tailored to those drivers. Staff looks forward to working with the CAISO and stakeholders to review the data and develop solutions to optimally address any issues identified as a result of this more thorough review.

Staff is also concerned that the proposed framework may likely require existing contracts to be reopened, renegotiated and reapproved by the Commission. It is still not clear to Staff if this significant added time and work justifies the potential benefits of the proposed changes. CAISO

⁴ Unforced Capacity (UCAP) attempts to measure how much capacity (MW), adjusted for outages and derates, a resource contributes to reliability during demand periods

⁵ Equivalent Forced Outage Rate on demand (EFORd), also referred to as "effective forced outage rate," is a performance measure that adjusts a resource's potential RA capacity value, accounting for the portion of time a unit is needed but unavailable to deliver due to forced outages.

asserts that the main goals in moving to a UCAP EFORd construct is that it will result in greater reliability. However, it is still not clear, given the data provided, that it would.

Under CAISO's proposal, Utilities may still not be incented to show all the capacity in their portfolios - One of the benefits to move to a EFORd construct is that it will eliminate RAAIM and potentially encourage LSEs to show all their RA to the CAISO rather than holding it back, as they do today, to avoid potential RAAIM penalties. However, there may be other reasons the utilities may not be willing to show excess capacity, having to do with the Power Content Indifference Adjustment (PCIA) charge. The PCIA is an exit fee charged by utilities to California entities that choose to depart from bundled service of the utility and choose another provider of electricity generation through community choice or direct access. The PCIA is calculated by taking the difference between the utility's "**actual portfolio cost**" (which represents the cost related to the utility's power procurement, e.g., utility-owned generation and purchased power), and the "**market value**" of the portfolio. The market value for RA is based on weighted average transaction prices collected by Energy Division. This capacity value (RA price benchmark) is used to value the RA capacity used by the utility to meet its RA requirements. However, the excess (unsold) capacity in the utility's portfolio is to be assigned a de minimus or zero value.

Given the complications associated with PCIA, a utility may not show excess capacity on its RA filing if it would then need to value that capacity at the RA price benchmark, which would decrease its PCIA charge.

CAISO should provide stakeholders with a mockup of 2020 UCAP RA requirements and EFORd counting estimates - Staff requests CAISO provide stakeholders with a mockup of what 2020 requirements would look like under a UCAP EFORd construct. This will allow parties to understand the expected changes to RA procurement requirements and estimate the expected costs to customers. Specifically, Staff requests that CAISO include a draft UCAP resource list for 2020 and aggregated RA requirements. This would allow LSEs to understand the magnitude of additional procurement that may be required and to compare the estimated costs with the potential benefits (savings in RAAIM cost, reliability, etc.).

EFORd Methodologies

CAISO proposes to calculate UCAP values for all resource types that do not rely on the CPUC's effective load carrying capability methodology for determining QC value. Staff notes that CPUCs exceedance methodology should also be exempt from this UCAP calculation, since it would doubly penalize resources for forced outages already included in the exceedance methodology.

In its revised proposal, CAISO proposes to develop EFORd rates based on forced outage data from its Outage Management System (OMS). Staff questions if there is potential for gaming forced outage cards to avoid de-rates to UCAP values. For example, will a resource that has an environmental outage just decide to put in a use limitation reached outage card to avoid lowering its UCAP? Are there strong enough definitions around the outage cards to mitigate gaming? How does opportunity cost bidding for use-limited resources (CCE 3) interact with these use-limited outage cards? Greater clarity around this topic would help parties understand whether the proposed solution would actually lead to less forced outages and a more reliable system.

System RA Showings and Sufficiency Testing

CAISO proposes to conduct two sufficiency tests for system capacity: An individual test and a portfolio deficiency test. These tests are designed to ensure that there is both adequate UCAP to maintain reliability for peak load and that the portfolio of resources, when combined, work together to provide reliable operations during all hours.

