California ISO

Stakeholder Comments Template

RA Enhancements

This template has been created for submission of stakeholder comments on the straw proposal part two that was published on February 28. The paper, Stakeholder meeting presentation, and other information related to this initiative may be found on the initiative webpage at:
http://www.caiso.com/informed/Pages/StakeholderProcesses/ResourceAdequacyEnhancements.aspx

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on March 20.

Submitted by	Organization	Date Submitted
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Please provide your organization's comments on the following issues and questions.

Calpine welcomes the opportunity to comment on the RA Enhancements, Straw Proposal—Part 2 ("the straw proposal"). The straw proposal would make several significant and inter-related changes to aspects of the RA program administered by CAISO. First, it would assess compliance with certain RA requirements based on unforced capacity ("UCAP") rather than NQC/installed capacity ("ICAP"). Because the amount of UCAP that a supplier sells prospectively would be reduced to account for historical forced outages, the UCAP counting mechanism itself would provide the primary incentive to ensure RA availability, potentially obviating the need for the CAISO's current mechanism for encouraging the availability of RA capacity, RAAIM. Along with the transition to UCAP, the straw proposal includes new tests by which it would assess the sufficiency of LSE-specific and overall procurement of RA. The straw proposal also addresses potential changes to how the transmission capacity that is required to import RA capacity, MIC, is allocated.

As discussed in more detail below, while Calpine agrees with the CAISO that the transition to UCAP could simplify RA compliance as well as outage management, Calpine is concerned that the transition to UCAP might introduce new complexity if LRAs such as the CPUC do not adopt similar changes. In the event that they do not, the CAISO and LRAs potentially would be relying on two similar but not identical ways of measuring capacity towards RA compliance and sufficiency, potentially creating confusion about what combinations of resources satisfy both LRA and CAISO requirements. Calpine is

also not convinced that UCAP is the best way to encourage performance when the CAISO most needs resources. Calpine generally favors stringent performance incentives, such as those in New England and PJM, that reward actual performance, i.e., the provision of energy or AS, during the most stressed system conditions.

Calpine is very supportive of the CAISO implementing new tests to validate that LSE-specific and overall RA procurement meets reliability objectives, regardless of whether the CAISO implements UCAP. As Calpine, the CAISO, and others have argued in the CPUC RA proceeding, the 15% PRM that is used by the CPUC to set system RA requirements and is currently used by the CAISO to validate system RA procurement by CPUC-jurisdictional LSEs probably does not meet objective reliability criteria, such as 1 event in 10 years, outside of the summer months. Calpine encourages the CAISO to adopt new tests to ensure that RA procurement satisfies objective reliability criteria.

1. Review of counting rules in other ISO/RTO's

Please provide your organization's feedback on this topic, described in Section 4.1. Please explain your rationale and include examples if applicable.

Calpine believes that the straw proposal's characterization of counting rules in other ISO/RTOs is largely accurate.

2. Capacity counting and availability best practices

Please provide your organization's feedback on this topic, described in section 4.2. Please explain your rationale and include examples if applicable.

Calpine believes that the straw proposal's characterization of counting and availability best practices in other ISO/RTOs is largely accurate. Calpine would characterize the practices as "common" rather than "best." Calpine disputes the assertion in the straw proposal that it would be impossible for the CAISO to introduce performance incentives similar to ISO-NE's Pay-for-Performance ("PFP") or PJM's Capacity Performance ("CP") because CAISO does not run a centralized capacity market. While the assertion may be true in a mechanical sense, i.e., the CAISO cannot adjust capacity payments because it does not generally control them, Calpine sees no reason that the CAISO could not administer a set of similar incentives that reward actual performance, i.e., the provision of energy or AS, during the most stressed system conditions.

Calpine notes that performance incentives might address some of the CAISO's concerns with RAAIM. For example, under PFP, all resources, including non-capacity/RA resources, are eligible for performance payments, so PFP encourages the availability and market participation of non-RA resources. (Non-RA/capacity resources are not subject to the same penalties for poor performance as RA/capacity resources.)[1] Finally, unlike RAAIM, which rewards compliance with the must-offer obligation but not actual performance, PFP and CP reward actual performance. With respect to the CAISO's concern that does not encourage LSEs to show RA capacity in excess of what they need

[1] For example, see slide 16 of https://www.iso-ne.com/static-assets/documents/2018/06/2018-06-14-egoc-a4.0-iso-ne-fcm-pay-for-performance.pdf.

to meet their RA requirements, it is not obvious to Calpine why RA rules should encourage such behavior given that a fundamental premise of the RA program is that the CAISO should be able to maintain reliability with shown resources if LSEs meet showing/compliance requirements.

