California ISO

Stakeholder Comments Template

Resource Adequacy Enhancements

This template has been created for submission of stakeholder comments on the Resource Adequacy Enhancements fifth revised straw proposal that was published on July 7, 2020. The proposal, stakeholder meeting presentation, and other information related to this initiative may be found on the initiative webpage at: http://www.caiso.com/StakeholderProcesses/Resource-Adequacy-Enhancements

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on ~~**July 30, 2020**~~ **August 7, 2020** (per July 17, 2020 Market Notice)

Submitted by	Organization	Date Submitted
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Please provide your organization's overall position on the RA Enhancements fifth revised straw proposal:

☐ Support
☐ Support w/ caveats
☐ Oppose
☐ Oppose w/ caveats
☒ No position

Please provide your organization's comments on the following issues and questions.

1. System Resource Adequacy

Please provide your organization's feedback on the System Resource Adequacy topic as described in section 4.1. Please explain your rationale and include examples if applicable.

MRP appreciates the CAISO's desire to create incentives to improve outage performance by tying the amount of RA capacity a resource can sell to its forced outage performance. However, MRP is not sure the CAISO appreciates the negative effect that annually-changing UCAP values will have on the bilateral RA market – a market the CAISO seeks to extend to three years forward for all RA products (system, flex and local).

The CAISO has pointed to PJM and ISONE's adoption of UCAP to support its desire to adopt UCAP. Taken in whole, the comparisons are inapt. While PJM and ISONE have UCAP paradigms in place, those two markets also have in place multi-year forward single-price capacity clearing markets with multiple reconfiguration opportunities. Additionally, these markets' RA structures apply to durations longer than a single month. If the CAISO, in seeking to adopt UCAP, were also to propose implementing similar structures, which would help mitigate the risks that market participants in the CAISO footprint face with changing UCAP values, MRP would be more amenable to adopting a UCAP structure in California. MRP remains opposed to implementing a UCAP paradigm without also implementing these other balancing and mitigating market structures.

a. Please provide your organization's feedback on the Determining System RA Requirements topic as described in section 4.1.1. Please explain your rationale and include examples if applicable.

   MRP questions the CAISO's statement that "a planning reserve margin should assume forced outage rates are the same regardless of load." (RAE 5RSP at page 10). Resources will run more, and more often, at higher loads. Given that, therefore, MRP questions the idea that forced outage rates are or should be independent of load levels.

   MRP appreciates the CAISO's support for using the 1-in-5 peak demand forecast (RAE 5RSP at page 12). Notably, the CAISO proposes to use the 1-in-5 system peak demand forecast as the basis for system RA requirements *in addition to* implementing a UCAP paradigm. Noting MRP's concerns with UCAP (which stem from its concerns about the impact on bilateral contracting), MRP suggests, until the market framework has been broadly revised to facilitate a UCAP paradigm, that the CAISO focus first on moving to system RA requirements that are based on the 1-in-5 peak demand forecast, which will ensure a greater pool of supply.

b. Please provide your organization's feedback on the Unforced Capacity Evaluations topic as described in section 4.1.2. Please explain your rationale and include examples if applicable.

   Definitions

   The CAISO's proposed outage definitions, taken from Operating Procedure RC 0630, are:

   - *Forced Outage – Facility/equipment that is removed from service real-time with limited or no notice*
   - *Urgent Outage – Facility/equipment that is known to be operable ,yet carries an increased risk of a Forced outage occurring. Facility/equipment remains in service until personnel, equipment and/or system conditions allow the outage to occur. Urgent outages allow Facilities to be removed from service at an optimal time for overall system reliability. For Urgent outages, the work may or may not be able to wait for the Short-Range outage window.*
   - *Planned Outage – Facility/equipment outage with enough advance notice to meet short range submittal requirements.*

- *Opportunity Outage – A Facility/equipment outage that can be taken due to a change in system conditions, weather or availability of field personnel. Opportunity outages did not meet the short range window requirements.*

The CAISO has proposed that only forced and urgent outages, as defined above, would be included in UCAP calculations. The CAISO has also proposed to retain opportunity outages, which MRP supports.

MRP takes no position on these definitions as this time. MRP agrees that there is a benefit to the CAISO using the same definitions for its market operations as for its RC operations.

Exclusions

The CAISO has proposed to exclude outages that are "…outside normal utility operations, significantly affect the resource's UCAP value, and are unlikely to recur within the same UCAP calculation period of 3 years for possible exemption." (RAE 5RSP at 17). While MRP appreciates the CAISO's willingness to consider exclusions, this proposed approach does not go far enough.