With regards to the portfolio assessment, CAISO states, “[i]f the portfolio is unable to serve load under given net load conditions, then CAISO will declare a collective deficiency, provide a cure period, and will conduct backstop procurement using the CPM competitive solicitation process to find the least cost solutions to resolve the deficiency if left uncured.” Staff is supportive of a collective sufficiency test that will then inform backstop procurement or exceptional dispatch **if there is a comparable change to the RA framework that will identify the energy needs that CAISO will be backstopping to.**

CAISO is proposing a sufficiency test, which does not inform upfront procurement and may lead to over procurement of the wrong types of resources. It may also result in leaning between entities. Some LSE may choose to meet all their local requirements with use-limited resources, and some may choose to meet none of their requirements with use-limited resources. If a portfolio deficiency is identified and the ISO has to perform CPM, then all LSEs will pay equally (based on the load share) for the costs.

If the CAISO wants to address operational needs in the planning horizon, then a procurement framework that limits the reliance on use-limited resources’ ability to meet system requirements would be a more optimal path. Staff envisions that this type of framework would look similar to the MCC buckets and encourages CAISO and parties to start looking at ways to modify the existing MCC framework to limit reliance on use-limited resources in meeting both system and local RA requirements.

Staff is not supportive of the proposed individual RA showing incentive tool

CAISO also proposes to develop a new individual RA showing incentive tool, which is intended to provide an incentive for LSEs to show above their UCAP obligations. This tool would penalize LSEs that show less than their UCAP requirement and then distribute those penalties to LSEs that show above their UCAP requirements. Staff is not supportive of this tool for several reasons. First, it ignores the interaction that excess RA procurement has with the PCIA charge, as discussed above. Second, it oversteps/duplicates the RA requirement enforcement jurisdiction of the CPUC. And third, it is duplicative of the CAISO’s monthly CPM Competitive Solicitation Process.

In particular, Staff is concerned that CAISO’s proposal potentially penalizes LSEs for non-compliance and that this is duplicative of the penalties that the CPUC assesses as part of its enforcement responsibilities under Section 380 of the Public Utilities Code, which states:

The commission shall implement and enforce the resource adequacy requirements established in accordance to this section in a non-discriminatory manner. ... The commission shall exercise its enforcement powers to ensure compliance by all load-serving entities.⁶

⁶ §PUC 380 (e)

Must Offer Obligation and Bid Insertion Modifications

Staff has no comment at this time on CAISO's Must offer Obligation proposal.

Planned Outage Process Obligation (POSO) Enhancements

CAISO proposes to develop a planned outage calendar that will provide scheduling coordinators (SC's) more visibility into when a planned outage may require substitution and when it may not. Staff supports greater transparency and more tools to help SCs manage their resources. However, Staff does not believe the CAISO's proposed calendar goes far enough to address the certainty that SCs are seeking regarding planned outages. Under CAISO's current proposal, the SC would still have to replace if the CAISO asked for replacement in the T-25 timeframe, and if the SC didn't replace, then the outage would convert to a forced outage and would be subject to EFORD (which would flow into a reduction to the UCAP value). A calendar may help in mitigating some portion of the replacement risk, however, the proposal carries the same uncertainty that exists today, which is that the outage can be canceled (or substitution required) up to T- 8. This uncertainty will continue to cause SCs to hold on to replacement capacity to manage this risk.

Staff also notes that CAISO's recent BPM change (PR 1122) views the action of changing a planned outage to a forced outage as a potential tariff violation. This rule may have to be changed to allow for the CAISO's proposal to work as intended.

Finally, Staff questions how the POSO process would treat excess RA on individual LSE plans in relation to determinations of replacement requirements on other LSE plans. For example, if LSE 1 shows 20 MW of excess RA and LSE 2 has a resource in its plan that is on planned outage for the month (or part of the month), will the POSO process use the 20 MW of excess in making a replacement decision for the resource in LSE 2's portfolio?

It would also be helpful if CAISO could provide more details regarding the proposed substitution availability calendar, including: the inputs used to calculate the daily headroom, the time horizon the calendar would cover, and the frequency and timing of updates made to the calendar.