3. RA counting rules and assessment enhancements

Please provide your organization's feedback on the following sub-section topics, described in section 4.3.

Please indicate any analysis and data review that your organization believes would be helpful to review on the this topic. Please provide details and explain your rationale for the type of data and analysis that you suggest.

a. Calculating NQC, UCAP, and EFC values topic, described in section 4.3.1.

Calpine has the following concerns about the proposed resource counting methodologies in section 4.3.1.

First, Calpine is not convinced that measuring forced outages over a broad 16 hour window on all days in order to calculate forced outage rates that will then be used to derate a resource's NQC to determine its UCAP will adequately differentiate between resources and encourage the type of performance that ultimately will assure reliability. Repeatedly, in both modeling and reality, the CAISO and others have demonstrated that, at least in the present and near future, the most critical periods for reliability are late afternoon/early evening hours in the late summer/early fall. What Calpine understands as the CAISO proposal to focus on a year-round (or seasonal) 16-hour window would treat two resources the same, for example, if they have the same forced outage rate but one is consistenly available midday but not during the critical late afternoon/early evening hours and the other is consistently available in the hours that matter. Relatedly, it appears to Calpine that the straw proposal would reward availability in different times of year equally when obviously performance is more important in certain months. Further, Calpine fears that measuring forced outage rates over broad windows could inadvertently reward units that do not run very much and hence are at minimal risk of forced outage. If the CAISO implements UCAP, Calpine encourages the CAISO to consider narrower windows for measuring forced outage rates more focused on their actual reliability needs. For example, the straw proposal observes "…the peak load and the largest net load ramps are now occurring during the same hours," presumably late afternoon early evening hours. Why not focus performance measurement on those hours.

Calpine also is not sure that UCAP accurately captures a resource contribution to reliability prospectively. For example, a resource might experience a major forced outage in one year but replace or upgrade equipment in the process of addressing the outage. Presumably, its UCAP would be low for several years due to the outage, but it should be significantly more reliable than it was before the outage after replacing or upgrading equipment.

Second, the straw proposal suggests that the ELCC values that are currently used by the CPUC to determine the QC of wind and solar resources would not need to be adjusted for forced outages to convert them to UCAP terms because the wind and solar generation profiles that are used in the development of the ELCC values already reflect forced outages. This interpretation of the CPUC's ELCC methodology should be validated with the CPUC.

Third, Calpine does not understand the CAISO's proposal to convert flexible RA requirements to UCAP terms. By keeping the same requirements but derating how resources count towards the requirements, is the CAISO effectively proposing to increase the requirements? In addition, by scaling a resource's EFC to its UCAP, the CAISO is proposing to shrink a resource's EFC uniformly to account for a resource's forced outage rate. A resource's forced outage rate potentially reflects both full and partial outages. For resources with non-zero Pmins, a partial outage is likely to impact a resource's dispatchable and potentially flexible range disproportionately, so the CAISO may want to consider treating partial and full outages differently with respect to calculating EFCs.

Fourth, Calpine is concerned that the straw proposal would effectively tie how much flexible capacity a resource can sell to the amount that it has bid economically into energy and AS markets historically. Given that bidding is behavioral rather than physical and can be changed easily in response to appropriate incentives, a resource's ability to sell flexible capacity, a commitment to bid, prospectively, should not necessarily be tied to past behavior when the resource might have been subject to different contractual arrangements, for example. In lieu of the approach in the straw proposal, the CAISO may want to retain an availability incentive similar to RAAIM to ensure that flexible RA resources are offered economically.

Finally, Calpine does not believe that it is appropriate to reduce the UCAP of a resource to reflect forced outages that occur when it is not an RA resource, because such resources are not being compensated to perform the maintenance that would assure their availability. This issue could be addressed by effectively categorizing all forced outages of non-RA resources as planned for the purposes of calculating UCAP. (Similarly, Calpine believes that non-RA resources should not be subject to performance penalties although they might be eligible for performance bonuses, as under PFP.)