MRP remains opposed to the CAISO including in its UCAP calculations outages that are beyond the resource owner's control, such as outages due to transmission outages (including wildfires) and outages due to the inability to secure fuel due to gas system problems, not due to the owner's failure to secure fuel. Because generators cannot take any action to affect such outages, it is inconsistent with causation principles for generator owners to suffer the economic consequences of such outages. (MRP also notes that generators cannot mitigate these kinds of disruptions even by signing firm inter-state fuel supply contracts) If the CAISO wanted to create the strongest, most equitable economic incentives to address and mitigate such outages, it would directly penalize the transmission provider or the fuel provider, not the generator, for such outages.

Again, the CAISO has pointed to PJM and ISONE's current paradigm, in which these kinds of outages count against a generator's UCAP value, to justify its position. And, again, these entities have radically different market structures in place in addition to their UCAP-based counting rules. Where market structures differ substantially, certain market design aspects may be reasonable in one footprint but not reasonable in another.

Further, in MRP's experience, PJM experiences far fewer of the kind of outage events (like generator outages due to transmission outages) that PJM includes in their generator UCAP calculations.

To reiterate: if the CAISO wants to adopt the PJM and ISONE UCAP structure, it should propose to adopt *all* the other supporting market features in total, and not just propose to adopt UCAP piecemeal.

UCAP Calculation

The CAISO's formula for determining seasonal availability factors is reasonable.

The CAISO's proposal to evaluate availability performance across the top 20% supply cushion hours by season instead of the top 100 hours by season is an improvement. It may yield somewhat anomalous or counterintuitive results (like including morning load ramp hours in the assessment) but it is more consistent with the standard 24 x 7 RA MOO than a very limited set of assessment hours would be.

For wind and solar resources, the CAISO has proposed to use the resource's ELCC-based NQC value as the UCAP value (RAE 5RSP at page 35.) Given the CAISO's proposal to assess UCAP availability across the tightest 20% of supply cushion hours, MRP offers the CAISO also should evaluate the overall availability of these types of resources across the same 20% tightest supply cushion hours.

ELCC measures a resource's ability to serve an incremental amount of load across all hours over time. As a result, an ELCC methodology will give a resource credit for its contribution for serving load in some hours, during which the CAISO will not assess the resource's availability performance. Using ELCC to set UCAP for some resources but using availability performance in the tightest 20% supply cushion hours for other resources is both discriminatory and inconsistent with the purpose of going to UCAP in the first place.

MRP does not have a specific proposal as to how to make the availability assessments among resources equitable; perhaps the CAISO could use for variable energy resources some kind of load-weighted exceedance approach applied consistently across the same supply cushion hours for which the CAISO will assess availability for other resources (though an exceedance approach will require also adopting a threshold exceedance value, which is subjective).

In any case, MRP remains opposed to using fleet-average ELCC across one set of hours to set UCAP for intermittent resources while using unit-specific evaluations across a different and more impactful set of assessment hours to set UCAP values for other resources.

i. Please provide your organization's feedback on whether the ISO should establish a dead band around a resource's UCAP value given the associated benefits and burdens, as described in section 4.1.2. Please explain your rationale and include examples if applicable.

   MRP agrees with the CAISO that, if the CAISO implements a UCAP construct, allowing for a dead band (i.e., allowing for an amount of unavailability below which the CAISO would not adjust the UCAP value of the resource, such as deeming a resource with 98% availability to be 100% available) would require the CAISO to secure additional capacity

to compensate for the amount of the dead band as it is applied to the RA fleet.

ii. Please provide your organization's feedback on Option 1 and Option 2 for calculating UCAP for new resources without three full years of operating history, as described in section 4.1.2. Please explain your rationale and include examples if applicable.

Option 1:

- Year 0 (i.e. before actual operational data is available): 45% class average, 35% class average, 20% class average
- Year 1: 45% year 0 performance, 35% class average 20% class average
- Year 2: 45% year 1 performance, 35% year 0 performance, 20% class average
- Year 3: 45% year 2 performance, 35% year 1 performance, 20% year 0 performance

Option 2:

- Year 0 (i.e. before actual operational data is available): NQC
- Year 1: 70% year 0 performance, 30% NQC
- Year 2: 55% year 1 performance, 35% year 0 performance, 10% NQC
- Year 3: 45% year 2 performance, 35% year 1 performance, 20% year 0 performance

MRP supports Option 1, which should yield UCAP values for new resources that are in line with fleet-average performance

MRP continues to remain concerned that assessing a resource's UCAP performance over a three-year period could result in a resource's UCAP value remaining low in the year following an owner investing in major maintenance, which should improve the resource's availability. MRP asks the CAISO to consider weighting the most recent year more heavily in situations in which the resource owner has performed major maintenance on the generating unit.

iii. Please provide your organization's feedback on the ISO's approach to use the historical availability during the RAAIM hours for years prior to 2019 and the historical availability during the 20% tightest supply cushion hours in years 2019 and beyond for hydro resources, as described in section 4.1.2. Please explain whether this approach is necessary or preferred to the standard UCAP calculation to reflect hydro availability.