RA Import Provisions

CAISO identifies two potential issues associated with RA resources: 1) potential double counting of RA import resources and 2) speculative supply being used on RA showings (i.e., resources bidding at or close to the cap and, if not cleared in the day-ahead, with no further real-time obligation). In addition, CAISO identifies potential objectives to guide potential RA import rule modifications, including the following:

- Creating comparable treatment between internal and external RA resources;
- Ensuring fair and comparable treatment for imports and exports with respect to unforced capacity counting rules; and
- Ensuring coordination with CAISO's extended EIM and day-ahead market enhancement initiatives.

CAISO then proposes two changes for RA imports: 1) requiring specification of the source balancing authority for all import RA, and 2) incorporating CPUC RA import rules in its tariff.

CPUC Staff appreciates CAISO's efforts to address double counting and speculative supply but has the following questions and concerns with CAISO's proposal:

- CAISO indicates that it is proposing to adopt CPUC requirements that require firm energy delivery but also appears to indicate that RA imports can include only a day-ahead bidding obligation. It would be helpful to understand if CAISO is proposing to require actual energy delivery or only a must-offer (or bidding) obligation.
- If CAISO is proposing that import RA only include a day-ahead bidding obligation and no real-time bidding obligation, it would be helpful to understand how CAISO envisions that this would address the speculative supply issue raised by DMM and discussed in CAISO's analyses.

Maximum Import Allocation Process

Staff supports CAISO's efforts to revise the current import allocation methodology to allow for more efficient procurement of import capability. To do this, CAISO proposes to modify its current 13 step import allocation process to include an auction mechanism. Specifically, "CAISO proposes to develop an auction mechanism to sell and allocate all Remaining Import Capability to LSEs, following the current Step 4 (after CAISO has protected for all ETCs, TORs, and Pre-RA commitments in the current process through Step 4)."⁷ Staff requests that CAISO clarify if it plans to limit the amount of import allocations an LSE could procure. By not limiting the amounts an LSE could procure, there could be a potential for LSEs that operate in other roles in the market (third party marketer, generator, etc.) to use the auction process to obtain market power. Staff would also like CAISO to clarify how any unsold RA imports will be allocated. Staff proposes that these be allocated to all LSEs.

Flexible Resource Adequacy

Staff appreciate CAISO's efforts to further develop its flexible capacity proposal but continue to have a number of questions and concerns with CAISO's approach:

- It would be helpful to more clearly understand the problem that CAISO is attempting to address with this proposal. While CAISO has identified its ramping needs over different time frames (3 hours, 1 hour, and uncertainty), CAISO has not provided evidence that it is unable to meet these ramps or sufficiently explained why price signals are insufficient to incent the movement of resources that CAISO needs. Notably, import resources (that do not currently qualify for flexible RA) ramp on nearly a daily basis, presumably in response to price signals and not because of a 17-hour bidding obligation.
- In the next iteration, it would be helpful for CAISO to provide estimates of the various ramps and requirements, as well as the estimated EFC values for all resources (or enough information so that parties could calculate this themselves) to better understand the potential impacts of this proposal.
- In past discussions, CPUC Staff has indicated that it is not clear, based on the ramps in the summer, that a flexible capacity product is necessary, since the net load ramps mostly follow the load ramp, and resources should have sufficient incentives to bid into the market (absent some other underlying or unidentified market failure).

⁷ RA Enhancements Revised Straw Proposal at 51

- It is not clear how CAISO's proposal would interact with the day-ahead flexible ramping product that is being proposed elsewhere and whether this would potentially result in duplicative payments for flexible capacity.

If imports do not have a real-time bidding obligation (as proposed by CAISO in this initiative), it is not clear how imports can provide flexible capacity, which has a real-time bidding obligation under CAISO's current framework. Moreover, if imports are bidding at or near the cap, it is unclear how this comports with the "economic bidding" required under the flexible capacity framework.