However the CAISO decides to determine forced outage rates to calculate UCAP values, it should be consistent with how the CAISO determines the UCAP requirements and tests the adequacy of UCAP showings. For example, if measuring forced outage rates over a narrower time window leads to generally higher forced outage rates then the adjustment of ICAP PRMs to comparable UCAP PRMs should reflect such higher average forced outage rates. Similarly, to the extent that the CAISO runs an LOLE model to determine the adequacy of UCAP showings, it should use the same forced outage rates applied over the relevant time windows that it is using to calculate UCAP values.

b. Determining System, Local, and Flexible RA requirements topic, described in section 4.3.2. Please explain your rationale and include examples if applicable.

Calpine is not convinced that the CAISO's proposed approach to developing UCAP requirements will ensure that sufficient UCAP capacity is secured. The straw proposal suggests that operating reserves requirements added to 1-in-2 peak load forecast should constitute a floor on UCAP requirements. Calpine is concerned that this may constitute a low floor. As the straw proposal describes, other markets tend to calculate UCAP requirements by adjusting reliability-based ICAP PRMs downward to account for average forced outages. Calpine would appreciate a demonstration that adjusting reliability based PRMs, i.e., ones that meet a reliability standard, such as 1 event in 10 years, to account for forced outages yields UCAP PRMs comparable to the ones yielded by the CAISO's proposed approach.

c. RA showings, supply plans, and assessments topic, described in section 4.3.3. Please explain your rationale and include examples if applicable.

Calpine strongly supports rigorous assessments of both LSE-specific and aggregate showings. Regardless of whether the CAISO implements UCAP or maintains the current NQC-based approach, Calpine recommends assessing LSE showings using PRMs that are based on objective reliability standards, such as 1 event in 10 years, i.e., these might vary by month and diverge from the 15% PRMs (in NQC/ICAP terms) to which most load in CAISO is currently subject.

Relatedly, in its proposed system sufficiency assessment, Calpine recommends that the CAISO test showings in aggregate in an LOLE model to assure that the portfolio meets an objective reliability criterion such as 1 event in 10 years. (For example, the CAISO might use the same general stochastic approach as has been used in the last few Summer Assessments.) Ideally, if the PRMs that are used to check LSE-specific procurement are based on a similar analysis and the resource counting conventions used to validate LSE-specific showings are suitably accurate, the system sufficiency assessment should not reveal any new deficiencies that aren't already captured through the LSE-specific validations.

With respect to market participation obligations for RA resources under a UCAP approach, Calpine agrees with the CAISO that a bid insertion approach is preferable to continuing rely on RAAIM to encourage market participation or treating the failure to submit a bid or schedule as a forced outage.

In the event that the CAISO implements UCAP, Calpine also supports the simplification of the planned outage approval process in the straw proposal, i.e., that the CAISO will approve planned outages in the order in which they are received as long as the resource for which a planned outage has been requested has not been shown and is needed for any LSE to satisfy its UCAP requirements.

d. Backstop capacity procurement topic, described in section 4.3.4. Please explain your rationale and include examples if applicable.

Calpine supports the expansion of the CAISO's CPM authority to allow it to cure LSE or collective deficiencies in UCAP showings in the event that the CAISO implements UCAP.

With respect to how the CAISO should address LSE-specific UCAP deficiencies, Calpine prefers Option 1 (the CAISO would use CPM to cure the LSE-specific deficiency even if sufficient UCAP has been shown in aggregate) or Option 3 (to the extent that an LSE is deficient but sufficient UCAP has been shown in aggregate, the deficient LSE would pay a penalty to LSEs who have shown more UCAP than they need). Under Option 3, a logical basis for the penalty payment would be the CPM soft offer cap price. This would lead LSEs to face similar incentives as under Option 1, while minimizing the potential for overprocurement and potentially obviating the need for the CAISO to actually procure additional capacity. Calpine does not support Option 2 (not addressing LSE-specific deficiencies to the extent that sufficient UCAP has been shown in aggregate) because, as the straw proposal notes, this approach would allow one LSE to "lean" on other LSEs' procurement.

4. Review of RA import capability provisions

Please provide your organization's feedback on the following sub-section topics, described in section 4.4.

Please indicate any analysis and data review that your organization believes would be helpful to review on the this topic. Please provide details and explain your rationale for the type of data and analysis that you suggest.

a. Maximum Import Capability Calculation review, described in section 4.4.1. Please explain your rationale and include examples if applicable.

No comments at this time

b. Available Import Capability Allocation Rrocess review, described in section 4.4.2. Please explain your rationale and include examples if applicable.

No comments at this time.

Additional comments

Please offer any other feedback your organization would like to provide on the RA Enhancements straw proposal – part two.