MRP supports this approach, which is consistent with the approach recently adopted in the CPUC's RA proceeding for assigning RA value to hydro resources.

iv. Please provide your organization's feedback on the modifications for UCAP counting rules for storage resources as described in section 4.1.2. Please explain your rationale and include examples if applicable.

The CAISO's proposal for assessing the availability of energy storage resources (see formula below) is reasonable.

$$Availabiltiy = \min(ABS(Effective\ Min), Effective\ Max, \frac{Effective\ Energy}{4})$$

c. Please provide your organization's feedback on the System RA Showing and Sufficiency Testing topic as described in section 4.1.3. Please explain your rationale and include examples if applicable.

MRP supports:

- A stochastic portfolio assessment that uses only shown RA resources (RAE 5RSP at 40). MRP looks forward to the CAISO proposing for consideration in this initiative (1) the amount of UCAP portfolio deficiency that will require backstop procurement and (2) the amount of UCAP procurement required to cure the deficiency.
- The proposed UCAP deficiency tool, which would levy a financial penalty on an LSE that had failed to procure their prescribed amount of UCAP, with the penalty proceeds going to LSEs that met or exceeded their UCAP obligations.

d. Please provide your organization's feedback on the Must Offer Obligation and Bid Insertion Modifications topic as described in section 4.1.4. Please explain your rationale and include examples if applicable.

The CAISO has proposed that the "standard" must-offer obligation ("MOO") would be an obligation to bid into the CAISO's Day-Ahead market on a 24x7 basis ((RAE 5 RSP at 45-46). The CAISO has also proposed that certain resources (Eligible Intermittent Resources, Non-generator resources, Proxy Demand Resources, Participating Load, Reliability Demand Response Resources, Regulatory Must-Take and Run-of-the-River Hydro) would be exempt from the standard MOO, as shown in Table 12. MRP requests that the CAISO identify in a future RAE proposal iteration how much capacity (both nameplate and RA) is associated with the categories of resources the CAISO proposes to exempt from the standard MOO.

Additionally, the CAISO has proposed that modifying the Maximum Cumulative Capability ("MCC") buckets would better address the increasing amounts of availability-limited resources than subjecting these resources to a MOO with which they.cannot comply. While MRP does not disagree with the CAISO's position on this issue, MRP notes that the reformation of the MCC buckets is being handled in the CPUC's RA proceeding, outside of the CAISO's control, and so while the ultimate reformation of the MCC buckets may support the CAISO's RA MOO direction, it also may not.

i. Please provide your organization's feedback on generally defining variations to the must offer obligations and bid insertion into the day-ahead market based on resources type, as described in Table 12 in section 4.1.4. Please explain your rationale and include examples if applicable.

Please see the response immediately above.

e. Please provide your organization's feedback on the Planned Outage Process Enhancements topic as described in section 4.1.5. Please explain your rationale and include examples if applicable.

MRP strongly supports the CAISO moving ahead with Option 1 - to increase the planning reserve margin in the off-peak months to provide capacity margin that allows generators to take needed outages.

f. Please provide your organization's feedback on the RA Import Requirements topic as described in section 4.1.6. Please explain your rationale and include examples if applicable.

MRP is disappointed that the CAISO appears to be signaling a willingness to backtrack significantly from its earlier proposals regarding RA imports. The earlier CAISO positions would have put RA imports on more equitable footing with internal resources, addressed concerns about speculative supply and double counting, and supported the spirit of the RA program, namely, to ensure that LSEs secure physical, deliverable capacity capable of reliably serving California demand well in advance of the need.

That said, MRP supports the CAISO's proposal to impose an "interim" obligation on RA imports to offer in the CAISO's real-time market until the CAISO's Day-Ahead Market Enhancements structure, which would limit the real-time MOO to resources with Day-Ahead schedules (including imbalance reserve and reliability capacity schedules), is implemented.

i. Please provide your organization's feedback on the issue of whether firm transmission service on the last line of interest to the CAISO BAA will ensure reliability and is feasible, or whether the CAISO should require point-to-point, source to sink firm transmission service as originally proposed, as described in section 4.1.6 page 68. Please explain your rationale and include examples if applicable.