Local Resource Adequacy Assessments with Availability Limited Resources

Staff appreciates the additional analysis that has been added to CAISO's most recent local capacity studies (2020 and 2024). As stated in California Public Utilities Code Section 380,

Each load serving entity shall maintain physical generation capacity and electrical demand response adequate to meet its load requirements, including, but not limited to, peak demand and planning and operating reserves. The generating capacity or electrical demand shall be deliverable to locations and at times as may be necessary to maintain electrical service system reliability, local area reliability, and flexibility.⁸

Staff agrees that as we look to the future, use-limited resources will play a greater role in meeting the State's local capacity requirements. We believe that it is necessary to identify these limitations and then use this information to develop a local framework that limits the over-reliance on use limited resources. As discussed above (in the portfolio sufficiency test section), Staff believes these buckets could be similar in concept to the MCC buckets or the flex capacity buckets. CAISO has taken the first step through its LCR study process to identify these needs, and the next step should be to structure the RA procurement framework to ensure that LSEs are buying their fair share of the local reliability requirement needs.

Meeting Local Capacity Needs with Slow Demand Response

Staff does not offer an opinion on slow demand response at this time but reserves the right to do so in further iterations of CAISO's proposal.

Backstop Capacity Procurement Provisions

CAISO proposes to expand its CPM authority to three new areas, including: individual LSE system UCAP deficiencies, inability to serve load in the collective portfolio sufficiency test, and inability to procure enough local resources to meet the local portfolio test.

While CAISO is adding new CPM authority, it is not removing any existing authority. Staff asks CAISO to further justify why it would need both System NQC deficiencies and System UCAP deficiencies CPM authority.

⁸ §PUC 380 (c)

The role of CPM backstop as established in CAISO's recent RMR CPM enhancement initiative is to backstop the RA program. However, the proposed addition to its backstop procurement authority goes beyond the RA program requirements, to the hourly needs of the system and local areas. Without defining and allocating those requirements to LSEs, CAISO is no longer backstopping to the RA program but backstopping to meet its system and local operational needs. As noted above, Staff would like there to be a comparable change to the RA framework that identifies these precise resource needs and RA requirements prior to expanding the backstop provisions to encompass these needs.

Currently, CAISO's tariff only allows it to backstop to individual LSEs if a collective deficiency is identified.⁹ The tariff specifically states: "the CAISO shall not designate CPM Capacity under this Section 43A.2.3 unless there is an overall net deficiency in meeting the total annual or monthly Demand and Reserve Margin requirements, whichever is applicable, after taking into account all LSE demonstrations in their annual or monthly Resource Adequacy Plans". CAISO asserts that under its proposal, this would still be the same. Staff is supportive of CAISO taking this approach for individual LSE deficiencies.

CAISO also proposes to implement a UCAP incentive mechanism to disincentivize LSEs from leaning on other LSEs' excess procurement. Staff believes that this appears to move into the enforcement realm and does not believe that it is appropriate for CAISO to enforce RA requirements through implementation of a UCAP deficiency tool. As noted earlier, the UCAP deficiency tool would duplicate the CPUC's efforts to enforce the RA program, which is the CPUC's jurisdiction, as directed under California Public Utilities Code Section 380.

The UCAP deficiency tool is also duplicative of the CASIO's CSP and CPM mechanism, which is penalizing deficient LSEs (by way of CPM cost allocation) and awarding other LSEs that have bid their excess RA into the CSP (by way of awarding their resource a CPM revenue). If an LSE shows excess RA on its plan, it cannot offer its resource into the CSP. Therefore, CAISO is providing two competing mechanisms that would attempt to monetize an LSE's excess RA. Staff does not see any material change in the reliability outcome (either a resource would be awarded a CPM revenue, or it would show up as excess on an RA plan) or one that would justify the costs of developing such a tool.

⁹ CAISO Tariff Section 43A.2.3 - SC Failure to Show Sufficient Resource Adequacy Resources