MRP does not support requiring RA imports to secure firm transportation only on the last segment of transmission delivering the RA import to the CAISO BAA (RAE 5RSP at 66-70). MRP also does not support the CAISO's proposal to not require RA import suppliers to demonstrate that they have secured firm transmission in, at least, the month-ahead showing timeframe, but instead allow RA import suppliers to demonstrate that they have procured firm transmission service as late as 3 PM on the day prior to the Trade Day. (RAE 5RSP at 69).

Neither of these things are remotely consistent with the fundamental purpose of California's RA program, which is to ensure that an adequate amount of physically identifiable and deliverable generation is secured well in advance. This proposal, which exacerbates the inequitable and discriminatory treatment of RA imports relative to internal generation providing the exact same system RA product, represents a significant

and unfortunate retreat from the CAISO's earlier positions regarding requirements for RA imports.

MRP strongly agrees with the CAISO that non-specified energy contracts should not be permitted to count towards RA requirements. (RAE 5RSP at 64-65). As the CAISO notes, given that the requirement for RA imports to be backed by operating reserves is no longer relevant, there is no reason to differentiate between non-resource-specific RA import energy contracts and energy contracts backed by unspecified internal resources, which were disqualified from providing RA capacity years ago.

ii. Please provide your organization's feedback on other BAA's systems bordering the CAISO and whether such a "last line of interest" proposal is feasible and would effectively support RA import capacity dependability and deliverability, as described in section 4.1.6 page 68. Please explain your rationale and include examples if applicable.

Please see the answer above.

iii. Please provide your organization's feedback on whether a non-compliance penalty or other enforcement actions are necessary if delivery is not made under firm transmission service, as described in section 4.1.6 page 69. Please explain your rationale and include examples if applicable.

The CAISO's proposal to impose a penalty on RA imports that fail to deliver their RA quantity neither remedies the proposed discriminatory treatment nor ensures reliability, but simply adds an expected value calculation – the extent to which incurring the penalty would offset forward revenue from RA sales - to RA importers' financial considerations.

iv. Please provide your organization's feedback on how to convey the last line of interest, as described in section 4.1.6 page 69. Please explain your rationale and include examples if applicable.

MRP does not support this proposal and has no comment.

v. Please provide your organization's feedback on the options proposed in section 4.1.6 and any other potential mechanisms that would best ensure RA imports are dependable and deliverable if the CAISO were to adopt, as an alternative, a "last line of interest" firm transmission service requirement. Please explain your rationale and include examples if applicable.

MRP does not support this proposal and has no comment.

g. Please provide your organization's feedback on the Operationalizing Storage Resources topic as described in section 4.1.7. Please explain your rationale and include examples if applicable.

The CAISO's proposal to enforce a minimum state of charge requirement on storage resources in the real-time market to ensure the resources are capable of following their DA schedules – which would ensure that they can deliver energy across a contiguous four-hour period consistent with current rules for counting storage resources towards meeting RA requirements - is reasonable.

While it is reasonable to assume that non-energy-limited resources can react to real-time events by increasing input and still retain sufficient energy to meet their day-ahead schedules, the same cannot be assumed about limited duration energy storage devices. Nor can it be assumed that a storage device that discharges in an unscheduled way in response to a real-time event earlier in the day can be economically charged, or even sufficiently charged, to be ready to meet its day-ahead schedule (presuming that schedule is to discharge across the four hours of the net load peak demand period). While there inevitably will be times that it might have been better, both from a reliability standpoint and an economic standpoint, for the storage resource to have discharged in response to a real-time event rather than to have its charge preserved to operate across the net load peak demand period, duration-limited storage resources cannot both "have their charge and use it, too".

2. Flexible Resource Adequacy

Please provide your organization's feedback on the Flexible Resource Adequacy topic as described in section 4.2. Please explain your rationale and include examples if applicable.

Given the significant changes that would result from implementing the modifications proposed in the Day-Ahead Market Enhancements initiative, MRP supports the CAISO deferring changes to flexible capacity requirements pending the development and possible deployment of the DAME.

3. Local Resource Adequacy

Please provide your organization's feedback on the Local Resource Adequacy topic as described in section 4.3. Please explain your rationale and include examples if applicable.

a. Please provide your organization's feedback on the UCAP in Local RA Studies topic as described in section 4.3.1. Please explain your rationale and include examples if applicable.

Performing the Local Capacity Requirements (LCR) studies in NQC terms, then converting the results to UCAP requirements via a TAC-level NQC-to-UCAP translation factor, seems to introduce the potential for mismatches between local area needs (especially at the sub-area level) and procured UCAP.

In this simplified example – consisting of nine 100 MW units with different UCAP values in three different sub-areas, there is sufficient UCAP to meet the total of the sub-area LCR, but there is not enough UCAP to meet the LCR in sub-area 3:

	LCR	Resource 1	Resource 2	Resource 3	UCAP in sub-area
TAC					
Sub-area 1	250	85	90	95	270
Sub-area 2	250	80	85	90	255
Sub-area 3	250	75	80	85	240

Total TAC NQC 765
Total TAC UCAP 900

MRP respectfully requests the CAISO address these questions in a subsequent proposal: Would the CAISO engage in backstop procurement in sub-area 3 in this example? If not, why not?

4. Backstop Capacity Procurement Provisions

Please provide your organization's feedback on the Backstop Capacity Procurement Provisions topic as described in section 4.4. Please explain your rationale and include examples if applicable.

a. Please provide your organization's feedback on the Capacity Procurement Mechanism Modifications topic as described in section 4.4.2. Please explain your rationale and include examples if applicable.

Within the context of MRP's overall position on UCAP, MRP supports the CAISO seeking the authority to exercise its backstop procurement authority for system UCAP deficiencies.

MRP respectfully urges the CAISO to modify its procurement authority to **require** the CAISO to exercise its procurement authority when there is a system UCAP deficiency. If UCAP is, in fact, the right product to help the CAISO meet its reliability needs with a changed and changing fleet, the CAISO should not have discretion as to whether to procure UCAP when there is a deficiency – it should be obligated to.

MRP is concerned that the CPUC's recent decision to allow the central procurement entities to defer procurement to the CAISO if they believe (based on undefined criteria) that a supplier is attempting to exercise market power will put even more pressure on the CAISO to use its backstop authority to ensure reliability. MRP respectfully urges the CAISO to use its backstop authority as needed without hesitation.

b. Please provide your organization's feedback on the Making UCAP Designations topic as described in section 4.4.3. Please explain your rationale and include examples if applicable.

MRP has no comment on this topic.

c. Please provide your organization's feedback on the Reliability Must-Run Modifications topic as described in section 4.4.4. Please explain your rationale and include examples if applicable.

   i. Please provide your organization's feedback on an appropriate availability incentive design to apply to RMR resources after the removal of the RAAIM tool, as described in section 4.4.4. Please explain your rationale and include examples if applicable.

      MRP respectfully urges the CAISO to restore and use the availability mechanism contained in the original RMR contract.

d. Please provide your organization's feedback on the UCAP Deficiency Tool topic as described in section 4.4.5. Please explain your rationale and include examples if applicable.

   MRP supports the CAISO's proposal. The CPM soft-offer cap level is a reasonable penalty amount to charge deficient LSEs.

5. Please provide your organization's feedback on the implementation plan, including the proposed phases, the order these policies must roll out, and the feasibility of the proposed implementation schedule, as described in section 5. Please explain your rationale and include examples if applicable.

The CAISO's new proposed phased implementation plan is as follows:

Phase One: (2021 for RA year 2022)

- RA Import provisions
- Planned outage process enhancements
- Local studies with availability limited resources CPM clarifications
- Operationalizing Storage
- UCAP - Phase 1
- Portfolio Assessment - Phase 1

Phase Two: (2022 for RA year 2023)

- UCAP - Phase 2
- Portfolio Assessment - Phase 2
- Must offer obligations and bid insertion rules
- Flexible resource adequacy

As noted above, MRP opposes implementing UCAP without simultaneously implementing the market mechanisms used by other ISOs to allow market participants to manage their UCAP risks. The proposed implementation plan includes none of those market mechanisms in place in other ISOs. In that light, while the CAISO's proposed implementation may appear reasonable in isolation, MRP cannot support it – in isolation – without the market mechanisms needed to mitigate UCAP risk.

6. Please provide your organization's feedback on the proposed decisional classification for this initiative as described in section 6. Please explain your rationale and include examples if applicable.

MRP has no comment on this topic.

Additional comments

Please offer any other feedback your organization would like to provide on the Resource Adequacy Enhancements fifth revised straw proposal.

MRP has no additional comments.